Proceedings of 2nd Baltic Sea Reading Conference – 15th Nordic Reading Conference

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The Conference participants were invited to submit articles to be considered for publication | Call for papers | Refereed net publication

Conference presenters are welcome to
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Du som presenterat på konferensen är välkommen att

Konferenssin esitelmöijät voivat

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Preface

Literacy skills – for learning

It is a pleasure for us to write a brief foreword for these proceedings, which is a result of the 2nd Baltic Sea Conference – 15th Nordic Reading Conference arranged by FinRA, the Finnish Reading Association in Turku, Finland, August 11–13, 2010.

The conference aimed to address issues that concerned literacy and learning. In the conference 110 papers were presented. The presenters from 20 countries represented both the field of research and practice. The sub-themes of the presentations considered content area reading, reading engagement, and reading and writing with new technologies to name a few. For the Book of Abstracts and for further information, please go to: http://www.parnet.fi/~finra/baltic_sea_abstracts

To sum up, many presenters argued a shift to an increasingly digital-dominated culture. Many agreed that the new media are changing the way people and societies communicate both in the virtual and real world. While the basic skills of reading and writing still remain at the heart of literacy, it is important to reconsider what it means to be literate, or multiliterate, in this present and forthcoming global and virtual world. The focal point in the world of the new literacies is that the gap between the reality and literacy practices of the pupils and educators do not grow too wide. The title of this conference proceedings Literacy skills – for learning leads us to pay attention to this multiplicity of literacy, which is a significant topic in all areas of education.

Nineteen presenters submitted a full-paper for the proceedings. Each submission was double-blind-reviewed and finally, 13 papers, 9 in English and 4 in Finnish were included in the proceedings. The range of the papers reflect the multiplicity of the presentations given at the three-day conference.

We hope you will enjoy these proceedings. As you will see, the authors come from a truly international background and bring diverse views and perspectives which give enriching approaches to literacy – for learning.

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Acknowledgments

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Layout

Ann-Sofie Selin, Finland
Core objectives and students diversity in Finnish literacy curriculum

Abstract

The strength of the Finnish literacy education has been shown in three PISA surveys (OECD 2001, 2004, 2010). However, international interest in this PISA success has not focused on curricular aspects, although the Finnish core curriculum gives a special status to teaching and learning practices. This article analyses the literacy objectives in Finnish core curricula, and the ways in which the curricula guide teachers in catering for student diversity. The data consist of the Finnish National Core Curricula for Basic Education, published in 1985, 1994 and 2004. Based on inductive document analysis, this article discusses the shifting perspectives and challenges, and contributes to an understanding of the roles that the core curriculum plays in defining the purposes of literacy education, as well as taking account of student diversity.

Introduction

The Finnish school education system is built on the basis of basic literacy as a body of learning. Finland’s successful PISA (Programme for International Student Assessment) literacy results (OECD 2001, 2004, 2010) reflect the foundation of the Finnish education system, which could be characterized by the words equality, equity and individual support. International interest has currently focused on the underlying factors that may have contributed to Finnish student success in PISA, such as the educational system and teacher education. However, the Finnish curriculum has not received so much attention. One reason for this might be that the aim of PISA was not to elucidate the curricula of different countries but to map the students’ literacy skills and knowledge in situations corresponding to the needs of everyday life and the future. On the other hand, in Finland, the national core curriculum has a special status that cannot be overlooked in discussions on education and learning.

The core curriculum in Finland is seen as an intentional and dynamic process, revealing the values, beliefs and principles in relation to learning, teaching and knowledge, and also cultural and political purposes (e.g. Pinar, 2004). Therefore, it is essential to ask
how the designers of the core curriculum conceptualize and formalize literacy education in response to increasing demands for high-level literacy skills, and increasing student diversity. This article presents a study that addresses these two aspects of the development of the Finnish Literacy Curriculum (named *mother tongue* in the Finnish core curriculum\(^1\)) since the 1980’s.

**The basis of curricular equality in literacy education**

In the early 1980s, Finland moved to a comprehensive school system (Comprehensive School Act 476/1983) and this meant that the core curriculum (1985) was devised to inform the guidelines of national education policy with up-to-date pedagogy. Accordingly, the core curriculum played a crucial role as an interpreter of the learning possibilities offered by the school institution (Boomer et al., 1992; Kelly, 1999). The Act of 1983 (and the core curriculum 1985) abandoned ability grouping and courses with different extensions of the syllabus and their inherently restrictive view of further studies.

In order to ensure educational equality, a national model of individual support called Part-time Special needs Education (PSE) was developed. Although the title indicates a system of segregating students, PSE from the very beginning has been placed within mainstream education and defined in the core curricula. PSE has been implemented in such a way that the students can study in flexible groups in their own classscaffolded by their class teacher, in a team teaching situation or with the teacher and special needs teacher working in collaboration. This sits well with, the recent UNESCO (2009) document, which suggests that the ultimate goal for inclusive education is to promote participation, entitlement, and opportunities for all learners.

However, the current education policy in Finland is controversial and complex. The PISA results have created tensions within the schools, as they try to repeat the success story by raising the effectiveness of school practices by extending the requirements of subject matter content in the core curriculum. At the same time the Ministry of Education (2007) has reinforced the reform of basic education by rebuilding the support system. Thus, the Act of Basic Education (2010/642) and the Core Curriculum (2010) have been updated in line with declarations at the global level (e.g. UNESCO, 1994, 2009). Current educational practice has shifted the focus from the earlier support and prevention. Support will now be divided into three parts: common, intensified, and special support. This kind of step-up support system will be used to strengthen learning and growth. Furthermore, the aim is to prevent educational exclusion and the escalation of problems.

\(^{1}\) The concept of *literacy* does not exist literally in the Finnish language. Since the construction of the 2004 curriculum, the term ‘literacy’ has been introduced and translated as ‘tekstitaidot’. I use the term ‘literacy’ throughout the article except in quotations and verbatim speech.
related to learning, especially to literacy development (cf. Koivula et al., 2011; Mäkinen et al., 2010).

**Methods**

By exploring the literacy objectives in the Finnish core curricula, and the ways in which the curricula take account of student diversity, this study contributes to an understanding of the role that the core curriculum plays in promoting literacy education.

The research questions that I set out to answer were as follows:
1. How do the core curricula formulate the core objectives of literacy education?
2. How do these curricula provide guidelines for a way of teaching that takes into consideration student diversity?

The data consist of the three Finnish National Core Curricula for Basic education published in 1985, 1994 and 2004. The analytical method of choice was an inductive document analysis (cf. Flament & Villiot-Leclercq, 2004) of three Finnish National Core Curricula for Basic Education published in 1985, 1994 and 2004. By inductive document analysis I refer to a "bottom-up" approach, which aims not just to describe a set of various objectives and support settings for teaching literacy, but also to identify and compare over time the curriculum constructors’ intentions, as well as the pedagogical and linguistic conceptualizations of the curriculum statements.

The process of analysis consisted of four stages: a) close reading, b) reducing the core objectives and equity-oriented pedagogical views (e.g. Arnesen et al., 2009; Gombert, 1992; Dewey, 1956; Frederickson & Cline, 2009), c) comparing the curricula statements to each other, and d) interpreting the epistemological changes concerning the core objectives and student diversity. Next, I present the results of the study and interpret the shifts in the paradigms, challenges, and alternatives of curriculum design for literacy education.

**Results: Shift in perspectives on curriculum of literacy education**

The results show the shifts in both approaches to core curriculum for literacy education as follows: a) a change of core content focus from cognitive skills to wide-ranging literacy, b) a change in attitudes towards student diversity from general objectives to the support of diverse learning processes.
Change of focus from cognitive skills to wide-ranging literacy

Literacy seemed to be the body of all subjects. In the 1985 curriculum, its special status was attributed to three causes. Literacy was seen as an object of learning, an instrument of teaching, and the basis for all studies: "A diversified command of language is the objective, not the starting point of school education" (Curriculum, 1985). Teaching literacy was divided into three sections: skills, knowledge, and arts. The skills were divided into receptive and productive skills. This division was based on Gibson’s and Levin’s (1975) view of reading, which was based on cognitive psychology: reading is an intellectual skill. It is the skill of extracting information from a text. They define perfect literacy as the ability to use information for many different purposes. These views shaped by psychology, led to the conclusion that the core objective of teaching was a mastery of language, which would be achieved by extensive practice.

The 1994 curriculum also emphasised basic skills in the following phrasing: “Reading and writing techniques and other reading and writing skills are improved.” Furthermore, the relation of literacy to learning in other subjects as an agent of integration subject was emphasised. Particularly, reading comprehension was to be practised through the texts of other subjects. In addition, the cognitive-psychological approach was strengthened by emphasising the fact that language and other cognitive functions cannot be separated from each other. They constitute intimately connected parts of the same entity – learning and growing up.

The development of linguistic awareness was at the centre of teaching (Gombert, 1992). “The students’ linguistic awareness is deepened and they are able to use the language in accordance with the task or the situation.” The emphasis on awareness was followed by a greater emphasis on the strengthening of meta-cognitive skills than in the previous core curriculum (e.g. Flavell, 1987; Karmiloff-Smith, 1986). The 1994 Curriculum stressed that the most important task of teaching was to reinforce the students’ self-regulation and ability to choose appropriate learning strategies (e.g. Paris, Lipson & Wixon, 1983; Rauste-von Wright & von Wright, 1994).

The 2004 curriculum was theoretically more complex than the earlier ones. It presented postmodernist views on the multifaceted and cultural nature of language and literacy skills. The curriculum title of ‘mother tongue’ had expanded into the subject ‘mother tongue and literature’ and its content areas had condensed first time into the term literacy. Literacy was defined by referring to spoken and written texts as well as to fiction and non-fiction texts. These also include so-called ‘non-linear texts’, visual, vocal, and graphic texts (Curriculum, 2004). The aim was to discuss during teaching, for instance, how a picture supports the understanding of a text or how it hinders understanding by leading thoughts astray.
The curriculum set out multifaceted demands on teaching literacy. Students must be offered the possibility to learn information literacy (e.g. Doyle, 1994), digital literacy (e.g. Gilster, 1997), media literacy (e.g. Aufderheide & Firestone, 1993), and network literacy (e.g. McClure, 1994). In addition to these demands, it should be kept in mind in teaching that the "mother tongue is for the students both an object of learning and an instrument" (Curriculum, 2004; cf. Curriculum, 1985).

This statement was an almost verbatim quotation from the curriculum published twenty years earlier (1985). The return to the 1994 curriculum was shown in the subject-centred descriptions of the criteria for good skills. The grade-based listings defined in detail what each student should know and do in order to complete a certain grade. In spite of a widening perspective on literacy, the recent curriculum (2004) fails to match up to the idea of the curriculum sketched out by Dewey (1956), according to which the primary task of education is to fill the gap between subject-matter and the student's experience. Experience could be seen as a core instrument of communication and impact between student, teacher, community, and society.

Change in attitudes towards student diversity

All the curricula have emphasised that the indispensable objectives of Finnish education must be achieved regardless of the differences in the students' starting points. In the year 1985 this was expressed as follows: "The linguistic background and the development of the students must be taken into consideration" (Curriculum, 1985). The 1985 curriculum replaced uniform courses with new types of teaching practices, which involved, in addition to PSE, remedial teaching and differentiation: “In mother-tongue teaching instrumental differentiation is applicable.” Teachers had to take into consideration the students' background and development in heterogenic groups.

In the following decade (Curriculum, 1994) there was a desire for pedagogy to be renewed in order to take better account of student diversity. However, new means of addressing the situation were not put forward. There was a wish for “didactic and other circumstances” in mainstream education to be favourable from the point of view of learning. The statement included, however, a reference to a functional culture that would strengthen cooperation between teachers. Students with reading and writing difficulties were to receive “didactic and other support through cooperation between the PSE teacher and the class teacher.” The revised 2004 curriculum emphasised the student’s subjective right for support in his or her studies when needed. The objectives of literacy included a remark: "Notice should be taken in teaching that students may be in very different stages of their learning process.”
The minor statements were concerned with how these practices have to be carried out. The curriculum (2004) included some procedural suggestions about PSE which was to be “given as team teaching, in small groups or individually and, as to its objectives, it should be linked to the other education engaged in by the student” (Curriculum, 2004). According to educational statistics (Statistics Finland, 2010), the focus in PSE has been on supporting students’ literacy achievement. For example, during the school year 2008–2009 about one fourth (23 %) of the students in basic education participated in PSE. Almost half of these (42 %) received individual support for problems related to reading and writing. One noteworthy risk might occur if the SPE practices merely ensure the maximisation of the individual students’ cognitive potential in literacy. Thus, the big challenge for the future curriculum designers and educators will be the change from supporting single fixed linguistic intelligence to a growing acceptance of multiple linguistic diversities.

Conclusions

According to the results, the Finnish curricula reflected the view of the subjectivity of literacy learning, and the competing demands of core objectives and student diversity. The aim of educational equality reflected the emphasis on ensuring that all students’ acquisition of basic literacy skills. Likewise, the function of PSE has been to support the students who need support in order to improve their skills. This support has focused mainly on problems in reading and writing, which also reflected a deep concern for basic literacy as a body of learning. The idea was that strong “cognitive instruments” empower the students’ potential and talents and enable them to be realized. The success of these aspirations has been spectacularly visible in two PISA assessments (OECD, 2001; OECD, 2004). From this point of view, both the establishment of the educational foundation and the PISA success in literacy could primarily be seen as the result of an advance in the educational inclusion process in Finland (e.g. Ainscow, 2005; Arnesen et al., 2009; Frederickson & Cline, 2009).

At present the Finnish literacy curriculum reflects the dilemma of cognitively oriented education. If the function of literacy education is seen to be transmitting indispensable knowledge and skills, the question is as follows: how could the curriculum be redesigned so that all the earlier recorded knowledge content retains its position while the contents required by postmodern society are added to? The problem is insoluble. In addition, the “inventory of knowledge and skills” that ignores the multilayered nature of learning might lead to a reversed interpretation. Learning literacy appears as a fragmented, mystical, and unstructured process. Yet, the increasingly complex information flood of the multimediatic and multilingual society requires more critical understanding of the meanings and structures of knowledge than ever before. A cognitively oriented scheme
or representation can no longer embrace the complexity needed to form a picture of the necessary subject-matter.

Thus Finnish teachers are facing new socio-pedagogical ambitions of multimediatic and cultural literacy, equipped only with a mishmash of twenty year old cognitive language conceptions. Additionally, there is a need to rethink the key principles for promoting equality and equity of all students. PSE has traditionally focused on supporting the students with difficulties in basic literacy skills. On the other hand, individual support could be viewed as the norm for all learners. Fortunately, the ongoing renewal policy for inclusive settings will make it possible by creating the stepped-up support model. Thus, diversity in education can be seen as an inevitable reflection of the richness of human experience (OECD, 2010).

The results suggest that the challenge of Finnish literacy curriculum design is to encourage collaborative pedagogy that aims to construct an experimental and interactive relationship between the students, the subject-matter and the surrounding culture. It should also be noted that the meaning of participation and engagement in literacy intertwines with the conception of how to handle personal experience. Thus experience, as the basis of curriculum, might become reality especially in literacy education, which emphasises a pedagogical approach that integrates and balances the students’ life-worlds. This kind of integrative literacy education should be sensitive enough so that the students’ experiences have a place in the learning processes. Literacy learning would be the transformation and creation of knowledge and skills in interaction between social dialogue, inner experiences, and the meanings that the mind has developed and interpreted out of these.

References


Comprehensive Schools Act (476/1983).


National Core Curriculum for Basic Education (Changes and Supplements 50/011/2010). Finnish Board of Education.


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Writing in disciplines in a foreign language: a study of writing in the subject of history in content and language integrated learning (CLIL)

Abstract

The present article explores the development of second language writing in Content and Language Integrated Learning (CLIL), which refers to instruction of a non-language subject through the students’ second or foreign language. The reported research investigated written, content-specific language from the viewpoint of Systemic Functional (SF) Theory (Halliday, 1985), more specifically the development of grammatical metaphor, which refers to a development from a direct, unmarked variety of language (congruent) towards an indirect, marked variety of language (incongruent). The findings indicated that the students’ historical writing did not comply with the conventions of genre-typical writing irrespective of the language of writing (L1 or L2). It was found that the students’ English essays showed signs of more developed grammatical metaphor than the Finnish ones. This may be at least partially due to circumstantial factors, such as restricted time and access to resources.

Introduction

The present article falls within research on the development of second language writing in CLIL, a methodological context that has gained popularity in Europe. CLIL, the acronym for Content and Language Integrated Learning, refers to instruction of a non-language subject through the students’ second or foreign language. The focus of the present article is the subject-specific language that the students are involved with in studying a subject in CLIL.

The research reported in this article investigated written, content-specific language from the viewpoint of Systemic Functional (SF) Theory (Halliday, 1985). According to Systemic Functional Linguistics (SFL), language acquisition involves learning how to express meanings by acquiring the functions that one can perform with human language. Similarly, to learn content-specific language involves studying the register-
typical language functions that are necessary for thinking and communicating in content-area instruction.

The purpose of the article is to use grammatical metaphor as a tool to investigate the features of the English and Finnish languages as these languages are used in CLIL students’ essays to give shape to historical content. The purpose of the study is to cast some light on the integration of language and content, and discuss some theoretical and practical implications, and limitations of the study.

The article will commence with a brief discussion of grammatical metaphor as part of the systemic-functional theory. Next, the study is presented, followed by the analysis and interpretation of results. Finally, some concluding remarks are presented.

**Grammatical metaphor**

According to the systemic-functional approach, there is a development from a direct, unmarked variety of language (congruent) towards an indirect, marked variety of language (incongruent). This development is called grammatical metaphor and it is realized syntactically and semantically in spoken and written texts (Halliday, 1993, 1994). To put it simply, beginning language use and spoken language consist of a great number of clauses and sentences, whereas advanced language and formal written language contain a great number of noun phrases which are typically pre- and post-modified by frequently heavy adjectival or adverbial modifiers. According to Systemic-Functional Theory, grammatical metaphor is not restricted to the mode (speaking vs. writing) or to the degree of formality, but is also seen in (primary) language development of the child.

Grammatical metaphor is relevant for the present research for a number of reasons. Firstly, it allows for a three-level examination of data: the semiotic level (content), linguistic realization of the content (discourse) and language production (writing vs. speaking). Secondly, it focuses on academic, scientific writing and thirdly, it suggests a pedagogical tool (dialectic learning). Below, the linguistic and the semantic realizations are discussed in more detail.

Syntactic intricacy is expressed differently in spoken and written texts: spoken texts display a high ratio of clauses per sentence, written texts display high lexical density. Thus, written language is characterized by abundant use of nominals, whereas a great number of subordinate clauses are used in spoken language. In other words, spoken, informal and beginning language use consists of long stretches of main clauses and only a few subordinate structures. Nouns are typically unmodified, or post- rather than pre-
modified. Advanced, formal, scientific writing contains a great number of subordination (main clauses with numerous subordinate clauses) and richly pre-modified and post-modified noun phrases.

Another important feature in the organization of discourse is the order in which information is introduced. This is called thematic organization. Thematic organization refers to the cohesive development of a text, more specifically to the flow of information conveyed by themes (topic, focus, old information) and rhemes (comment, new information). The theme is frequently defined as the first, clause-initial element, typically the grammatical and topical subject of the clause. Unmarked themes coincide with the subject of the clause. All the sentences in example (1) are initiated with unmarked themes (in bold):

(1) **The Finnish civil war** started in 1917 and ended in 1918. **It** was against the whites and reds. **The reds** wanted to take over and be independant. **They** already had about 20 % of the south of Finland. **The whites** were the rest of Finland and wanted to stay in power. **Russia** helped the reds and **the germans** helped the whites. (International school data)

Marked themes do not coincide with the grammatical subject of the clause. Non-subject clause-initial elements may consist of pre-posed adverbials and prepositional phrases. In (2) below, marked themes are in bold.

(2) **In 1917, after getting the independence** there were many kinds of problems in Finland. There were different opinions about Finnish independence between rightist and leftist parties. **In the countryside** the poor people were disappointment in their situation is society. They didn’t have many rights and in 1917 they really woke up and saw their situation. They wanted some rights for themselves. **In 1917** unemployment increased and there were a huge shortage of food. People were disappointment in senate’s works. [...] **In autumn** the Finnish social democratises publisher their program called “We Demand” It was their strike against senate. They really believed that there were no other ways to solve the situation than revolution. **In “We Demand”-programme** they wanted many changes in society. (CLIL English data)

Typically, unmarked thematization is characteristic of narrative-type and personified writing, both characteristics of speaking and informal language, and a less typical grammatical metaphor in academic writing. The occurrence of marked themes may be interpreted as a sign of advanced grammatical metaphor.
Research

The purpose of the study discussed here is to describe the written expressions of grammatical metaphor in young adolescents’ writing about history. The data consist of three types of essay: 1) ten essays written in English and 2) ten essays written in Finnish by students enrolled in a bilingual CLIL programme (the CLIL group), and 3) nine essays written in English by international school students enrolled in monolingual (English) instruction (the international school group). All the students were eighth-grade students (14-15 years old). The English essays were written as take-home assignments and the Finnish essays were written as part of the course-final test some three weeks after the home assignment had been administered. The topic of the English and Finnish essays was the same for all groups: “The Causes of the Finnish Civil War”.

Research questions

The study set out to explore how historical thinking was reflected in written language in the three types of essay. More specifically, the study set out to find out what features of grammatical metaphor, both syntactic and thematic, were observable in the written productions. On the basis of the different language levels and first languages, some tentative hypotheses were presented as to the results of the data analysis. In terms of the syntactic research question: 1) What features of syntactic intricacy are observed in the data? It was assumed that the CLIL English data would show more clauses per sentence and fewer nominalizations (lower lexical density) than the English essays of the international school data. This hypothesis was based on the more advanced language skills of the international school students. In general, it was assumed that more advanced writing across the data would be characterized by high lexical density and fewer subordinate clauses.

The second research question: 2) Which types of topical (unmarked) and marked themes are observed in the data? set out to find out how the flow of information was sequenced in the data. The expectations concerning the data analysis of the second question were ambivalent. In terms of language skill levels, it was assumed that there would be more unmarked themes in the English productions of the CLIL students. The CLIL students’ level of English was not as advanced as that of the international school students and their exposure to academic English had been shorter and less intensive. On the other hand, in terms of the CLIL students’ first language (Finnish), the expectations might have been different. Finnish is a free word-order language, which means that many elements other than subjects may initiate clauses in the initial, thematic position without necessarily assuming strong markedness (Shore, 1990, 2008). This would mean that the CLIL students’ Finnish productions might be expected to
contain marked elements in the thematic position without necessarily indicating advanced grammatical metaphor in the register of historical writing. Yet another angle may be added: marked thematization is typical of historical writing in general. This is due to the richness of temporal and situational features typical of the register, especially in the narrative and descriptive accounts of history (Halldén, 1986, Voss et al., 1994, Coffin, 2004).

**Results**

The analysis of the data follows the division of research questions into syntactic and semantic analyses. Table 1 shows that the international school data were the most intricate of all. Both clauses and T-units (T-unit is a syntactic unit consisting of main clause + subordinate elements) were longer than in the rest of the data. The English data of the CLIL group were more intricate than their Finnish data, which is very likely to be due to time restrictions: the English essays were written as home assignments, whereas the Finnish production was part of a timed course-final test.

Table 1. Indicators of syntactic intricacy

<table>
<thead>
<tr>
<th>Level</th>
<th>Mean length of T-unit (MLTU)</th>
<th>Mean length of clause</th>
<th>Clauses/T-unit (C/TU)</th>
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<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
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<tr>
<td>CLIL En</td>
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<td>1.49</td>
<td>8.15</td>
</tr>
<tr>
<td>CLIL Fi</td>
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<td>International school</td>
<td>13.01</td>
<td>3.10</td>
<td>9.45</td>
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Table 2. Means and standard deviations for lexical density by language and group

<table>
<thead>
<tr>
<th></th>
<th>CLIL En</th>
<th>CLIL Fi</th>
<th>International school</th>
</tr>
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<tbody>
<tr>
<td>Mean</td>
<td>4.07</td>
<td>3.62</td>
<td>3.80</td>
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<tr>
<td>SD</td>
<td>0.44</td>
<td>0.58</td>
<td>1.11</td>
</tr>
</tbody>
</table>

Table 2 shows the means and standard deviations for lexical density in the data. Lexical density was calculated as the average number of nouns per clause.

Typical of the international school data is heterogeneity, which is shown as great variation in the values for lexical density. The lowest (2,2) and the highest (6,1) values were found in this group. The Finnish data show the least lexical density.

The other research question addresses the semantic dimension and adds another vantage point to the data analysis and interpretation. The results show that the majority of the themes in the data consist of unmarked topical themes in sentence-initial, subject position. Table 3 shows the frequencies of topical, unmarked themes in the English data and Table 4 provides corresponding values for the Finnish data.

Table 3. Topical, unmarked themes in the English data

<table>
<thead>
<tr>
<th>Topical Theme</th>
<th>CLIL En (N_{ALL}=249) n (%)</th>
<th>International school (N_{ALL}=173) n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>They</td>
<td>26 (10.4)</td>
<td>32 (18.5)</td>
</tr>
<tr>
<td>(The) Reds, The Red Guards</td>
<td>30 (12.0)</td>
<td>19 (11.0)</td>
</tr>
<tr>
<td>(The) Whites The White Guards/Forces, The White Army, The White Terror</td>
<td>25 (10.0)</td>
<td>24 (13.9)</td>
</tr>
<tr>
<td>The (Finnish) Civil War</td>
<td>8 (3.2)</td>
<td>10 (5.8)</td>
</tr>
<tr>
<td>People</td>
<td>17 (6.8)</td>
<td>4 (2.3)</td>
</tr>
<tr>
<td>It</td>
<td>11 (4.4)</td>
<td>5 (2.9)</td>
</tr>
<tr>
<td>Total</td>
<td>117 (46.9)</td>
<td>94 (54.3)</td>
</tr>
</tbody>
</table>
Table 4. Topical, unmarked themes in the Finnish data

<table>
<thead>
<tr>
<th>Topical Theme (in Finnish)</th>
<th>(in English)</th>
<th>CLIL Fi n (in ALL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Punaiset (punakaartilaiset)</td>
<td>The Reds (Guards)</td>
<td>16 (14.2)</td>
</tr>
<tr>
<td>He</td>
<td>They</td>
<td>10 (8.8)</td>
</tr>
<tr>
<td>Valkoiset</td>
<td>The Whites</td>
<td>8 (7.1)</td>
</tr>
<tr>
<td>Suomi</td>
<td>Finland</td>
<td>3 (2.7)</td>
</tr>
<tr>
<td>(Suomen) sisällissota</td>
<td>The (Finnish) Civil War</td>
<td>3 (2.7)</td>
</tr>
<tr>
<td>Ihmiset</td>
<td>People</td>
<td>3 (2.7)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>43 (38.1)</td>
</tr>
</tbody>
</table>

It appears from Tables 3 and 4 that the same unmarked themes occur in both the English and the Finnish essays. Most of them refer to human actors, which is typical of young adolescents’ historical writing (Halldén, 1986, Voss et al., 1994). The majority of the unmarked themes were repeated, unmodified (proper) nouns in subject position in the CLIL English and Finnish productions. A more elaborate use of multi-word unmarked themes was found in the international school productions (see example (3) below).

(3) **Industrial workers, tenants from the countryside and members from the lower social group** (theme) supported the Reds (rheme). (International school data)

The most typical marked themes were experiential themes of time and place (frequent in history, Taylor, 1983, Lovejoy, 1992). Typical examples are *during the civil war, in May 1918, in November, in the south of Finland*. Subordinated constructions were also frequent (*When the Reds saw that they were losing, Because the Whites did not know what to do with all of the “Red” prisoners*). Table 5 shows that marked themes were most frequent in the CLIL English data (45% of all themes) and least frequent in the CLIL Finnish data (28%).

The frequent versus infrequent marked thematization in the English and Finnish productions of Finnish native speakers might reflect a narrative function in which marked themes of place and time signal the sequencing of events. Marked themes in the English essays would thus signal the recount function (Coffin, 2004), whereas in the Finnish ones the retelling (Coffin, 2004) function would be prevalent: the students were pouring out as many facts as possible within the limited time of the test and perhaps as a knowledge-telling test-taking strategy.
Table 5. Marked themes in the data

<table>
<thead>
<tr>
<th></th>
<th>No (%) textual (but, and)</th>
<th>No (%) experiential (place &amp; time)</th>
<th>No marked (N total)</th>
<th>% of marked themes (% unmarked)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLIL En</td>
<td>59 (24)</td>
<td>54 (22)</td>
<td>113 (249)</td>
<td>45 (55)</td>
</tr>
<tr>
<td>International school</td>
<td>34 (20)</td>
<td>28 (16)</td>
<td>62 (173)</td>
<td>36 (64)</td>
</tr>
<tr>
<td>CLIL Fi</td>
<td>18 (16)</td>
<td>14 (12)</td>
<td>32 (113)</td>
<td>28 (72)</td>
</tr>
</tbody>
</table>

**Discussion**

As was mentioned above, the data of the study are not directly comparable, which obviously does not provide clear-cut answers to the research questions. The results showed that the English writing of the students showed a more elaborate grammatical metaphor. It is possible that the more advanced English skills, but not native-level Finnish proficiency, were linked to a more elaborate grammatical metaphor. A number of explanations, mostly contextual, such as time pressure in the test situation and freely available time in the home assignment, were discussed above. On the other hand, there seemed to be very little, if any, transfer to the Finnish essays from the previously written English essays. Had there been some, it might have shown in more elaborate grammatical metaphor, such as marked thematization, and, to say the least, getting one’s facts correct. To take an example, one writer claimed in his English essay that the Reds started the war and in his Finnish essay that the Whites started the war. The students obviously saw the writing of the English essay as an obligatory task rather than as a learning opportunity.

The results indicated that the learners of language and content were not aware of the linguistic conventions and devices that are necessary for the use of the language of the subject in writing. This may be due to lack of pedagogy in teaching subject-specific language.

Dialectic learning refers to the learning processes that the learners are involved in when they read content-specific text, learn new content-typical discourse from it and then produce the newly learned discourse in writing (Byrnes, 2009). Learning to read and write in subject-specific genres often means working with grammatical metaphor.
One way of using dialectic learning to learn linguistic conventions of the discipline would be to work dialectically by comparing congruent and incongruent expressions and then working on the linguistic manifestations by, for example, reformulating incongruent expressions as their congruent expressions and vice versa.

References


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Literacy in mother tongue through new textbooks\(^2\)  

Abstract  

Improving early literacy and ensuring literacy development are major concerns of the education systems in the European Union. PISA reports have been severe on Portugal (OECD, 2001, 2004, 2007) and the 21st century marked the beginning of a rather innovative reform in Portuguese education. Underlying principles include the need to focus education on the development of competences and to approach the teaching/learning of mother tongue in a transversal way, thus emphasizing its relations with other subjects at school. Developing competences in reading comprehension holds a very important position in this context, because they are essential to life in a modern society and to lifelong learning (Sá, 2009).  

In Portugal, textbooks still play a very important role at school and the teaching/learning of the mother tongue is no exception. A study, developed in LEIP/Research Laboratory for Education in Portugal, which began in 2006 and is nearing its end, has shown that mother tongue textbooks in use in the Portuguese compulsory education no longer serve the purposes they were created for. The analysis of some of these textbooks, selected according to pre-established criteria, led to the identification and characterization of some problems. We concluded that textbooks for the teaching/learning of mother tongue are not adapted to the main ideas in today’s educative policy, although they may contribute to the development of some competences in reading comprehension and written production. The knowledge thus acquired will allow us to formulate some principles that are designed to ensure the production of textbooks and other educational resources more  

\(^2\) This paper was produced within the Project Language and Education: constructing and sharing professional knowledge (PTDC/CED/68813/2006; FCOMP-01-0124-FEDER-007106).
adequately serve the promotion of early literacy and literacy development in Portuguese schools.

**Literacy and reading competences**

Improving early literacy and ensuring literacy development are major concerns of the education systems in the European Union. Portugal is no exception.

The importance of this issue is related to the transformative potential of literacy and its power in what concerns the construction of a reflective and critical citizenship. PISA reports have been severe on Portugal (OECD, 2001, 2004, 2007) and the 21st century marked the beginning of a rather innovative reformation in Portuguese education. Underlying principles include the need to focus education on the development of competences and to approach the teaching/learning of mother tongue in a transversal way, thus emphasizing its relations with other subjects at school (Sá, 2009). The essential competences to be acquired and developed throughout compulsory education were defined in the *National Curriculum for Basic Education* (Ministério da Educação, 2001) and they concern: i) knowledge (scientific, technological and cultural) and its use; ii) language, both mother tongue and foreign languages; iii) methods and techniques centred on problem solving, such as looking for information and organizing it, selecting strategies adapted to specific goals, taking decisions, being autonomous and capable of team work at the same time; and iv) the ability to perceive life in an ecological way (Sá, Cardoso & Alarcão, 2008).

Developing competences in reading comprehension holds a very important position in this context. Reading plays a crucial role in modern societies. It affects success at school, which is seen as essential to social integration. Moreover, it contributes considerably to professional accomplishment. Reading is also a very useful form of access to knowledge that we can apply to novel situations and cultures allowing us to be more creative.

It is a process generally associated with the teaching/learning of mother tongue, but one must recognize that competences in reading comprehension can also be acquired through the teaching/learning of other subjects, because they all involve verbal communication.

Teaching reading comprehension in a first language is a demanding task, since proficient reading comprehension depends on: i) mastery of decoding mechanisms; ii) the development of language skills (such as the use of vocabulary and grammar, among others); iii) knowledge about text genres and their use in written
communication; iv) conceptual and factual knowledge; v) reasoning and inferential skills, essential to the identification of implicit ideas in texts and the relations among them; vi) cognitive strategies used to improve comprehension and to repair it when it breaks down; vii) motivation (Perfetti, Landi, & Oakhill, 2005; Martins, 2008).

Teaching reading comprehension implies the promotion of learning situations inviting the students to use their skills in written communication, including: (i) writing texts based on the reading comprehension of a text studied in the classroom; ii) reviewing one’s own texts; and iii) rewriting those texts according to reviews made by others (such as the teacher or other students).

The importance of textbooks

In Portugal, textbooks still play a very important role at school, at all levels of education, and the teaching and learning of the mother tongue is no exception.

Textbooks can play several roles in the teaching/learning process (Choppin, 2005): i) an instrumental role, by favouring certain teaching methods (in our opinion, nowadays, they should favour methods promoting reading, writing and critical thinking skills); ii) a referential role, providing insights for the definition of curricula and helping to solve pedagogical problems; iii) a documental role, presenting instruments and documents serving the teaching/learning process, thus becoming sources of information; and iv) a cultural role, through the promotion of certain social values, contributing to the construction of ethical models.

In what concerns the teaching/learning of mother tongue related to the development of competences in reading comprehension, textbooks should encourage the students to explore several kinds of texts, in order to acquire and develop strategies in reading comprehension (Giasson, 2004; Sim-Sim, 2007), and promote the activation and development previous knowledge (Carreira, & Sá, 2004).

Do mother tongue textbooks contribute effectively to this purpose?

Mother tongue textbooks’ contribution to the promotion of literacy

A study, conducted at the LEIP/Research Laboratory for Education in Portuguese, which began in 2006 and is nearing its end, has shown that mother tongue textbooks in use in the Portuguese compulsory education no longer serve the purposes they were created for. It is a PhD project, entitled Textbooks and development of transversal competences.
in reading comprehension in Portuguese as a mother tongue: a study in basic education, developed by one of us (Maria da Esperança Martins) and directed by the other (Cristina Manuela Sá).

It is focused on the contribution of mother tongue textbooks to the development of transversal competences in reading comprehension and thus to success at school, socio-professional integration and the effective exercise of citizenship. Two research questions were formulated: 1) Are the present textbooks for teaching Portuguese as a mother tongue adequate for the development of competences in reading comprehension in students in compulsory education?; 2) Is it possible, as a result of the analyses, to establish principles underlying the production of more adequate textbooks? Nine textbooks were selected according to pre-established criteria: “popularity” in Portuguese schools (we selected three textbooks representing several levels of “popularity”, measured according to the number of schools that chose them); characteristics of the editing project they represented (which led us to choose textbooks from different publishing companies); and use in the three levels of compulsory education in Portugal (three for each of the three cycles included in compulsory education for 6-15 year-old students). The analysis of these textbooks was done using a grid previously produced and validated by a panel of specialists (including researchers in several Portuguese universities, teacher training supervisors and teachers of Portuguese in compulsory education). It was focused on five aspects of the textbooks: competences, objectives, content, strategies/activities and resources. Those aspects were analysed according to three main categories related to competences in reading comprehension, including subcategories: i) reading comprehension (divided into identification of the ideas in the text, identification of the main ideas and identification of the macrostructure of the text); ii) interaction between oral communication, reading comprehension and written expression; and iii) autonomy in reading (divided into reading for leisure and reading for information). The analysis took account of the presence of references to these categories in the textbooks, either explicit or implicit. A grid was filled for each textbook analysed.

Data analysis showed that these textbooks do try to contribute to the acquisition and development of competences in reading comprehension, but it also led to the identification and characterization of some problems. The texts never explicitly refer to the competences that should be developed in the students, although we can infer them, mainly from the activities they present. They mention objectives, but sometimes they really are activities. In general, they are rather focused on content, i.e. knowledge the students must acquire, mainly concerning literature and grammar. The strategies/activities suggested by these textbooks do not always take into account important dimensions of modern conceptions of reading: they tend to focus a lot on language skills (e. g., related to the use of vocabulary and grammar) and ignore...
communicative skills (such as knowing how to use several text genres); they pay little attention to the characteristics of reading situations and the acquisition/development of reading strategies (insisting on the same kind of reading situations) and the reader’s objectives (ignoring important goals of reading comprehension, such as gathering information); they tend to impose certain “interpretations” of the texts (instead of leading the students to create their own); they do not value previous experience in reading, nor contribute to the acquisition of new reading habits. Briefly, they do not promote citizenship, because they do not approach the teaching/learning of mother tongue in a transversal way, paying too much attention to contents and seeing reading as an instrumental practice, not as a goal in itself. Finally, in what concerns resources, these textbooks favoured the use of literary texts, corresponding to excerpts of the works referred to in the official programs. And they seldom related to the world outside school, taking into account the experiences of the students in what concerned reading and writing and non-literary texts. By doing this, they reduced the chances for students to develop skills in reading comprehension and writing that might be useful in everyday life.

The final step in this study will lead us to the formulation of some principles that are intended to ensure the production of textbooks and other educational resources that more adequately focus on the promotion of early literacy and literacy development in Portuguese schools. We are already working on that issue.

**Future research into reading in LEIP**

In a near future, we intend to develop a new project, i) resulting from this one, ii) centred in the role played by teaching/learning of mother tongue in the development of transversal competences at school and in social life and iii) paying special attention to written communication. Its main objectives will be: i) to characterize the factors conditioning the transversal approach of the teaching/learning of mother tongue and the development of competences in reading comprehension and written expression; ii) to conceive and validate strategies and resources to serve this purpose; iii) to elaborate guidelines concerning teacher training and research centred on this purpose. Thus, the project will include: the analysis of conceptions about reading comprehension and its didactic approach and of instruments and practices used in the teaching/learning process; the conception and validation of strategies and resources for a transversal approach to the development of competences in reading comprehension and written expression; and the production of guidelines for teacher training and research on these topics.
References


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The strategies used by eight grade Romanian pupils in reading scientific texts

Abstract

The present research explores the strategies that eighth-grade pupils use when reading the texts from Science textbooks. The participants in the present research were 52 eighth-grade pupils from three schools in Romania. In the frame of the investigation, the pupils have been questioned regarding the frequency with which they use textbooks when learning Science, the usefulness of the Science textbooks, the main problems they encounter, and the strategies they use when reading texts from the Science textbooks. Results show that pupils make little use of the Science textbooks, that they consider them to be of little value for their success in Science, and that they use ineffective reading strategies. Furthermore, pupils’ answers show that they encounter difficulties in understanding terms and concepts from Science textbooks. This investigation raises questions about the effectiveness of the Science textbooks and proposes some recommendations regarding the development and the use of the Science textbooks.

Introduction

Generally, there is a relatively high number of studies that have examined how Science teachers use textbooks (Chiappetta, Ganesh, Lee & Philips, 2006), whereas there is little research into the use of science textbooks by students (Love & Pimm, 1996). However, we can distinguish different categories of research concerning Science textbooks, such as: research on analysis and evaluation of the content of the Science textbooks, research on how teachers use the Science textbooks, research on how pupils use the Science textbooks, and research on the impact of the Science textbooks upon pupils’ academic achievement.

As far as Romania is concerned, there are no studies regarding how Science teachers use textbooks, or how pupils use textbooks. However, the Romanian Government and Publishers have invested in the development and publication of textbooks, and thus
there is a high number of Science textbooks for pupils. For example, for Physics there are seven textbooks (comma deleted) by different authors. Thus, we consider that is necessary to investigate how pupils use and understand Science textbooks and to investigate if textbooks represent a useful resource for pupils, especially because there might be a gap between the reading level of pupils and the readability of the textbooks.

Research shows that, generally, teachers use science textbooks in their classroom teaching practice (Chiappetta, Ganesh, Lee & Philips, 2006; Brändström, 2005). Even if hands-on activities and curricula have increasingly drawn the attention of professionals in science education, science textbooks are generally considered to be the norm. As Foley and McPhee (2008) have argued, textbooks remain the favoured educational genre for disseminating information in classrooms, even if they have been criticized for many shortcomings.

**Reading and understanding scientific texts**

The active engagement of pupils in the learning process is of high importance for effective long-term learning and for transferring the knowledge from one context to another. One way students can become actively involved in their learning is by using self-regulation strategies in the learning process. Brown (1980) has shown that metacognitive knowledge and regulation are important determinants of successful learning and effective studying. Moreover, research has shown that students who use metacognitive strategies significantly increase the effectiveness of their reading (e.g. Loper & Murphy 1985; Perry & VandeKamp, 2000; Brown, 1980; Baker, 1989; Long & Long, 1987). Following Hartman (2001). We consider strategies to be those methods which are deliberately and consciously used by pupils during the learning process. Thus, awareness of and control over one’s thinking are essential in metacognition, which has two basic components: executive management strategies for planning, monitoring, evaluating and revising one’s thinking process, and strategic knowledge that refers to declarative knowledge (what information and strategies one possesses), contextual knowledge (when and why to use knowledge and strategies), and procedural knowledge (how to use knowledge) (Hartman, 2001).

The reading and understanding of scientific texts is guided by instructions that aim to identify the essential elements of the content of a text. There are certain steps that pupils can follow for a successful and active reading. Hartman (2001) has described several reading strategies: skimming, activating relevant prior knowledge, constructing mental images, predicting, self-questioning, comprehension, monitoring, summarizing, and connecting the new material with the relevant prior knowledge.
The aim of the present study was to understand the main reading strategies used by eighth-grade pupils in learning from the Science textbooks. Thus, the main question of the research was “What strategies do pupils use when reading from the Science textbooks?” In order to answer this question, we used Hartman’s framework of the nine reading strategies mentioned above: skimming, activating relevant prior knowledge, constructing mental images, predicting, self-questioning, comprehension, monitoring, summarizing, and connecting the new material with the relevant prior knowledge. However, we adapted this framework to the specific aims of the present research, thus expanding it with items that measured the use of textbooks in specific science domains such as Physics, Chemistry and Biology.

We further address some additional questions, including:
- How often do pupils use the Science textbooks when studying Science?
- How useful do pupils consider the Science textbooks to be?
- What are the main problems that pupils encounter when reading from the Science textbooks?

Method

Participants
Data were obtained through questionnaires with eighth grade pupils from Romanian schools. Fifty-two pupils from three schools in three Romanian cities participated in this study: 16 pupils from Zalau, 16 from Campia Turzii, and 20 from Targu Mures. The age of the participants ranged from 14 to 15 years old, (mean = 14,69, SD = 0,46). The sample included 27 females and 25 males, and the ethnic background of pupils was homogenous, as all of them were Romanians.

Measures
Measures were obtained through a self-administered questionnaire. In the first section of the questionnaire, pupils were asked to provide some demographic data, such as age, gender, ethnic background, city, school, classroom profile, father’s profession, and mothers’ profession. The second section contained a scale with 26 items that aimed to identify the reading strategies that pupils use when reading Science textbooks. Pupils were ask to indicate which statement best describes them, from 1 – does not describe me at all, to 5 – best describes me. Pupils were also asked to answer to some open questions, such as “How often do you use the Science (Physics, Chemistry, and Biology) textbooks?” “How useful do you consider the Science textbooks to be?” “How do you identify the most important information from the Science textbooks?” and “What are the main problems that you encounter when using the Science textbooks?” The
internal consistency of the scale was high, Cronbach’s Alpha being 0.85. In Table 1, we provide the items of the scale used in the present study.

Table 1. The items of the scale used in the present study

| I use textbook when I study Physics |
| I use textbook when I study Chemistry |
| I use textbook when I study Biology |
| I think at what I have to learn before opening the textbook |
| I can identify the relevant information when reading from the Physics textbook |
| I can identify the relevant information when reading from the Chemistry textbook |
| I can identify the relevant information when reading from the Biology textbook |
| I consciously focus my attention on important information |
| I know what teacher expects me to learn from textbook |
| I regularly revise in order to better understand the important information |
| Before I start to learn the lesson from textbook I ask some questions about the subject I will study |
| I summarize what I read |
| When I don’t understand something I read the paragraph again |
| I know what strategies I use when learning a new lesson from textbook |
| I try to understand the meaning and significance of the information that I read |
| I try to develop my own examples in order to better understand the text |
| I evaluate how better I understood a text |
| When I learn I make draws and diagrams in order to better understand the text |
| I use the organization of the text for a better understanding of the information I read |
| I assess to what extent what I have already know connects to the new information I read |
| I split the text in small steps when I learn |
| I stop and revise the difficult information |
| When I get confused I stop and revise the material |
| I read slowly when I encounter important information in the text I read |
| When the text becomes too difficult, I stop and read it again |
| After I finish learning the lesson, I review what I have learned |

Procedure
Pupils filled out the questionnaire in a 30 minutes paper-and-pencil session, within a collective context (a classroom). Participation was voluntary and anonymous. First, we chose the schools in which we knew a teacher who agreed to collaborate with us in
order to facilitate access to the schools. Then each teacher selected one eight-grade classroom in which to administer the questionnaire.

Results

The analysis of data reveals that pupils attached little value and usefulness to the Science textbooks. Further, they make little use of them when learning a new lesson.

Table 2. Students’ (n = 52) use of textbooks

<table>
<thead>
<tr>
<th>Subject</th>
<th>Always</th>
<th>Often</th>
<th>Sometimes</th>
<th>Seldom</th>
<th>Never</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics</td>
<td>1.9%</td>
<td>11.5%</td>
<td>7.7%</td>
<td>28.9%</td>
<td>50.0%</td>
<td>100%</td>
</tr>
<tr>
<td>Chemistry</td>
<td>5.8%</td>
<td>11.5%</td>
<td>9.6%</td>
<td>34.6%</td>
<td>38.5%</td>
<td>100%</td>
</tr>
<tr>
<td>Biology</td>
<td>11.5%</td>
<td>15.4%</td>
<td>21.2%</td>
<td>17.3%</td>
<td>34.6%</td>
<td>100%</td>
</tr>
</tbody>
</table>

As shown in Table 2, pupils make little use of Physics textbooks when learning a new lesson. Fifty percent of the pupils contained in the sample never use a textbook when learning a new lesson in Physics, while only 1.92 percent always use the textbook. Those pupils who use the Physics textbook often comprised 11.54 %, while 28.85 % use the Physics textbook seldom. Pupils have asserted that they almost never use the Chemistry textbook when learning a new lesson. Thus, 73.08 % of pupils have mentioned that they seldom or never use the Chemistry textbook when learning Chemistry, and only 17.31 % always or often use it. Regarding the use of the Biology textbook, 34.62 % of pupils have asserted that they never use the Biology textbook when learning a new lesson, 26.92 % have mentioned that they always or often use it when learning a new lesson, and 21.15 % have indicated that they use it sometimes, as can be seen in the Table 3.

Table 3. Students’ (n=52) perception regarding the usefulness of Science textbooks

<table>
<thead>
<tr>
<th>Subject</th>
<th>Always</th>
<th>Often</th>
<th>Sometimes</th>
<th>Seldom</th>
<th>Never</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics</td>
<td>15.4%</td>
<td>38.5%</td>
<td>34.6%</td>
<td>7.7%</td>
<td>3.9%</td>
<td>100%</td>
</tr>
<tr>
<td>Chemistry</td>
<td>11.5%</td>
<td>42.3%</td>
<td>30.8%</td>
<td>9.6%</td>
<td>5.8%</td>
<td>100%</td>
</tr>
<tr>
<td>Biology</td>
<td>11.5%</td>
<td>21.2%</td>
<td>36.5%</td>
<td>21.2%</td>
<td>9.6%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Regarding the usefulness of Science textbooks, pupils from the present investigation attach little value to the Physics, Chemistry and Biology textbooks. As far as the Physics and Chemistry textbooks are concerned, 11.54% and 15.39% of pupils consider that these textbooks are useful or very useful for their success at these disciplines, while 53.84% and 53.85% assign a slightly or null usefulness to the Physics and Chemistry, textbooks respectively. The Biology textbook is considered the most useful of all of the science textbooks. Thus, 30.77% of pupils consider that the Biology textbook is useful for their success in Biology class, although an even higher percentage of pupils (32.69%) consider it to be of slight or null importance.

Pupils from our sample might encounter difficulties in understanding the content of science textbooks, since they do not use successful and active reading strategies. Table 4 presents the means and standard deviations for the reading strategies essential in identifying the main elements of the content of a text. As can be seen, the answers ranged between 2 and 3.15, which indicates that pupils use poor reading strategies when learning from the Physics, Chemistry and Biology textbooks.

Table 4. Reading strategies

<table>
<thead>
<tr>
<th>Reading strategy</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>I use textbook when I study Physics</td>
<td>2.31</td>
<td>1.36</td>
</tr>
<tr>
<td>I use textbook when I study Chemistry</td>
<td>2.50</td>
<td>1.52</td>
</tr>
<tr>
<td>I use textbook when I study Biology</td>
<td>2.00</td>
<td>0.96</td>
</tr>
<tr>
<td>I think at what I have to learn before opening the textbook</td>
<td>1.96</td>
<td>0.90</td>
</tr>
<tr>
<td>I read slowly when I encounter important information in the text I read</td>
<td>1.88</td>
<td>1.00</td>
</tr>
<tr>
<td>I figure what is the most important information when I read in the Physics textbook</td>
<td>2.08</td>
<td>1.02</td>
</tr>
<tr>
<td>I figure what is the most important information when I read in the Chemistry textbook</td>
<td>2.02</td>
<td>0.82</td>
</tr>
<tr>
<td>I figure what is the most important information when I read in the Biology textbook</td>
<td>2.17</td>
<td>1.18</td>
</tr>
<tr>
<td>I consciously focus my attention on important information</td>
<td>1.92</td>
<td>1.10</td>
</tr>
<tr>
<td>I know what teacher expects me to learn from textbook</td>
<td>2.15</td>
<td>1.10</td>
</tr>
<tr>
<td>I regularly revise in order to better understand the important information</td>
<td>2.02</td>
<td>0.80</td>
</tr>
<tr>
<td>Before I start to learn the lesson from textbook I ask some questions about the subject I will study</td>
<td>1.83</td>
<td>0.87</td>
</tr>
<tr>
<td>I summarize what was read</td>
<td>2.15</td>
<td>1.30</td>
</tr>
<tr>
<td>When I don’t understand something I read the paragraph again</td>
<td>2.25</td>
<td>0.88</td>
</tr>
<tr>
<td>I know what strategies I use when learning a new lesson from textbook</td>
<td>1.92</td>
<td>1.02</td>
</tr>
<tr>
<td>I try to understand the meaning and significance of the information that I read</td>
<td>2.62</td>
<td>1.41</td>
</tr>
</tbody>
</table>
Regarding how pupils identify the relevant information from textbooks when learning Science, pupils have mentioned that, generally, they memorize formulas, check the index, read the lesson, and note the relevant information. These were the most frequent categories of answers that pupils have mentioned, both for Physics and Chemistry, as well as for Biology. However, a high number of pupils said that they actually do not use textbooks at all, preferring instead the notepad because the information is already structured, and thus is easier for them to directly learn from the notepad.

Even if pupils usually do not use textbooks, preferring the notepad, they have mentioned that when they do use textbooks to learn Science they encounter some difficulties, which makes learning more difficult. The main difficulties that pupils encounter in Physics are the following: “there are too many formulas”, “there is too much theory”, “there are too many details” and “the theory and formulas are difficult”. Regarding the Chemistry textbook, pupils have stated that “there are too many details”, “there is too much theory”, “the explanations are given in a difficult language and I don’t understand the terms being used in the Chemistry textbook”, “there too many useless details”, “the definitions are too difficult to understand”, “there are too many formulas,” or “it was easier for me to learn from the notebook”. The most used science textbook was the Biology textbook because, as pupils have mentioned, “texts from Biology textbook are not very difficult.”

**Discussion and conclusions**

The main goal of the present study was to explore how eighth grade pupils from 3 schools in Romania read texts from Science textbooks. As we have seen, the eighth grade pupils who participated in the present research have mentioned that they make little use of the Science textbooks, and they attach little value to them. Further, our data suggest that the strategies used by pupils when reading from textbooks are ineffective (checking the index, learning formulas, reading the lesson and taking
notes, or just reading the lesson). The participants have acknowledged that it is hard for them to understand texts from the Science textbooks, and that the common problems they encounter when reading from textbooks are the difficulty of understanding Science terms and the details that are used in Science texts. Thus, the research has shown that there is a gap between pupils' reading levels and the readability of Science textbooks.

Concerning the limitations of the present study, the results should be replicated using larger samples to ensure the generalization of the results. Further, the results of the present study were obtained using a self-administered questionnaire developed by the researchers, and this involves a reduced control for the variables measured during the present investigation.

Suggestions for teachers:
- Teachers should evaluate the reading level of pupils and the readability of the Science textbooks, and choose appropriate textbooks for a given class of pupils.
- Teachers should help pupils use the Science textbooks as a useful resource for learning Science, helping them to become active readers.

Suggestions for policymakers:
- Policy makers should use effective criteria to evaluate the readability of the Science textbooks, and they should provide textbooks with various readability levels.
- Policy makers should develop evidence-based textbooks, textbooks based on the results of empirical research. In this way, they can assure that textbooks are appropriate for the reading level of pupils, not just for the curricula outlines.

Suggestions for future research:
- There is a need for further research to determine if textbooks can be adapted to different reading and learning styles of pupils (as we have seen in the present study, some pupils consider that the Science textbooks are complicated, while others consider that reading from the Science textbooks is not difficult).

Acknowledgement

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References


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Text comprehension and solving mathematical word problems

Abstract

To understand the written text when solving mathematical word problems is very important. This paper presents the results of an investigation carried out with fifty seventh-grade pupils (13-14 years old). The aim of the research was to find out how well pupils understand mathematical word problems, what text comprehension strategies they use, and how they solve these problems. The results of this investigation highlight the importance of text comprehension in mathematical word problem solving.

Introduction

Romania scored below many others on international tests of reading and mathematics. For example, on PISA for eighth grade students from 2006, Romania was ranked 47th for reading and 45th place for mathematics from 56 participating countries.

The Romanian mathematics curriculum put the emphasis on knowing concepts and mathematical relations and on constructing and applying algorithms for processing data. It stops at the analysis level of the cognitive domain taxonomy of Bloom, without covering the synthesis (Ciascai & Marchis, 2009). There are national tests for eighth grade pupils. Usually the problems given on these tests are symbolically formulated, they don’t have any relation with pupils’ real life, and they require application of formulas or algorithms (Marchis, 2009a; Marchis, 2009b). These are reflected in the Romanian pupils’ results on international tests. They perform above average for problems that are mathematically formulated and require the application of an algorithm, and they perform below average in the case of word problems taken from everyday.

Mathematical word problem solving requires multiple processes, such as reading, text comprehension, problem representation, selection and execution of calculation operations (Kintsch & Greeno, 1985; Mayer & Hegarty, 1996; Swanson, 2004). When solving mathematical word problems, it is important to understand the text of the problem (DeCorte & Verschaffel, 1985; Kintsch & Greeno, 1985; Reusser, 1989;
Vilenius-Tuohimaa, Acenola & Nurmi, 2008) and to translate it into mathematical language using symbols, and vice versa. The low performance of pupils on solving mathematical word problems is related to the understanding of the text (Reusser, 1989). Thus, the aim of this paper is to study seventh grade (13–14 years old) pupils’ mathematical text comprehension and mathematical word problem solving skills.

**Solving mathematical word problems**

Pólya (1945) has identified four main stages when solving a problem: understanding the problem, making a plan, carrying out the plan, and reviewing the solution. Similar steps are described by other researchers (among others Higgins, 1997; Leader & Middleton, 2004; Ridlon, 2004). The understanding stage includes some text comprehension techniques, for example, to identify the unknown words, to reformulate the problem, to think about a picture or diagram that might help to understand the problem context, and the relations between the given and unknown data (Pólya, 1957).

According to Mayer (1983), problem solving has two phases: problem representation and search for solutions. Ahmad, Salim & Zainuddin (2008) have broken down each major part into smaller parts. The “problem representation” phase was divided into comprehension of the text, extraction of the information, and construction of the equation steps. The “search for solution” phase contains solving the equation and giving the answer.

The text comprehension step is very important. Pupils should read and understand the problem, identify the context of the problem, and rephrase the problem in their own words. In the extraction step, pupils should write down the given data and keyword, draw diagrams and figures to help themselves to understand better the problem and see the relations between the given data. Then, they should construct the equation, i.e. translate the text into mathematical language using symbols. After solving the equation, it is important to check the calculations and formulate the answer in the problem context.

When reading a word problem, the difficulties encountered by the pupils could be related with understanding of some words used in the text, and understanding some sequences or some specific vocabulary (Ballew & Cunningham, 1982; Bernardo, 1999; Stape, 2011). Mathematical word problems use a mathematics terminology, which is a challenge for some of the pupils. Another major difficulty is that pupils are unable to imagine the context of the problem (Nunes, Schliemann & Carraher, 1993). If pupils are familiar with the story content, they understand the text better (Wiest, 1996). When solving the problem, the most important difficulties are related with forming a number sentence or equation based on the data given in the problem (Carey, 1991; English, 1998) and interpreting the answer in the context of the
problem (Wyndham & Säljö, 1997; Cooper & Dunne, 2000, Gooding, 2009). Visual representation has an important role in the organization of information given in the text (Antonietti, 1991; Hegarty, Mayer & Monk, 1995). There are cases where the context of the word problem is illustrated with some illustrations. In these cases, it could happen that the pupils’ attention is focused on the illustration and not on mathematical requirements of the problem (Gooding, 2009).

Research

Design of the research

The aim of the research is to evaluate pupils’ reading and problem solving strategies when solving mathematical word problems. The research was conducted during May 2010.

A questionnaire and a problem sheet were developed for the research. The questionnaire contained two demographical questions (gender and mathematics mark of the pupils) and six questions related with the pupils’ problem solving behavior. These six questions were affirmations, which the pupils evaluated on a 5-point scale: from 1 (not at all typical for me) to 5 (totally describes me). The items were developed based on the theoretical background on understanding mathematical word problems (Reusser, 1989; Antonietti, 1991; Mayer, 1992; Hegarty, Mayer & Monk, 1995; Wiest, 1996; Vilenius-Tuohimaa, Acenola & Nurmi, 2008). Cronbach’s alpha reliability for the questionnaire is .76.

The problem sheet contained two mathematical word problems. These problems were selected to be similar as to type and difficulty with those given on the Romanian national test for mathematics. Pupils were required to write down the detailed solutions of these problems.

The questionnaire and problem sheet were anonymously filled in by the respondents. Fifty seventh grade (13–14 years old) pupils completed the questionnaire, 54% of them boys, 46% girls. As regarding their marks, 10% had marks of 3 or 4 (not passing marks), 18% with marks of 5 or 6, 46% with marks of 7 or 8, and 26% with marks of 9 or 10.

Results

Results of the questionnaire

Pupils’ responses are recorded in Table 1.
Table 1. Pupils’ responses to the questionnaire

<table>
<thead>
<tr>
<th>Affirmation</th>
<th>Scale</th>
<th>Not at all (%)</th>
<th>A bit (%)</th>
<th>Typical (%)</th>
<th>Very much (%)</th>
<th>Totally (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I write down the given data to understand the problem better.</td>
<td></td>
<td>8</td>
<td>28</td>
<td>32</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>I check to see if I used all the given data.</td>
<td></td>
<td>16</td>
<td>38</td>
<td>26</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>When solving the problem, I ask myself questions to focus on the problem.</td>
<td></td>
<td>26</td>
<td>42</td>
<td>20</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>If I can’t solve the problem, I read the text several times.</td>
<td></td>
<td>6</td>
<td>20</td>
<td>38</td>
<td>22</td>
<td>14</td>
</tr>
<tr>
<td>I make drawings to understand the problem better.</td>
<td></td>
<td>30</td>
<td>22</td>
<td>30</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>I reformulate the problem with my own words.</td>
<td></td>
<td>32</td>
<td>28</td>
<td>22</td>
<td>12</td>
<td>6</td>
</tr>
</tbody>
</table>

We observed, that 32 % of the pupils do not reformulate the text with their own words, 30 % do not make drawings, and 26 % do not ask themselves questions to focus on problem solving. If we also take into consideration the answer “a bit typical for me,” 68 % rarely try to focus on the problem by asking themselves questions, 60 % of the pupils’ rarely reformulate the problem, and 52 % rarely make drawings. The percentage of those choosing the “totally describes me” option is very low for all the affirmations.

Problem solving

Both problems required pupils to write equations, which they learned about in seventh grade. The second problem also required knowledge about percentage, which pupils learned in sixth grade (see Problem 2). We have presented the solution to the first problem to illustrate how important text comprehension is and how to translate the text into an equation (see Problem 1).
**Problem:** In the seventh grade, there are 6 more girls than boys. When 3 boys were missing, then there are two times more girls than boys. How many classmates does Ann have?

**Solution:** Let \( x \) equal the number of girls and \( y \) the number of boys.

- “there are 6 more girls than boys” \( \Rightarrow x = y + 6 \)
- “When 3 boys were missing, then there were two times more girls than boys”:
  - “3 boys were missing” \( \Rightarrow y - 3 \) boys
  - “there were two times more girls than boys” \( \Rightarrow x = 2(y-3) \)

Thus the system of equations, which we have to solve is:

\[
\begin{cases}
\ x = y + 6 \\
\ x = 2(y - 3)
\end{cases}
\]

Solving the system of equations we get that \( x = 18, y = 12 \). Then there are \( 18 + 12 = 30 \) pupils in the classroom. Thus Ann has 29 classmates.

Problem 1. The first problem given at the test

Analyzing the answers given for the first problem, 20 % of the pupils gave a correct solution, 10 % correctly solved the problem, but their answer is: “There are 30 pupils in the classroom;” therefore, they didn’t carefully read the question. 40 % of the pupils translated “when 3 boys were missing, then there were two times more girls than boys” into \( 2x=y-3 \); 10 % translated “6 more boys then girls” into \( 6x = y \), 10 % gave a totally incorrect solution, and 10 % gave no solution.

Together, Peter and James weigh 90 kilos. 25 % of Peter’s weight is equal to 20 % of James’ weight. Whose weight is less, and how many kilos does he weigh?

Problem 2. The second problem given at the test

In case of the second problem, 20 % of the pupils gave the correct solution and answer, 40 % the correct solution, but they didn’t answer the question of the problem. They have just calculated Peter’s and James’ weight. 20 % of the pupils have understand that Peter’s weight is 25 % of 90 kilos and James’ weight is 20 % of 90 kilos, and 20 % gave no solution.

24 % of the pupils didn’t write down what the variables \( x \) and \( y \) represent. 70 % of the pupils wrote some system of equations (correct or not), and 71 % of them have solved it correctly.
Conclusions

In many cases pupils don’t solve correctly the problem because they don’t understand the text. This is in accordance with the results of Reusser (1989), who concluded that pupils’ major difficulties in solving mathematical word problems are related with the insufficient understanding of the text of the problem. The lack of mathematical knowledge and arithmetical skills is minor importance.

Pupils don’t know what strategies to use for understanding the text of a mathematical word problem. Only 40% of the pupils reformulate the problem with their own words, and one third of the respondents put questions related with the problem context in order to focus on it.

The ability to integrate the information in a structure where the values of known and unknown data become related to each other is important when solving word problems (Mayer, 1992). More than one third of the respondents do not extract the data from the test of the word problem, more than half of them do not check if they have used all the given data and the relations between these data.

There are cases when visual representation helps in organizing the given information and searching for the solution. More than half of the respondents do not use drawings to understand better the problem.

Another difficulty of the pupils is to translate the text into a system of equations. The algorithmic part, i.e., solving the system of equation, is a routine task for most of the pupils.

As a recommendation arising from the results of the research, pupils’ text comprehension abilities should be developed not only during mother language classes, but also during Mathematics classes, developing students’ mathematical vocabulary. Teaching mathematical terminology to students improves their performance on mathematical word problem solving (Gifford & Gore, 2008). Also, pupils should be taught how to solve a word problem: to read and understand the problem, to design a solution plan, to solve the problem, and then to formulate and check their answer in the context of the problem (Higgins, 1997; Ridlon, 2004). This instruction not only increases pupils’ problem solving skills, but it also develops a positive attitude towards word problem solving (Higgins, 1997). Composing their own word problems also helps students in changing their attitudes regarding these problems and becoming familiar with the mathematical terminology (Edwards et al., 2002).
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References


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Metacognitive experiences during collaborative online reading

Abstract

This study explores students’ (16–18 years of age) metacognitive experiences when they read collaboratively online in order to explore multiple perspectives on a controversial issue. Student pairs (n = 38) were asked to write a joint essay on a controversial issue. First, the pairs discussed the topic freely in order to activate their prior knowledge. Next, they gathered source material on the Internet. Finally, they composed a joint essay. During the first two phases of the task the students either took notes or constructed an argument graph. The data were collected using an interaction approach to verbal protocol data (Miyake, 1986) and screen captures. The interaction protocols were transcribed and analyzed by categorizing students’ online reading practices into five episodes: 1) locating information, 2) evaluating information, 3) content-processing, 4) monitoring and controlling activities, and 5) off-task talk. Students in the argument graph group spent 7.5 % and in the note-taking group 6.6 % of the time of the task on monitoring and controlling activities. This article gives representative examples of students’ metacognitive experiences and controlling activities that took place in monitoring and controlling episodes and included collaborative elements. The examples represent different kinds of metacognitive experiences: feelings, judgements, and online task-specific knowledge.

Metacognitive experiences are subjective, cognitive or affective experiences that people encounter during cognitive processing (Flavell, 1979). According to Efklides (2006), metacognitive experiences have an important role when people monitor and control their cognitive processes. First, metacognitive experiences indicate that some monitoring activities have taken place. Second, metacognitive experiences may trigger controlling processes. It has been shown that good readers are skilled at monitoring and controlling their reading processes both when they read traditional printed texts (Baker, 2008) and when they read non-linear texts online (Coiro, & Dobler, 2007).

Although metacognition is usually considered as an individual phenomenon, recently, attention has also been paid to metacognition in social interaction (e.g. Salonen, Vauras, & Efklides, 2005; liskala, Vauras, Lehtinen, & Salonen, 2011). This article...
aims at describing students’ metacognitive experiences and controlling processes that these experiences trigger when students read online in a collaborative situation.

**Metacognition**

This article explores students’ metacognitive experiences based on the framework of metacognition presented by Efklides (2006). According to her, metacognition comprises monitoring and controlling processes. By monitoring a reader can form a representation of his or her cognition. Based on this representation the reader can, in turn, control his or her cognitive processes.

According to Efklides (2006), *monitoring* is based on two functions: metacognitive knowledge and metacognitive experiences. A reader has *metacognitive knowledge* about him/herself as a reader, about the task, and strategies that are effective to accomplish the task (Flavell, 1979). This metacognitive knowledge forms a framework for understanding one’s own and others’ cognition. When metacognitive knowledge enters to ones’ consciousness it might cause a *metacognitive experience*. Metacognitive experiences can, in turn, trigger control decisions. Interaction between metacognitive knowledge and metacognitive experiences is bidirectional since some metacognitive experiences can also shape the metacognitive knowledge base.

Efklides (2006) divides metacognitive experiences into three categories: 1) feelings, 2) judgements or estimates, and 3) online task-specific knowledge. According to her, *metacognitive feelings* may be feelings of familiarity, difficulty, or satisfaction. If a reader feels that she or he is familiar with the reading topic and the reading task runs fluently, there is no need for control activities. Conversely, if a reader feels that the reading task is difficult and she or he does not proceed in a desired way, the reader may call of the use of control decisions. *Metacognitive judgments or estimates* concern judgments of learning, such as whether the outcome is correct, or estimates of effort and time (Efklides, 2006). For example, an online reader might consider whether he or she has found enough relevant information for solving the information problem. Finally, Efklides states that *online task-specific knowledge* differs from metacognitive feelings and judgments since it focuses on the task and processes related to the task itself rather than to person’s affective responses. Online task-specific knowledge refers to identifying critical task features and procedures to be applied. For example, online reader might consider what kind of information is needed to solve the information problem at hand.

Although metacognitive experiences are subjective in nature verbalization of one’s experiences in a collaborative reading situation provides information to their partner(s) about the quality of one’s own, partner’s, or joint cognitive processing. In consequence, sharing metacognitive experiences may affect the controlling of joint activities (Efklides, 2006; Iiskala et al., 2011).
Monitoring and Controlling Processes during Collaborative Online Reading

Online reading (Coiro, Knobel, Lankshear, & Leu, 2008) can be defined as a process of problem-based inquiry. At least five processing practices occur during online reading: 1) reading to identify important questions, 2) reading to locate information, 3) reading to evaluate information critically, 4) reading to synthesize information, and 5) reading and writing to communicate information. This complexity of online reading sets demands on students’ metacognitive processing (Coiro & Dobler, 2007).

Online reading in collaboration might bring along additional complexities on metacognitive processing. Students have to monitor and control not only their own cognitive processes but also both their partner’s and their joint processing. However, there is evidence that collaborative online reading yields higher instances of planning, monitoring and evaluating search behavior compared to individual online reading (Lazonder, 2005).

In this study collaborative reading is defined as a process which requires two elements. First, analogous with collaborative learning (Suthers, 2006, p. 318), collaborative reading is a socially contextualized form of reading. However, a collaborative reading context, by itself, does not automatically produce meaningful learning (Mayer, 2004). Therefore, a second required element of collaborative reading is that it includes a process in which meaning is jointly constructed through discussion (cf. Suthers, 2006, p. 317).

This study sought to explore students’ metacognitive processes when they read online in order to explore multiple perspectives on a controversial issue. During collaborative online reading the students either took notes or constructed an argument graph. An argument graph is a representational tool with which students can graphically present arguments for and against a claim as well as illustrate the relations between the arguments (Van Amelsvoort, 2006). It has been found that argument graph helps students to make their thinking explicit (Van Amelsvoort, 2006) and to monitor their progress in the task (Cox, 1999).

Research Questions

The research questions addressed in the present study were as follows:
1) What was the number of monitoring and controlling episodes in the argument graph group and in the note-taking group?
2) How much time did the students spend on monitoring and controlling activities during online reading in the argument graph group and in the note-taking group?
3) What kind of metacognitive experiences were found when students read collaboratively online and what kind of controlling activities did these experiences trigger?
Method

The participants of the study were 76 students (47 females, 29 males) aged from 16 to 18 years attending the same Finnish upper-secondary school. The students were asked to write a joint argumentative essay on the issue *Should Internet censorship be tightened?* First, the pairs were asked to discuss the topic (10 minutes) in order to activate their prior knowledge; second, they gathered source material on the Internet (30 minutes), and finally composed a joint essay (45 minutes). The students either constructed an argument graph (n = 19 student pairs) or took notes (n = 19 student pairs) during the first two phases of the task.

This study applied an interactive approach in which students are instructed to talk together as they perform a given task (Miyake, 1986). In addition to the discussions, a computer program was used to capture (as video files) all of the students’ web-based activities on the computer screen. The data consisted of interaction protocols which included both information about the Web pages students visited and their discussions. The interaction protocols were transcribed from all the video and audio files, that were recorded when students read and discussed source material online (second phase of the task).

The interaction protocols were analyzed by categorizing students’ online reading episodes (n = 1043). An episode was defined as a thematic entity which consisted of successive activities that served one of several specific reading practices: 1) locating information; 2) evaluating information; 3) content-processing; 4) monitoring and controlling activities (one’s own, other’s, or joint activities), and 5) off-task discussions. The episodes were categorized according to the primary function of each episode. The length (in seconds) of each episode was measured to determine the total amount of time the student pairs spent on the different activities.

Next, we explored monitoring and controlling episodes more carefully in order to choose representative examples of different kinds of metacognitive experiences: feelings, judgments, and online task-specific knowledge. An additional criterion for choosing the examples was that the episodes included collaborative elements. That is, a student responded in some way to his or her partner’s metacognitive experience.

Results

*Monitoring and Controlling Activities among Other Online Reading Practices*

Table 1 presents the number of the different online reading episodes. The means in the number of monitoring and controlling episodes did not differ significantly (U = 188; p = 0.826) between the argument graph (M = 4.58) and the note taking (M = 4.89) groups. There was a relatively wide variation in both groups in the number of
the monitoring and controlling episodes. In the argument graph group the number of monitoring and controlling episodes ranged from 1 to 10 and in the note taking group from 1 to 11.

Table 1. Online reading episodes in the argument graph and note taking groups

<table>
<thead>
<tr>
<th>Online reading episode</th>
<th>Argument graph group (n = 19)</th>
<th>Note taking group (n = 19)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Content-processing</td>
<td>9.95</td>
<td>2.61</td>
</tr>
<tr>
<td>Locating *</td>
<td>6.95</td>
<td>2.92</td>
</tr>
<tr>
<td>Monitoring and controlling activities</td>
<td>4.58</td>
<td>2.52</td>
</tr>
<tr>
<td>Evaluating</td>
<td>3.37</td>
<td>3.69</td>
</tr>
<tr>
<td>Off-task</td>
<td>0.47</td>
<td>1.07</td>
</tr>
<tr>
<td>Total**</td>
<td>25.32</td>
<td>7.34</td>
</tr>
</tbody>
</table>

*U=262.5; p<0.05; **U=253.0; p<0.05

Time Spent on Monitoring and Controlling Activities among Other Online Reading Practices

Table 2. Proportion of time spent on different online reading practices

<table>
<thead>
<tr>
<th>Online reading practice</th>
<th>Argument graph group (n = 19)</th>
<th>Note-taking group (n = 19)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Content-processing</td>
<td>70.52</td>
<td>8.43</td>
</tr>
<tr>
<td>Locating information*</td>
<td>16.38</td>
<td>7.35</td>
</tr>
<tr>
<td>Monitoring and controlling activities</td>
<td>7.52</td>
<td>4.88</td>
</tr>
<tr>
<td>Evaluating</td>
<td>3.39</td>
<td>0.98</td>
</tr>
<tr>
<td>Off-task</td>
<td>0.47</td>
<td>0.64</td>
</tr>
<tr>
<td>Total</td>
<td>100.01</td>
<td></td>
</tr>
</tbody>
</table>

*U=248; p<0.05
Table 2 shows how much time the student pairs spent on different online reading practices in the argument graph group and in the note-taking groups. Student pairs in the argument graph group spent on average 7.52% of time of the task on monitoring and controlling their activities. In the note taking group the proportion was 6.55%. There was not significant difference (U = 148; p = 0.343) in time spent on monitoring and controlling activities between the groups. Again, time spent on monitoring and controlling activities varied widely among the student pairs in the both groups.

**Examples of Metacognitive Experiences**

**Feeling as a metacognitive experience**

In the first example Tiina expresses feeling of satisfaction to her pair. Minna agrees by judging their progress in the task. Both students share the feeling of satisfaction concerning their joint progress in the task.

Example 1

Tiina: I think that we have done quite well.
Minna: So. I also think that we have a rather a lot [of information].

In the second example Sanna expresses feeling of difficulty in her understanding. In this example two control activities emerge. First, Sanna asks her pair about the meaning of preventive censorship who then decides to check the meaning of the concept by utilizing a search engine. Thus, Pinja respond to Sanna’s metacognitive experience.

Example 2

Sanna: Does preventive censorship? What does it mean? Does it mean that before the publishing?
Pinja: Let’s check what it means [googles the concept].

The third example also illustrates the feeling of difficulty. Sini does not understand what implementation of filtering system means and then she controls her lack of understanding by asking her pair about the explanation from. As Mika explains the meaning of the difficult concept to her, the example illustrates also the benefits of collaboration.

Example 3

Mika: Yes, that [implementation of filtering system] is also voluntary for Internet operators.
Sini: Yes... Or is it, wait a moment. Is it some kind of program? Or what is it? Implementation?
Mika: I understood that Central Criminal Police keeps up the list and then sends it to Elisa or Sonera [Finnish operators]. And your Internet goes through them. So, they can inhibit your access. I mean, Elisa can decide whether you can open the page or not.

Judgement of progress
Both example 4 (note taking group) and example 5 (argument graph group) illustrate the students’ judgement of their progress in the task. As the students’ task was to consider the Internet censorship from different viewpoints, both student pairs consider whether they have been able to find arguments for and against the issue. In order to make these judgements the students have take into account the demands of the task. In example 5 the student pair uses argument graph for assessing their progress by checking the balance of their argumentation. In particular, students judge their joint progress collaboratively.

Example 4
Heidi: We have a lot against but almost nothing for the censorship.
Satu: How could we have?
Heidi: This [web site] is against the censorship, too.

Example 5
Taru: What new could we add on this? There isn’t anything new. We have child pornography, Jokela [a school shooting case in Finland] and that stuff.
Taina: There are good and bad things. One, two [counts arguments from the argument graph].
Taru: Take those that begin directly [from the main claim]
Taina: Three, four. And then one, two, three. Three of those with a minus sign. And four with a plus sign. So, three [arguments] that do not support and four that support.

Paying attention to task demands
In the following example the student pair utilizes the online task-specific knowledge. Jari and Marika pay attention to the demands of the writing task when they search for source material for their essay on the Web. In this example metacognitive experience triggers the collaborative planning of the essay.

Example 6
Jari: Should we start to do this so that we think about the essay and what we will put on it?
Marika: Perhaps.
Marika: Some kind of outline on how we start [the essay]
Jari: Yeah.
Marika: Should we start with the fact what is censored?
Jari: Yes, we could start with that.
-planning of the essay continues –

Detecting partner’s misunderstanding
Example 7 illustrates that a metacognitive experience can also concern partner’s cognitive processes. In the example Nina notices the misunderstanding of her pair where after Nina and Kati start to negotiate in order to reach a joint understanding. This example also shows that making connections between arguments visible in the argument graph might help students to notice inconsistencies in their understanding.

Example 7
Nina asks Kati to add the fact that when it is allowed to censor one thing then it is easier to start to censor other things as well.

Kati: But don’t we have already here that useful sites [have been censored]. [Refers to the box in the argument graph.]
Nina: But I thought that this is a little bit different thing. [she explains what she means].
Kati: Is it a little bit like or what do you mean?
Nina: I mean that it is said here.
Kati: But isn’t it. Wait a minute, I don’t get it. Isn’t it so that [she explains what she means]
Nina: It is not necessarily like that [explains by giving several examples]

Conclusions

Students’ metacognitive experiences can concern their own activities, the activities of others’, or joint activities. Metacognitive experiences that students share may also trigger different kinds of reactions. For example, the students may share their feelings of difficulty or satisfaction. They may also explain some difficult concepts to their partner who feels difficulties in his or her understanding. Although the Internet presents new complexities to the reading process (Coiro & Dobler, 2007) it also provides tools to compensate for the potential lack of understanding (see also Coiro, 2007). For example, students can utilize search engines to find a definition for concepts they are not familiar with.

Future research on metacognitive experiences and the control activities these experiences trigger would help us to better understand the unique nature of online reading. In addition, new knowledge on these metacognitive processes might help educators to develop tools for supporting students’ online reading processes.
The argument graph tool can be a helpful aid for students to monitor their cognitive activities. In the argument graph students can make their thinking visible (Suthers, 2001) which might help them to monitor their progress (Cox, 1999) and other aspects such as the balance of their argumentation. However, in this study the student pairs who constructed the argument graph during online reading did not monitor or control their processing more than the student pairs who took notes. This suggests that students need specific instruction to be able to take full advantage of the argument graph as a metacognitive tool.

References


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Reading from print and from screen

Abstract

The article addresses a currently hot topic – reading from print and screen. A sample of Russian 12- to 13-year-olds were asked to choose their preferred medium and answer questions on two texts. The study showed that reading from screens is attractive to this age group, and that it is dependent on both reading and computer skills, on how reading is taught, and on other factors. The research reported here was carried out with the help of the Russian State Scientific Fund (RSSF) in 2009. The main purpose of the study was to compare this age group’s comprehension when reading from screen and from print. The following questions were also examined: Was reading from screen attractive to this age group, boys in particular? And which factors did the choice of reading from print or screen depend on?

Background

Reading from print and from screen is a very widely discussed topic today (Block & Parris, 2008; Chudinova, 2004; Coiro, 2007; Efklides, 2006; Leu, 2000). There is a variety of opinions from teachers and educators: some are ready to get rid of books, others stick to printed materials and avoid using computers in schools (Block & Parris, 2008; Chudinova, 2004, Gendina et al., 2006). Research provides educators with conflicting evidence (Block & Parris, 2008; Coiro, 2007; Chudinova, 2004; Efklides, 2006; Smetannikova, 2006) about reading from screens: there is therefore still a need to re-evaluate some of the most fundamental ideas about literacy, readers, and texts (McEneaney, 2006, p.352).

The situation in Russian schools in 2009 was not simple. School administrators decided when to introduce ICT lessons, how widely computers should be used, which syllable to choose (Chudinova, 2004, Gendina et al., 2006). A lot depended on teachers’ attitude to the topic and their personal computer skills. Possessing a PC at home characterised families of high socio-economic status. Using it for reading depended on the reading behaviour of the family: a lot of parents and children played games and watched films, but did not read texts from screen (Chudinova, 2004). Research also shows that girls of this age are better and more active readers than boys (Block & Parris, 2008; Chudinova, 2004; Smetannikova, 2006; Wood et al.,
that it is a sensitive age for reading development, and that children often drop reading as a pastime when they become secondary school students (Block & Parris, 2008; Chudinova, 2004; Gendina et al., 2006).

**Method**

**Sites and participants**

The study reported here was part of a 3-year research project designed to examine the impact of school computer use on reading development. The study was conducted in the Moscow Region. Schools from four neighbourhoods were selected: three from Moscow, and one from the Moscow region. The neighbourhoods differed socio-economically: two were low-income and two middle-income:

- **Obruchevsky** (location of School 1, S1) is a traditionally white-collar, middle-income, active reading neighbourhood in Moscow which supports public library activities and recreation centres.

- **Vyhinovo** (S2) is a suburban area of Moscow which has lately become home to a large number of migrants from the other former republics of the USSR. They have formed cultural and ethnic communities, which include white-collar and blue-collar families; some are striving for better living and working conditions. Their mother tongue is not Russian, which is the language of schooling in Moscow.

- **Dmitrovka** (S3) is a village situated in the Moscow region. It is officially a low-income area with a rather old rural, even rustic, population and a small local school.

- **Alekseevsky** (S4) is a traditional white-collar area of central Moscow with people who grow up and stay in this part of the city throughout their lives. It supports public libraries and cultural centres. Children often go to schools where their parents and grandparents were pupils.

Four criteria were used to select schools: school type and location, type of curriculum, and use of any extra-curricular reading programmes (Sustained Silent Reading Programme, Library reading activities, etc.)

Three types of school took part in the study: (1) Two comprehensive schools following the standard curriculum, though one had a group receiving extra humanities; (2) A so-called specialist school, in which the curriculum in humanities and languages received more emphasis than in the standard curriculum, though one group followed the standard curriculum; (3) A grammar school with an enhanced curriculum, with one group also receiving extra reading. ICT classes were in the basic
curriculum of all participating schools, but when to introduce them was decided by school principals.

S1 is located in a good, safe area of Moscow, not far from the city centre. Group 1.1 (G1.1) had extra classes in humanities, while G1.2 followed the standard curriculum.

S2 is located in the outskirts of Moscow. Its status is a specialist school with extra classes in languages. The students learn two foreign languages besides Russian. But there are many migrant pupils who can hardly speak or read Russian, and are provided with extra classes in Russian. Three groups took part in the research from this school: one following the standard curriculum (G2.1) and two groups with extra classes in languages and humanities which require a lot of reading practice (G2.2, G2.3).

S3 is situated in a village in the Moscow region. One group following the standard comprehensive school curriculum participated (G3.1).

S4 is a grammar school. It follows an enhanced curriculum, with a strong focus on languages and humanities. G4.1 was a typical gymnasium class, and G4.2 had some supplementary reading programmes (SSR, Reading across the curriculum, Leaders of reading), so their reading skills were better developed.

To sum up, three of the student groups (1.2, 2.1, 3.1) were following the standard curriculum, while the other five were humanities- or language-oriented groups, who were expected to read more and to have better reading skills, not only in Russian but in foreign languages as well. Table 1 summarises the information on the schools and the groups within them.

Table 1. Characteristics of the four schools

<table>
<thead>
<tr>
<th>School</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Obruchevsky, Moscow</td>
<td>Vyhino, Moscow</td>
<td>Dmitrovka, Moscow region</td>
<td>Alekseevsky, Moscow</td>
</tr>
<tr>
<td>Socio-economic level</td>
<td>middle</td>
<td>middle</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>School type</td>
<td>comprehensive</td>
<td>specialist</td>
<td>comprehensive</td>
<td>grammar</td>
</tr>
<tr>
<td>Curriculum</td>
<td>standard (G1.2) (extra humanities, G1.1)</td>
<td>enhanced (extra humanities and languages, G2.2, G2.3); standard (G2.1)</td>
<td>standard (G3.1)</td>
<td>enhanced (focus on languages and humanities, G4.1; with extra reading, G4.2)</td>
</tr>
<tr>
<td>Students’ mother tongue</td>
<td>Russian</td>
<td>Mixed</td>
<td>Russian</td>
<td>Russian</td>
</tr>
</tbody>
</table>
Information was also gathered on the students’ characteristics, and Table 2 presents a summary.

Table 2. The students’ characteristics by school and group

<table>
<thead>
<tr>
<th>School</th>
<th>Group</th>
<th>Total</th>
<th>Girls</th>
<th>Boys</th>
<th>12-year-olds</th>
<th>13-year-olds</th>
<th>Academic attainment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>1</td>
<td>1.1</td>
<td>15</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>1.2</td>
<td>14</td>
<td>6</td>
<td>8</td>
<td>8</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>2.1</td>
<td>20</td>
<td>8</td>
<td>12</td>
<td>6</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>2.2</td>
<td>27</td>
<td>18</td>
<td>9</td>
<td>8</td>
<td>19</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>2.3</td>
<td>27</td>
<td>14</td>
<td>13</td>
<td>9</td>
<td>18</td>
<td>13</td>
</tr>
<tr>
<td>3</td>
<td>3.1</td>
<td>20</td>
<td>6</td>
<td>14</td>
<td>8</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>4.1</td>
<td>24</td>
<td>14</td>
<td>10</td>
<td>18</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>4.2</td>
<td>14</td>
<td>1</td>
<td>6</td>
<td>9</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>162</td>
<td>97</td>
<td>65</td>
<td>72</td>
<td>90</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The students who took part in the research were in the 7th form (grade).

The majority were rather successful: 44 had only excellent marks (high attainment), 80 had good or excellent marks (medium attainment), and 38 had satisfactory marks alongside good and excellent ones (low attainment). So, the numbers in the high and low categories were nearly equal, and the majority (124) were medium or high attainers. On this basis, we hypothesised that the better students would be good readers.

Through questionnaires, information was obtained on whether the students had had ICT classes at school and for how long, if they used PCs for their school projects and/or possessed them at home, and how extensively they used them – see Table 3.

Table 3. ICT classes, and use of PCs in school and at home

<table>
<thead>
<tr>
<th>Groups</th>
<th>N stud.</th>
<th>ICT class</th>
<th>PC projects</th>
<th>PC at home</th>
<th>N years use PC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group1.1</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>3-7</td>
</tr>
<tr>
<td>Group 1.2</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>3</td>
<td>3-7</td>
</tr>
<tr>
<td>Group 2.1</td>
<td>20</td>
<td>12 only boys</td>
<td>12</td>
<td>13</td>
<td>1-6</td>
</tr>
<tr>
<td>Group 2.2</td>
<td>27</td>
<td>23</td>
<td>23</td>
<td>12</td>
<td>1-6</td>
</tr>
<tr>
<td>Group 2.3</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>18</td>
<td>1-3</td>
</tr>
<tr>
<td>Group 3.1</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>3-7</td>
</tr>
<tr>
<td>Group 4.1</td>
<td>24</td>
<td>0</td>
<td>20</td>
<td>23</td>
<td>3-7</td>
</tr>
<tr>
<td>Group 4.2</td>
<td>15</td>
<td>0</td>
<td>15</td>
<td>15</td>
<td>3-7</td>
</tr>
</tbody>
</table>
In groups 1.1 and 1.2 all the students had classes in information and communications technology (ICT) and used computers at school, and only 3 didn’t have a PC at home. In group 2.1 only boys had ICT classes (the girls had home economics!). In group 2.2 almost all students had ICT classes, with the exception of four girls who also chose home economics. All the students in groups 2.3 and 3.1 had ICT classes and used PCs for their project work, and most (G2.3) or all (G3.1) had PCs at home. Students in groups 4.1 and 4.2 had no ICT classes (they start in year / grade 8). But many of them had computers at home and used PCs for their personal needs, including school projects.

Reading materials
Two texts were chosen for the research. They both concern life under water and colourful fish.

Text A was a fairy tale from “The Thousand and One Nights”, where each episode moves slowly on to the next and provides the solution to the previous problem. It is eleven pages long and its length is its difficulty. But as the students know the genre, and it has a crystal-clear problem-solution frame, it is easy for them. Its readability is of medium difficulty.

Text B is non-fiction. It is a popular science, “goal-action-outcome” text with descriptive elements which explains underwater life. It is shorter but has a lot of factual information, biological terms, complex sentences and specialised vocabulary. Its readability is also of medium difficulty.

The texts were accompanied by before-, during- and after-reading questions. Students were allowed to use resources to find the answers (the internet, encyclopaedia, dictionaries), if necessary. Before-reading questions were intended to help the students form hypotheses about the text on the basis of the title and their reading experience.

During-reading questions fell into six groups.
1) The first group included factual (literal comprehension) questions, the answers to which were “in the lines” of the text. The answers to some questions could be located in one place, while to answer others it was necessary to put pieces of information together from different parts of the text.
2) The second group included interpretive (inferential comprehension) questions “between the lines”. It was necessary to interpret the author’s ideas, and to make judgments.
3) The third group included conceptual questions about the topic, main idea, problem, and message of the text. Full answers including arguments were expected, supported with facts or examples from the text.
4) The questions of the fourth group were “beyond the lines”. They asked students either to apply information from the text or to identify each text’s type and its genre.

5) Group five consisted of vocabulary questions.

6) Group six included reflective questions where the readers assessed their before-reading hypotheses about the content of the text.

After-reading questions asked the students to assess themselves as readers and to reflect on their experience of reading from screen and from print. Answers to the questions were to be given in a full or short form; some questions were of multiple-choice form.

**Questionnaires**

Teacher and student questionnaires were devised. The teachers reported about students’ marks in the Russian language, literature, history, science and ICT, and use of PCs at school. The students answered questions about their reading habits and preferences in reading, explaining their preference: print or screen.

**The research design and data analysis**

The texts had previously been divided into logical sections. Each student read the odd-numbered sections from print, and the even-numbered sections from screen. After getting experience in reading from both print and screen, the students chose the medium they preferred. They worked with the first text for 135 minutes and for 90 minutes with the second.

Method included: (1) reading in succession from print and screen; (2) answering 100 questions, 70 for text A and 30 for text B. It is similar to the Self-Monitoring Approach to Reading and Thinking strategy (SMART). Marks were awarded as follows: correct answers to the most difficult questions got 3 points, less difficult questions 2 points, and easy questions 1 point.

The students’ scores were grouped into five comprehension categories:

- Low: 50 points or less
- Low intermediate: 51–60 points
- Intermediate: 61–74 points
- Higher intermediate: 75–95 points
- High: 96–100 points
Results

The points were also converted into percentages, and the average percentage score for each group was calculated and related to the same scale as the individual students’ scores. This information and the distribution of individual students’ scores are shown in Table 4.

Table 4. Students’ comprehension levels, individually and by group

<table>
<thead>
<tr>
<th>Group</th>
<th>High intermediate</th>
<th>Intermediate</th>
<th>Low intermediate</th>
<th>Low</th>
<th>Mean %</th>
<th>Average level per group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>65%</td>
<td>Intermediate</td>
</tr>
<tr>
<td>1.2</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>60%</td>
<td>Intermediate</td>
</tr>
<tr>
<td>2.1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>20</td>
<td>24%</td>
<td>Low</td>
</tr>
<tr>
<td>2.2</td>
<td>2</td>
<td>9</td>
<td>6</td>
<td>10</td>
<td>56%</td>
<td>Low intermediate</td>
</tr>
<tr>
<td>2.3</td>
<td>0</td>
<td>6</td>
<td>6</td>
<td>15</td>
<td>49%</td>
<td>Low</td>
</tr>
<tr>
<td>3.1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>18</td>
<td>42%</td>
<td>Low</td>
</tr>
<tr>
<td>4.1</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>9</td>
<td>55%</td>
<td>Low intermediate</td>
</tr>
<tr>
<td>4.2</td>
<td>11</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>83%</td>
<td>High intermediate</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>32</td>
<td>21</td>
<td>80</td>
<td>54%</td>
<td>Low intermediate</td>
</tr>
</tbody>
</table>

Table 4 does not contain a ‘High’ column because no students scored in that range.

Three groups (2.1, 2.3, 3.1) had a low average level of text comprehension, two (2.2, 4.1) were low Intermediate, two (1.1, 1.2) were intermediate and only one (4.2) was high intermediate; the overall level was low intermediate. The average proportion of correct answers varied from 24% to 83% across the groups. A total of 61 students were in the High intermediate and Intermediate groups, and 101 in the Low intermediate and Low groups. Thus it would seem that more than 60% of these quite good students were learning at school while understanding only half of what they read. The better results of group 8 may be explained by their curricular and extra-curricular supporting reading programmes. The results lead us to the conclusion that the reading skills of secondary school students are underdeveloped, and they become successful readers and learners only with some extra work.
Table 5. Average scores (%) for comprehension of fiction and non-fiction, by group

<table>
<thead>
<tr>
<th>Group</th>
<th>Fiction</th>
<th>Non-fiction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>66</td>
<td>64</td>
</tr>
<tr>
<td>1.2</td>
<td>61</td>
<td>59</td>
</tr>
<tr>
<td>2.1</td>
<td>28</td>
<td>20</td>
</tr>
<tr>
<td>2.2</td>
<td>66</td>
<td>46</td>
</tr>
<tr>
<td>2.3</td>
<td>58</td>
<td>40</td>
</tr>
<tr>
<td>3.1</td>
<td>44</td>
<td>40</td>
</tr>
<tr>
<td>4.1</td>
<td>56</td>
<td>54</td>
</tr>
<tr>
<td>4.2</td>
<td>82</td>
<td>84</td>
</tr>
</tbody>
</table>

Reading comprehension of the fairy tale was better in all the groups except G4.2. Comprehension of non-fiction was 18-20 percentage points worse than that of the fiction text in groups 2.2 and 2.3.

Mostly, literary texts are used to develop the reading skills of pupils in Russian elementary schools. When, at 11 years of age, students enter secondary school, which begins with form/grade 5, there are no reading lessons any longer, and subject teachers do not develop reading skills. That appears to be why the comprehension of non-fiction is, in general, worse. Additional reading programmes for G4.2 seem to have helped those students get better results. Failures in the comprehension of non-fiction in other groups are probably connected with the methods of teaching reading. In all four PISA studies Russian students have shown better understanding of fiction than non-fiction (OECD (2001; 2004; 2007; 2010).

The answers to the questions also reflect methods of teaching comprehension, which is mainly based on answering factual questions and on vocabulary work.

The worst results were the answers to questions asking the students to form hypotheses. In some cases, they put forward false hypotheses, in others no hypotheses at all. They described making hypotheses as the most difficult assignment.

The results showed that the students had no habit of searching for information even if they had access to the internet. If they didn’t know the answer, they simply skipped the question. It is the evidence of the “old” teaching method when the students asked and the teachers answered all their questions.

The most difficult after-reading assignments were writing full answers to the questions. In some cases the questions were omitted, in others the answers were either wrong or rather short. Moreover, the sentences had a lot of spelling and grammar mistakes when students wrote them by hand. Spelling mistakes were
corrected by the computer spell-checker if students answered on computer. As the students were not fast at inputting their answers, it took them longer and their answers were shorter. Poor readers answered only factual questions, which might be connected with their limited reading experience.

Reading behaviour
Only one aspect of reading behaviour is discussed here. The choice of reading medium was made by all the students after they had practised reading from print and from screen. They didn’t change it. It shows that they were capable of taking the decision and responsibility for it.

Table 6. Comprehension from print and screen

<table>
<thead>
<tr>
<th>Group</th>
<th>N of students</th>
<th>N who read from print</th>
<th>N who read from screen</th>
<th>Mean comprehension from print (%)</th>
<th>Mean comprehension from screen (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>15</td>
<td>1</td>
<td>14</td>
<td>65</td>
<td>62</td>
</tr>
<tr>
<td>1.2</td>
<td>14</td>
<td>7</td>
<td>7</td>
<td>60</td>
<td>56</td>
</tr>
<tr>
<td>2.1</td>
<td>20</td>
<td>17</td>
<td>3</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>2.2</td>
<td>27</td>
<td>16</td>
<td>11</td>
<td>56</td>
<td>50</td>
</tr>
<tr>
<td>2.3</td>
<td>27</td>
<td>21</td>
<td>6</td>
<td>49</td>
<td>50</td>
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<tr>
<td>3.1</td>
<td>20</td>
<td>15</td>
<td>5</td>
<td>42</td>
<td>40</td>
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<tr>
<td>4.1</td>
<td>24</td>
<td>6</td>
<td>18</td>
<td>55</td>
<td>52</td>
</tr>
<tr>
<td>4.2</td>
<td>15</td>
<td>1</td>
<td>14</td>
<td>83</td>
<td>8</td>
</tr>
</tbody>
</table>

Table 6 shows that the students from the more successful groups, better learners and readers, chose reading from screen. Their level of reading comprehension from screen was not different from the mean level of comprehension of the whole group. In group 1.1 they all had PCs at home and used them at school. In group 4.1 they all used PCs at home but had no ICT classes at school. It was their first chance to practise computer skills in class work. In groups 2.1, 2.2 and 2.3 only some students had an ICT lesson at school for one year. As we know from the answers in the questionnaire, they used PCs at home mainly for playing games. Poorer students stuck to more traditional ways of working, read from print, answered questions the way they were taught, skipped those to which they did not know the answer, and did not take any risks. They showed little curiosity. They did not go on the internet to find answers as they were not sure how to do it and were afraid to lose time. We had expected the boys to be more inclined to read from screens, but the results did not show this. Future research is needed to investigate several other factors.
Conclusions and discussion

On average, the level of text comprehension of these 7th-grade students of 12-13 years of age varied from low to high intermediate depending on school, class, curriculum, additional reading programmes, and the medium of text presentation.

Three groups had low average levels, which is depressing as the students mainly had good marks at school. The high intermediate level was reached only by students of a grammar school group with additional reading programmes. Comprehension of fiction was better than comprehension of non-fiction, on average. One exception was the group with extra-curricular programmes where they practised reading both fiction and non-fiction. Russian students showed similar results in the PISA studies of 2000, 2003, 2006 and 2009. This suggests that secondary school students should be provided with teacher-guided reading practice in all subject areas.

Methods of teaching reading affected reading behaviour, especially of poor students. The more experienced the readers, the better the chance that they would choose the new approach, reading from screen. Those who had good print skills learnt to read from screens fast. Their comprehension level when reading from screens was similar to that when reading from print.

Making hypotheses was the most difficult assignment for the students. Interpretive, conceptual and reflective questions were second in difficulty. Answering factual questions was easier as they are much more common in lessons. Answers to interpretive questions show if a reader is able to have a “dialogue with the author”, and hypothesizing shows if a reader can carry out the so-called “I and myself cooperative activity” described as “talking with oneself” (M. Bakhtin).

The strategy used in the study was effective and had an educational value. It combined reading from screen and from print, and aroused students' interest in learning a new way of reading.

There was no significant difference in the reading comprehension levels when reading from screen or from print. Those who read well from print also read well from screen. Those who learned at school how to use computers and practised working with them at home made their choice very quickly. Those who hadn’t used PCs widely before, but had good reading skills, learned to read from screen in the course of the study. Reading from screen was attractive for all the students but it was much more motivating and challenging for good readers. At first students’ speed of working from screen was slower, but then it increased to their print speed.

Extra-curricular reading programmes at school were very effective. In fact, the standard curriculum did not provide high levels of reading comprehension in these secondary schools.
Reading from screen motivates good students more. They get better results faster. Boys and girls are equally interested.

References


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Adolescent reading for pleasure

Abstract

This paper is based on the outcome of the national survey, conducted in May of 2010 on a representative sample of 15-years-old Polish teenagers. The study observed adolescents towards the end of compulsory schooling. The aim of this research is to describe the place taken by a book in the adolescent's everyday life; it means their reading activities, intensity, preferences and access to books. The article focuses on recreational reading practices of Polish teenagers: the activity of reading books and the discrepancies between boys and girls, the part of teenagers beyond book reading, the genres of literature read by young readers, gender and the reading choices in leisure time.

Reading books as a social and cultural practice

Reading books is more than the ability to read and write (Gee, 1992; Barton et al., 2000). The study of literacy involves the study of how readers use texts and how texts fit into the practices of people's lives (Majors et al., 2009; Fiske, 2006). According to Pierre Bourdieu (1984), reading books is an indicator of a reader's cultural capital. Reading choices tell us about the cultural competence of readers and about their social functions in everyday life.

When speaking about book reading in times when the book is losing its stable identity (Kress, 2003), in circumstances of convergence of culture (Jenkins, 2006), and rapid development of information and communication technologies when traditional reading loses out to reading online, the researcher faces the question: how to currently investigate literacy, and how to compare reading a printed book to reading text online in light of new skills and strategies accorded to new or digital literacy (Tapscott, 2010, Palfrey & Gasser, 2008). New book formats evoke new alternative communication strategies (e.g.: Ito et al. 2010) as well, particularly for digital teenagers.

Adolescent reading should be considered in two social situations of reading communications: reading for school and out of school. These two situations have different social and cultural contexts and conditions. In this article I will focus on the first: reading in leisure time, including reading for pleasure.
Spontaneous reading depends on intrinsic motivation (Brophy, 1997; Guthrie & Wigfield, 2000) and a socio-cultural background deeper than compulsory reading. This kind of reading is determined – more than reading for school – by socialization in the family, parents’ scholarly culture, and the cultural capital from home (Kraaykamp, 2003). The cultural patterns of reading are important: the prestige of books which appears in possessing, buying, borrowing and reading them and talking about them in teen households, to what degree the reading of books is an everyday activity, part of the cultural toolkit (Swidler, 1986). Reading is an important activity in peer groups as well. Talking about books, recommending, exchanging them between colleagues and friends makes reading social and collaborative. In peer groups, some children can find a status-conscious motivation for book reading, which builds their position in a group as well. Children who like to share books as well as tastes and preferences with peers and who participate in a community of readers are likely to be intrinsically motivated readers.

There is a positive relationship between students’ reading achievement and parents having engaged their children in early literacy activities before starting school (e.g., reading books, telling stories, singing songs, playing with alphabet toys, and playing word games). Additional factors influencing reading for pleasure are students’ perceptions of themselves as good or poor readers – self-assessment of their own reading ability and reading achievement (Guthrie & Wigfield, 2000; Mokhtari et al., 2009; Mullis et al., 2007), their literary competence and literacy skills originating from school (curriculum, instructions, teacher competence, etc.). Reading as a habit in leisure time depends on the amount of free time and various forms of access to books available to young readers.

There is a close relationship between reading proficiency—and positive attitudes towards reading, enjoying reading and appreciating books (Mullis et al., 2007). Recent research focused on student motivation and reading habits in middle schools presents evidence of a strong connection between independent reading and school success measured in different ways (Knoester, 2009: 676-677; Hughes-Hassell & Rodge, 2007).

**Differences in reading practices – social and cultural distances**

International research on achievement in reading literacy and reading habits (PISA, PIRLS, NAEP National Center for Education Statistics 2010; Hughes-Hussell & Rodge 2007) shows great differences between students in their reading performance and activities. In Poland, the results of the social sciences test in a comprehensive lower secondary school (called gymnasium) examination conducted in April 2010 (CKE, 2010) revealed vast discrepancies in the educational achievement of Polish students. On average, the best were pupils from large cities, the poorest those from
schools in rural areas, but the largest gap was between girls and boys. Previous empirical studies have shown that reading books, especially fiction, is a pastime activity linked to gender (e.g. Tepper, 2000; Clark, Torsi & Strong, 2005). The same tendency was proven by a national survey of readership of Polish 15-year-olds (Zasacka, 2008): it showed social inequality in leisure reading, and girls as more active readers and with a positive attitude toward reading.

Method

The main purpose of the study was to examine the reading experience of 15-year-old teenagers and to analyze socio-demographic differentiation in their reading practices. The general research question was: what proportion of Polish students no longer engage in book reading at the end of compulsory schooling? This study applied the same method as in a national survey conducted in 2003 (Zasacka, 2008) and made it possible to observe trends in adolescent readership.

A survey was conducted on a nationally representative sample of 15- to 16-year-olds from 70 comprehensive lower secondary schools in Poland in May 2010. The questionnaire was administered during one lesson towards the end of the third year of a comprehensive lower secondary school (gymnasium). The topic of interest of this survey was the role of reading experience in the everyday life of school students, their reading of books for school and beyond. Students were asked about their reading of books (in electronic versions or on the internet as well) in the last eight months – from the beginning of the school year. The questionnaire concerned the following detailed issues: participation in culture and main activities in students’ leisure time (how often); how many and what types of book (title, author or subject) they read, whether they liked to read or not and if they had favourite books, of what type and subject, whether they had any idea of book recommendations for their peers and why those books were worth reading, reading practices on the internet, the number of books in their households, the social circle of book readers (borrowing, lending, discussing, informing), ways of obtaining the books they read, especially what types of books were borrowed from libraries. Background questions provided the following independent variables: gender, place of student residence and location of school, whether they needed to travel to school, and the level of parental education and occupation.

The books indicated by the participating students as read in leisure time, their favourite books and the books they recommended were classified using a method of expert evaluation. I used classification into genres and literary books to investigate social differentiation in the tastes of teen readers. Content analyses of students’ grounds for book recommendations provided an opportunity to identify values attributed to enjoyable reading. The analyses in this study are based on basic descriptive statistics and two-way cross-tabulations using SPSS.
In this paper I focus on students’ spontaneous reading activities and choices beyond school work – reading for pleasure and the place of book reading among other leisure time activities.

Characteristics of the sample
The survey included 1,472 15- to 16-year-olds from the third year of a comprehensive lower secondary school (gymnasium): 51% boys and 49% girls of whom 40% lived in the countryside and 60% in towns (17% in towns below 19,000; 19% in towns from 20,000 to 99,999; 18% in cities from 100,000 to 500,000 and 6% in cities with more than 500,000 inhabitants, whereby 27.4% lived in another location than the school requiring daily travel to school. 98% stayed during the school year with their parents and only 1.1% lived at another family home or at a boarding-school.

Main findings

Teenagers who no longer read books
We asked subjects whether they had read books in their leisure time during the last 8 months and separately whether they had read books as part of compulsory school activities. It turned out that 14% of Polish students no longer read books, but they are mostly boys: 21% of boys leaving common comprehensive school cycle do not read books for school or on their own.

Reading for pleasure
Some 68% of all 15-year-olds reached for a book merely for pleasure in addition to their school work and without encouragement from their teachers. This means that one-third of the students near the end of grammar school lacked inclination or interest to read on their own for enjoyment. There is a crucial gender difference in this activity: 81% of Polish adolescent girls read for pleasure, but only 56% of boys.

Within the group who do read for pleasure, a small percentage were very infrequent readers (that is, they reported reading only one book) (4% of girls and 10% of boys); occasional readers (who read 2-3 books) constituted 14%; 21% read 4–9 books and more than one in five Polish students (22%) were avid readers, who mentioned more than 10 titles of books read. The girls read more books than boys; in particular, 38% of girls were avid readers, but only 27% of boys.
Taking into account the criterion of two kinds of reading activity: for and outside school work, I distinguished three groups of readers: spontaneous readers, school readers and active readers (Figure 1).

Active Readers were those teenagers who read books in both situations: during their leisure time and as a school duty. Some 57% of participants' students were classified as active readers. This is another example of the cultural distance between Polish teenage girls and boys: the gap is almost 30 percentage points – 71% of girls and only 44% of boys.

Positive attitudes towards reading

To find out about teenagers' attitudes towards reading books, I simply asked them: “Do you like reading?” There was an increase in those who declared that they did not enjoy reading compared to the results of a study from 2003 (Zasack, 2008), especially among boys. Less than one half (46%) of the sample declared that they enjoyed reading (63% girls and 30% boys), 23% that they did not - 11% of girls and 34% of boys.
Spontaneous reading choices and teen gender

The most popular and favourite books and authors belong to popular fiction mainly for teens. There are two different groups: fantasy and realistic novels with teenage protagonists. 28% of the sample chose fantasy. There was a clear overall favourite (number one in each reading ranking in this survey): Stephenie Meyer’s sequel of vampire books (*Twilight* etc), horror and romance in one body, mainly the girls’ favourite. In all, 15% of Polish 15-years-olds read her books.

We can distinguish a group of authors and their novels with young vampire protagonists (Meg Cabot *Lyceum Avalon*, Jane L. Smith, Rachel Taine *Vampire from Morganville*, PC. Cast, Kristin Cast, Cassandra Clare, Becca Fitzpatrick, Lisa McMann, and Russian author Ksenia Basztowa) and still on the top, the series of adventures of Harry Potter by J. K. Rowling.

![Figure 2: The most popular authors](image)

The girls’ favourite reading from this genre was vampires’ diaries and romances of girls with boys from another world.

Other authors of fantasy for teens were read by both genders. Their books have more sophisticated heroes, action, mystery, evil, humour, and vivid description: Neil Gaiman *Coraline* is as suspenseful and horrifying as a modern movie thriller, Christopher Paolini books with dragons (*Eragon, The Oldest, Brisingr,* and Lemony Snicket, Cornelia Funke, and Anthony Horovitz.
In this non-realist set of choices, there is a second group of books most frequently read and favoured by readers, fantasy for adults. We emphasize that this genre is number one in boys’ reading choices. Twice as many boys as girls indicated novels and authors from this genre as their favourite reading. We admit that these novels demand advanced literary competence and are very often serious artistic literary works in a highbrow style. The first one for years was Tolkien, followed by Polish author Andrzej Sapkowski. Still very popular among these teenagers were Stephen King and dozens of other writers, Terry Pratchett, Robert Anthony Salvatore, Dmitry Glukhovksy (Metro 2033), Dean Koontz, Anna Rice, Christopher Moore, Neil Gaiman, horror writer Robin Cook and Graham Masterton, together with many Polish writers, e.g. Jacek Dukaj, Jacek Piekara, Andrzej Pilipiuk, Jacek Komuda and Maja Lidia Kossakowska.

The second group of spontaneous reading choices consisted of very different realistic novels about everyday youth life: relations with peers, first love, school and family troubles. They are written mainly by Polish authors. Most popular for years have been “problem novels”, books about teen drug addiction and pathologies in family and society. The authors of those books were primarily German (Christiane F, mostly read 7 years ago as well, Jana Frey, Heidi Hassenmuller) and Polish: Barbara Rosiek, Anna Onichimowska, etc (figure 4). This genre had almost exclusively female readers.

Popular light novels, romances with teenage protagonists were read as well. The most read authors of such literature were: Meg Cabot, Valpierre, Jacqueline Wilson, Kevin Brooks and Ann Brashares.

Highbrow belle-lettres were also popular, mainly books in the bestseller rankings (in Poland, the popular Paulo Coelho, Carlos Luis Zafon). These Polish teenagers liked books written by Eric Emanuel Schmidt and from classic fiction they, mainly girls, chose Jane Austen and Charlotte Bronte. These novels requiring a more emotional reception were popular mostly among girls. The survey noted an increase in the popularity of Polish romances and lowbrow popular novels due to female readers.
Figure 3: Types and genres of books read in leisure time – list based on read titles and authors

<table>
<thead>
<tr>
<th>Rank</th>
<th>Genre</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fantasy for teens, young adults</td>
<td>28%</td>
</tr>
<tr>
<td>2</td>
<td>Fiction for teens, young including: problem novels (about</td>
<td>20%</td>
</tr>
<tr>
<td>3</td>
<td>Fantasy</td>
<td>16%</td>
</tr>
<tr>
<td>4</td>
<td>Belles-lettres, highbrow fiction for adults</td>
<td>11%</td>
</tr>
<tr>
<td>5</td>
<td>Popular scientific books, handbooks</td>
<td>11%</td>
</tr>
<tr>
<td>6</td>
<td>Crime fiction, suspense detective</td>
<td>10%</td>
</tr>
<tr>
<td>7</td>
<td>Lowbrow, popular novels, romances</td>
<td>8%</td>
</tr>
<tr>
<td>8</td>
<td>Non-fiction, narrative non-fiction, adventure, fairy</td>
<td>7%</td>
</tr>
<tr>
<td>9</td>
<td>Children literature: adventure, fairy</td>
<td>6%</td>
</tr>
<tr>
<td>10</td>
<td>Comic books</td>
<td>3%</td>
</tr>
<tr>
<td>11</td>
<td>Religious literature, mainly Christian</td>
<td>2%</td>
</tr>
<tr>
<td>12</td>
<td>Encyclopedias, dictionaries, atlases</td>
<td>4%</td>
</tr>
</tbody>
</table>

In comparison with the findings from a previous survey conducted seven years earlier, we observed less interest in hobbies and popular scientific books. Boys’ eagerness to read books about history, especially World War II, has been stable for the last decade. Female readers of non-fiction preferred diaries and memoirs of famous people, mostly women.

There were several more male readers of crime fiction and the most popular was an author from the bestseller lists – Don Brown. Literature for children and adventure stories were more often read by boys. Comic books had only a few but real fans, who used to read dozens of them, of which manga was the most popular.

Reading books online

Most participating teenagers used the internet, and reading assumed a large role in different skills used there such as listening, watching, playing, and writing. Some 24% declared that they obtained books from the internet, but only 9% indicated books read online and websites for this purpose. If we speak about books on the internet, real e-books are not so popular among adolescents. Even literary texts read online are not treated as taken from books, mainly because they are read in fragments and are obtained from the internet by chance through browsers.
Conclusions

Reading practices vary according socio-demographic distinctions, but this paper presents general results concerning a sample of Polish teenagers and the main differences in girls' and boys' reading choices.

There were great discrepancies in teenagers’ reading activities. There was a group who no longer read books, predominantly boys. At the opposite end there was smaller group of primarily girls for whom reading books was an obvious everyday activity. They were avid readers, had defined interests and possessed their own favourite choices. It is alarming that the number of boys who disliked reading had grown.

As for adolescents’ spontaneous reading choices, we must emphasize the great impact of the globalized book market. Books from the top ranking lists are examples of the immediate, international spread of popular literature supported by quickly distributed film versions. The popular novels by Joanne K. Rowling and Stephenie Meyer are cases in point. There are many new fantasy literary works on the Polish book market, especially for teens. Most are popular, but some are highbrow literature with artistic values. Those novels that are more complicated and demanding are attractive to a certain group of teen readers, including boys as well.

The internet is a new important resource for reading books for young readers. One out of ten of these Polish 15-year-olds had taken reading from websites. If they could not obtain a book they needed from home, a public library or the school library, or could not buy it (regardless of whether for school or their own use), they were clever enough to find it online.

References


Kirsch, I et al. (2002). Reading for change. Performance and engagement across countries. Results from PISA 2000, OECD.


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Literature circles to integrate instruction in literature with learning skills

Abstract

The overall purpose of our research project is to explore and describe the classroom activities needed to develop learners’ competence in reading literature at school. The focus of this case study is to find relationships between the construction of meaning within literary discussions and the modes of collaboration and social interactions in the peer-group literature circles. The participants of the case study are 22 7th grade pupils who were involved in collaborative peer-group work during the Mother Tongue and Literature classes. The results show that social engagement and metacognitive skills are combined in the literature circles, and together they seem to support a literary discussion where role-playing and free debate are intertwined.

Introduction

The purpose of our research project is to investigate the classroom activities needed to develop learners’ competence in reading literature at school. The investigation is built upon following the literary discussions of one class from 7th through 9th grade. The participants of the case study are 22 7th grade pupils – 10 girls and 12 boys. The focus of this case study is on the collaborative work of the learners in peer-group literature circles.

This paper focuses on the collaborative work of the learners in peer-group literature circles at the end of the 7th grade. The discussion and social interaction in literature circles combines first attempts to analyze fiction books read in the Mother Tongue and Literature classes and a series of interactive and collaborative activities. The concept of learning reflects an individual and communal process of building knowledge and skills, which takes place independently, under a teacher’s guidance, and in interaction with the teacher and peer group (National Core Curriculum for Basic Education 2004, 16).

The specific objectives of literature instruction for grades 6 through 9, however, include analysis of fictional structures using concepts appropriate (National Core Curriculum for Basic Education 2004, 54). Thus, we also wish to study the interplay...
between the general goals of the national core curriculum and the objectives of reading fiction in the Mother Tongue and Literature classes.

**Research material**

In this project, reading fiction in the Mother Tongue and Literature classes is explored in an authentic classroom context where the instructional practices of Tampereen normaalikoulu (University Training School) are employed. The 7th grade pupils come to this school from several elementary schools that span grades 1–6. Note 1:

During the first year with a specialized teacher in the Mother Tongue and Literature, teaching and learning focuses on enabling pupils to improve skills for studying, including co-operation in small groups, along with reading, writing, language and media knowledge in the Mother Tongue and Literature classes. In the new learning environment of ‘upper school’, fiction texts are initially taught through popular genre literature, fantasy, horror, science fiction, detective stories, poems and short drama texts. Basic concepts of literary reading are also taught. The amount of books read during the school year is six; three of them are obligatory for all, three books may be chosen from a list of suggested books, or the pupils can choose books on their own.

The research project group involved in this study consists of 22 pupils - 10 girls and 12 boys in this group. It is one of the bilingual Finnish-English classes at the school, comprising a specially selected group of pupils with good skills in Finnish and English. The Finnish language, the mother tongue, however, is taught as usually in the schools in Finland.

The group’s teacher in the school-subject Mother Tongue and Literature is an experienced and innovative person, and a member of the author team of the textbook used in the class. Note 2. She is in charge of instruction, which is planned and carried out for this research together with some student-teachers. Note 3

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Note 1: In Finnish schools, students are taught every subject by the same teacher, ‘a class-teacher’, until the beginning of seventh grade, when every subject has its own teacher. The curriculum is written for the grades 1st–5th and 6th–9th.

Note 2: The teacher, MA Kaarina Ahonen, who is in charge of instruction, is also a member of the author team for the textbook Taito, which is used in Tampereen normaalikoulu; the publishers in Finland also follow the National Core Curriculum when preparing books for schools.

Note 3: Teacher education in Finland takes place in universities, with special training schools for the student teachers to have the practical part of their education in. Supervising activities are shared between the mentoring Mother Tongue and Literature lecturers of the training school and the lecturer in Didactics of Mother Tongue of the Department of Teacher Education. – In this research project the teacher in charge of the instruction and mentoring of the student-teachers is the school lecturer, and the writer of this paper, and the participating observer in the research project is the university teacher.
In Spring 2009, the pupils were given the opportunity to read a book of their own choice; it was possible to choose a young adult fantasy book, or any new book. The small groups for the literature circle activity were organized around the books chosen to be read by the pupils with the help of the teacher.


The activities of the literature circles and the literature discussions were guided and scheduled by the teacher. Concepts of narration were taught according to the curriculum and the textbook. The tasks given to the groups were based on the textbook used. The pupils used two books for the literary discussions: the fiction book they were reading and the textbook, entitled “Skill” (*Taito*, WSOY).

The literature circle discussions consisted of three meetings and reading the book at home. The guidance and tasks given influenced the structure and activities of the group members during the discussions. Each student wrote personal comments in a log while reading the novel, called a “reading-adventure book”; all of the writing or drawing tasks were documented in that book. The peer-groups met twice to discuss the books, according to the schedule.

During the first meeting on May 12th, 2009, the pupils had a warm-up conversation about their expectations of the book based on the cover, the back cover text, other books by the same author, and the title of the book. Plans were made for starting to read the first part of the book at home. Roles were given to every member of the group to prepare for the second meeting: Dialogue Hunter, Narration Hunter, Description Hunter, Protagonist Analyst, Analyst of Protagonists and Antagonists.

In the second meeting on May 15th, 2009, the pupils went through the tasks they had completed in the roles decided on in the earlier meeting. After that, the pupils were asked to engage in a discussion, which was to look at the forms of narration in the book. The groups were also given the task of drawing a mind map together around the concepts of 'narration' and 'narrator'.

During the third meeting on May 20th, 2009, the pupils were given the task to have a thematic discussion about the book and to write a disposition together for introducing the book to the other groups. In addition, everyone was expected to independently do one of the final tasks *Note4* based on reading the book. At the end, the members of
the group wrote notes together for presenting the book to the other groups. And then there followed a series of small oral presentations.

Note 4 Choose one of these: Write a poem that tells about the protagonist of the book; Write a letter to someone who is considering reading this book; Write a review that could be published in a youth magazine; Make an advertisement to sell the book in a specific season.

The second and third meetings of all five peer-groups were videotaped, transcribed, and coded for classification and analysis. This is the main material drawn upon for the detailed study of literary discussions presented in this paper.

**Research questions**

The focus of this paper is to describe and understand what occurs in autonomous peer-group discussions about read fiction, and how literature circles used in the classroom help in developing reading skills and attitudes that lead towards a deeper understanding of texts and fulfil the goals and objectives of learning.

The research questions are: What is the interaction in peer-groups like? How do the members of peer-groups articulate and develop subject in literacy discussions? How does the peer-feedback help the group-members in collaborative meaning-construction and learning about literature?

**Theory and methods of analysis**

Teaching literature is an elementary part of the subject of Mother Tongue, known since 1999 as Mother Tongue and Literature. *Reading fiction and sharing that experience with others* is already expressed in the national core curriculum in the objectives for the early years of school (National Core Curriculum for Basic Education 2004, 49).

The reading theory in this research project combines aspects from traditional close-reading to imaginary transaction with the text and cultural reading of an individual and independent subject (Vaittinen 2010). However, we do not know much about these experiences otherwise than expressed in written words and other kinds of messages mediated interactively. The verbal and non-verbal interactions during literature circle discussions are the only way to investigate and describe the cognitive and social actions of the pupils in peer discussions.

On the cognitive level, we want to pay attention to what kinds of subjects the students use while talking about fiction and how they elaborate on a single topic in their meetings. On the metacognitive level, we want to investigate how students manage
tasks. On the interactional and social level, we seek to observe how they offer feedback in the context of literature circles.

The social, cognitive and metacognitive aspects of the conversation are tightly intertwined. Qualitative content analysis methods have been used to analyze the discussions. The transcribed discussions are coded into episodes of discussion and units of meaning. The units of meaning are classified on the basis of their relation to the four modes of collaboration: Give feedback, Manage behaviours and tasks, Articulate subjects and Develop the subject (Hébert 2008, 41, 44).

*Give feedback* is a mode of collaboration where the speaker simply directs his or her words to one of his peers; this kind of speech has the purpose of social interaction. The types of interaction used may vary in the attitude: *F-1 Approve, F-2 Disapprove, F-3 Doubt or listen remaining neutral, F-4 Ask for a retroaction* (Hèbert 2008, 41). Additional classifications used in this research are *F-5 Commenting, F-6 Specification, F-7 Feedback to peer-discussant and F-8 Feedback to the group* (Levänen 2010).

*Manage behaviours and task* means that a member of the group wants to take control of the turns of speech, or to further define the task, or to try to push the others to get it done. Managing presents the metacognitive aspects of collaboration. This mode of collaboration is indicated with *M-1 Manage turns, M-2 Discipline, M-3 Help peers to elaborate and M-4 Manage the task*.

*Articulate subject and Develop the subject*, are connected with the cognitive aspects of collaboration. The sub-classes are *A-1 Initiate a new subject, A-2 Come back to a previous subject, A-3 Deviate from the subject, and A-4 Abandon a subject* (Hébert 2008, 41, 44). The elements in these categories are thematic or topical; they are verbalization of the themes of the fictive text, developing the thematic topic. Usually, we think that these kinds of statements are the core of literary discussion.

All of these elements in the discussions are intertwined with each other. Analyzing conversations means that each discussion is first divided into episodes, and units of meaning are then identified and coded. This paper is based on identifying the subjects discussed and coding the verbal interactions done by student teachers for their research essays. The statistics are based on ratings by Elina Levänen (2010). During the coding process, all the discussions were divided into *elements of interaction as indicators for the modes of collaboration*. 
Results

Articulating and developing subject in literary discussions

If we think that thematic problem-solving is the core of literary discussion, it might be surprising that Articulating the subject was not used very often in these discussions.

Table 1. Articulating the Subject and Developing the Subject in all literary discussions

<table>
<thead>
<tr>
<th>Mode</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-1 Initiate a new subject</td>
<td>49</td>
</tr>
<tr>
<td>A-2 Come back to a previous subject</td>
<td>5</td>
</tr>
<tr>
<td>A-3 Deviate from the subject</td>
<td>3</td>
</tr>
<tr>
<td>In all</td>
<td>57</td>
</tr>
<tr>
<td>DS Developing the Subject</td>
<td>106</td>
</tr>
<tr>
<td>In all</td>
<td>163</td>
</tr>
</tbody>
</table>

The groups used “Picking up a new topic” (AS) as follows: groups 1 (Adams) and 5 (Pullman) used it 9 times, group 2 (Hosseini) 12 times, group 3 (Boyne) 13 times and group 4 (Swarup) 14 times. The other mode of the core literary discussion, developing the subject, was used 106 times. The groups used it in the following measure: group 1 used it 7 times, group 2 11 times, group 3 19 times, group 4 28 times and group 5 41 times.

The percentage of thematic discussion was 28 %. One third of the discussion, including the amount of units of meaning classified into the mode of cognitive collaboration, related to the topic of real literary discussion.

The share of thematic discussion was, however, clearly larger, because turns of speech often included extracts from the text of the book, or a summary of the plot or events, not just profiles of characters or comments on the narration and the way it runs in the novel.

Second meeting, May 15th, 2009: Vikas Swarup, Slumdog Millionaire

Hilla: Okay, well so I was a Dialog Hunter and my job was to find some dialogue bits in here. So am I meant to know your whole life... So this is from page twenty-five. And this is from the part where um he's like um the lawyer's shown up at the prison because that Ram was tortured and then uh he rescued him to his house and now this guy wants to know how he could win the contest. -- He might be a Muslim. Why couldn’t you name him Muhammed?

So yeah this like tells what sort, what kind of environment he had as a child that he was born in the middle of so many religions and lived there and took a lot of influences from all those religions, even though like he said that he wasn’t religious as a child or anything but he has a lot of life experience still through all these religions that were influential in India.
Niina: Yeah, you'd found them really well.
Topi: Yeah.
Virpi: I thought it was really descriptive (- -) you got a good image of the world of the book and those characters. Yeah, so I'm the Narrator Hunter and my job was to pick an extract that shows the form of narration and the narrator's opinion of a person and my first extract is from page twenty-three and this is about this like how this guy has to trust this Smita even though he doesn't know her at all. Is this woman too good to be true?

I think that this first excerpt was more like narration and like that, this second one is description of a person.
Hilla: Yeah, I thought those were really good and it was nice when uh there was this about Father Timothy this description about him like from also this Ram's point of view so that it showed that how the point of view affects these characters.
Virpi: Yeah. I think this conversation is successful and everyone's done their assignments and found good points.
Hilla: Yeah, I think so too. What did you think about the start of the book in general?
Virpi: I thought this was kinda interesting at least
Niina: Yeah
Virpi: and I wanna read more.
Hilla: Yeah.
Topi: Yeah.
Niina: Yeah, it's not like boring but it's written in an interesting way.
Topi: And the structure like it goes from every question to the next.
Hilla: Yeah, that was exactly.
Virpi: Yeah it was interesting. Really hooked you in.
Hilla: Yeah me too. It was fun.

(.

Hilla: Yeah so what did you think about this situation that's going on here this kind of like inequality here in India?
Niina: Yeah it's like totally unfair that you can't believe that he's telling the truth even though he's won it fair and square, or we don't know that yet that...
Hilla: Nyeah...
Niina: … if he won fairly.

As every group member is given a role and a task, and the roles are complementary, everybody is expected to make a statement that helps to go through the first part of the discussion using the concepts. With gentle feedback, some remarks and questions about the themes and way of telling are shared, with expectations for further reading.

**Peer-feedback during literary discussion**

Social engagement in the group when given a common task was found to be very important for the young teenagers. They appeared to want to belong to the group and to want to help others to feel that they are a member of the team. This is shown in the diversity of giving feedback.
Table 2. The types of giving feedback in all the groups

<table>
<thead>
<tr>
<th>Feedback Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-1 Approve</td>
<td>97</td>
</tr>
<tr>
<td>F-2 Disapprove</td>
<td>7</td>
</tr>
<tr>
<td>F-4 Ask for retroaction</td>
<td>89</td>
</tr>
<tr>
<td>F-5 Commenting</td>
<td>33</td>
</tr>
<tr>
<td>F-6 Specification</td>
<td>22</td>
</tr>
<tr>
<td>F-7 Feedback to another discussant</td>
<td>25</td>
</tr>
<tr>
<td>F-8 Feedback to the group</td>
<td>6</td>
</tr>
<tr>
<td><strong>In all</strong></td>
<td><strong>276</strong></td>
</tr>
</tbody>
</table>

Giving feedback type F3, which is *Doubt or listening remaining neutral*, was not found in the material. Approval was used ten times more than disapproval.

**Approve (F-1):**
M-4, A-1 Panu: I would put also that catches the moment.
F-1 Turo: Yeah.
F-1 Rami: Yeah.

**Disapprove (F-2):**
M-4, A-2 Topi: Well, I'll shorten that putting it on your ear you can listen and speak all the languages of the Universe.
F-2 Niina: There is nothing about speaking.

**Ask for a retroaction (question, asking for more knowledge, or for a detail):**
F-4 Katri: He wasn’t twelve?
Simo: Well, he becomes in the end.
F-4 Taina: Wasn’t he already in that part?
Simo: No, he wasn’t.
F-4 Varpu: Yeah. Do you think these quotes were good, though there were so many?
Mikko: (nods)
F-4 Varpu: That they described the happening?

The goal of *Making comments* and *Specification* is to keep the discussion as exact as possible, and to help peers in keeping knowledge as authentic as possible.

**Comment (F-5) and Specification (F-6)**
DS Iiro: Then he got depressed when that guy left.
F-5 Visa: Kotler
A-1 Mikko: From a small planet near Bletelgeuze.
Leena: Well yes.
M-3 Varpu: Yes, from outer space, from a small planet.
F-6 Mikko: Near Bletelgeuze.
The comments and specification were also found to be interesting: they suggest that the group members were interested in the content of the course of discussion, and in what the others said. In this way, these modes of giving feedback created collaboration in the group’s actions.

Though the pupils were not advised to give feedback to each other, they did it spontaneously.

**Feedback to a group member (F-7)**

F-1 Sari: Yeah.
F-1 Varpu: Yeah.
F-7 Sari: Good places you had found here.
F-1 Varpu: Yes, you had.
F-7 Sari: in the text, were these happenings can be noticed.
F-7 Varpu: It was good, that you have taken up the questions, because this book is made of those questions.

**Feedback to the group (F-8)**

F-8 Varpu: Yes, I am very much satisfied with this discussion that everybody brought up opinions.
F-1 Mikko: Yeah.
F-8 Varpu: and conceptions. Quite everybody, to my mind, all did it.

The function of giving feedback is not just to observe the contribution of another group member, but also to learn about that group member and about the whole group. Giving feedback to each other and to the group constructs action and makes it more solid. While giving feedback, the group members are being social: they are in direct interaction with each other and they engage in real interaction, positive mutual dependency, individual responsibility and equal participation – all central to collaborative learning (Saloviita 2006, 45–50). The group members also realize that it is important for collaboration that all the participants of the group prepare their tasks in order for the group to proceed.

Giving feedback was used 35 times by groups 1 and 2, 55 times by group 3, 58 times by group 4 and 99 times by group 5. Feedback to the group was not given in the same way in all of the literature discussion groups. The groups that used the mode of feedback most, also used the mode of managing the behavior and task most, and use of all the modes of collaboration was diverse.

**Managing behaviour and task**

The mode Managing the group behavior and task was richly used in the literary discussion in all its different forms, except discipline.
Table 3. Manage behaviors and task in all the groups

<table>
<thead>
<tr>
<th>Mode of Collaboration</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Group 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-1 Manage turns</td>
<td>35</td>
<td>35</td>
<td>55</td>
<td>58</td>
<td>99</td>
</tr>
<tr>
<td>M-2 Discipline</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>272</td>
</tr>
<tr>
<td>M-3 Help peers to elaborate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>41</td>
</tr>
<tr>
<td>M-4 Manage the task</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td>142</td>
</tr>
<tr>
<td>In all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>142</td>
</tr>
</tbody>
</table>

Group 1 used this mode of collaboration 19 times, group 2 used it 28 times, group 3 used it 33 times, and the groups 4 and 5 used it 31 times each.

Managing the group behaviors and the task gathers together the kinds of metacognitive abilities that have great importance in situations where the peer-led study groups are working without the help of the teacher. When the group is taking care of the activity, the presence of the teacher is not needed (Hébert (2008, 44).

Metacognitive skills are trained effectively, and the pupils develop the courage to help each other, which is an important factor in preparing for organized conversations and debates. Also, in the area of metacognition, positive attitudes seem to be well used.

Summary

All of the modes of collaboration were represented in the discussion. The share of literary discussion measured in the amount of speech turns was 28 %; the social and metacognitive elements took up 77 % of speech acts. Social interaction took up almost one half of the discussion, but with metacognition taking up a quarter of discussion, discussion was on a high level if we consider the prerequisites for higher level learning according to constructive and socio-constructive theories (Kaartinen 1996).

Table 4. Interaction Units used by the groups

<table>
<thead>
<tr>
<th>Modes of Collaboration</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Group 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback</td>
<td>35</td>
<td>35</td>
<td>55</td>
<td>58</td>
<td>99</td>
</tr>
<tr>
<td>Manage behaviors and task</td>
<td>19</td>
<td>28</td>
<td>55</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>&quot;Social&quot; in all</td>
<td>54</td>
<td>63</td>
<td>63</td>
<td>88</td>
<td>89</td>
</tr>
<tr>
<td>Articulating the Subject</td>
<td>9</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>Developing the Subject</td>
<td>7</td>
<td>11</td>
<td>19</td>
<td>28</td>
<td>41</td>
</tr>
<tr>
<td>&quot;Topic&quot; in all</td>
<td>16</td>
<td>23</td>
<td>27</td>
<td>32</td>
<td>50</td>
</tr>
<tr>
<td>In all</td>
<td>70</td>
<td>86</td>
<td>120</td>
<td>131</td>
<td>180</td>
</tr>
</tbody>
</table>

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The 7th graders in our research project have shown that they have gained good skills in constructing their own collaborative work in peer-groups. They are able to work in literature circles using verbal communication in their meetings and writing down their thoughts between the meetings.

Looking at the statistics of the amounts of units of meaning, it is evident that the social and metacognitive types of collaboration were pronounced in the discussions by groups of pupils near the end of 7th grade. Social elements and metacognition were stressed more than cognitive elements in the discussion. The Finnish young teenagers were social and positive.

The groups that were collaboratively skilful used modes of collaboration in many ways. In the groups where feedback was given, there was also a tendency to take care of the metacognition of collaboration. The skills in these collaboration modes affected the level of discussion. The groups also worked for longer periods of time, because they made sure that all the tasks were tackled, all matters were discussed, and everyone got to say what he or she had to say. In these groups, sharing the responsibility of working was functioning: the group members had prepared their tasks, and that is why discussions were successful.

Discussion

Since this is a case study, it is important to assess the nature of the conditions in which the study was carried out. In this respect, it is essential to note that this small phase at the end of the school year was an integrated part of the regular teaching at school. No special intervention was made; the only change from regular classroom activities was that the simultaneous literature circle meetings were held for the first discussion in separate rooms, two classrooms and three smaller rooms. For the second meeting, the groups met in an open library where they were separated only by bookcases, and the discussions were videotaped.

Because the learning environment was natural for the activities, the ecological validity can be regarded as being good, and it is therefore realistic to suppose that corresponding teaching and learning could be carried out elsewhere.

The reliability of the coding is based on studying the methods and results of the corresponding groups of a research project in Montréal, Canada, and negotiating the use of the episodes and units of meaning together with the group of student teachers who wrote their research essays in Spring 2010.
Giving feedback is a part of collaboration in action, and teaching and learning it is stressed in the National Core Curriculum (2004, 53–54):

The pupils' interaction skills will be developed so that they
1. want and venture to express themselves in writing and orally, both alone and in a group
2. demonstrate skill in inferential and evaluative listening
3. know how to take a turn to speak in problem-solving and idea-sharing discussions as well as in other group communication situations, and how to present a proposal, a position, a question, further information, and justifications
4. further the group's attainment of an objective and also know how to act constructively when people disagree about things

The Curriculum of the Tampere Training School lists the following content for the 7th grade: *group communication skills, asking, questioning, listening, reacting to another person's speech, expressing one's own opinion, understanding non-verbal messages, consideration of others.*

Literature discussion as a way and method of learning seems to fulfil the objectives of the curriculum. The 7th grade pupils of the Tampere Training School use versatile modes of collaboration and types of interaction in their literary discussions. They are well trained in studying in groups and acting collaboratively in class. These social and metacognitive elements are stressed in the statistics of the turns of speech in the peer-groups of these seventh-graders. The social, metacognitive and cognitive elements of peer-led group discussions are tightly interwoven, and they are dependent on the ruling practices used by the teacher (Hébert 2008, 30).

The study methods chosen and taught by the teacher, carefully scheduled discussions with tasks and advice and also the textbook used, are meaningful for the development of the skills of the pupils. Teachers' scaffolding activities are needed in the reading community of a school-class. Understanding the literature circle and making it work effectively is necessary for more responsive teaching.

References


Non-printed essays


Note 1: In Finnish schools, students are taught every subject by the same teacher, ‘a class-teacher’, until the beginning of seventh grade, when every subject has its own teacher. The curriculum is written for the grades 1st–5th and 6th–9th.

Note 2 The teacher, MA Kaarina Ahonen, who is in charge of instruction, is also a member of the author team for the textbook Taito, which is used in Tampereen normaalikoulu; the publishers in Finland also follow the National Core Curriculum when preparing books for schools.

Note 3 Teacher education in Finland takes place in universities, with special training schools for the student teachers to have the practical part of their education in. Supervising activities are shared between the mentoring Mother Tongue and Literature lecturers of the training school and the lecturer in Didactics of Mother Tongue of the Department of Teacher Education. – In this research project the teacher in charge of the instruction and mentoring of the student-teachers is the school lecturer, and the writer of this paper, and the participating observer in the research project is the university teacher.
Note 4 Choose one of these: Write a poem that tells about the protagonist of the book; Write a letter to someone who is considering reading this book; Write a review that could be published in a youth magazine; Make an advertisement to sell the book in a specific season.

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Ennakointikertomus luetunymmärtämisen ja kirjallisuuden opetuksen tulkinnan väliseenä

Ennakointikertomus sopii sekä kirjallisuudenopetuksen että eettis-moraalisista kysymyksistä käytävien keskusteluiden välineeksi. Vaikka ennakointikertomuksen sisältöön vaikuttaa oppilaan motivaatio ja asenne kirjoittamiseen, ei ole sattuma, mitä oppilaat ennakointikertomuksinsa kirjoittavat. Ennakointikertomusta kirjoittaessaan oppilas kuvaa emoteksiin liittyvää personallista kokemustaan sekä tietoisesti että tiedostamattomasti, mikä on tärkeää kirjallisuuden maailmaan astuttaessa.

Fiktiivisen kirjallisuuden käyttämisen etuna eettis-moraalisessa keskustelussa pidetään eettis-moraalisen aiheen etäännyttämistä keskustelijoiden omasta elämänpiiristä, jolloin eettis-moraalisesta kysymyksestä on helpompi keskustella (kirjallisuuskasvatuksesta luku 4.4). Myös ennakointikertomusten käyttö toimii etäännyttävästi. Yläkoululaisen tulkintan voi olla vaikea kertoa luokkakeskustelussa omia mielipiteitään, mutta käytettäessä ennakointikertomuksia kirjallisuuden tulkintaan ja eettis-moraaliseen keskusteluun oppilas saa varmuutta vastaukseen, kun huomaa, että luokassa on oppilaita, jotka tuottavat ajattelevat samoin kuin hän. Lisäksi omasta tulkinnasta on helpompi puhua, kun tulkinta on etäännytetty kirjoittamalla siitä ennakointikertomus.

Johdanto

Artikkelissa pohditaan koulussa käytävän kirjallisuuskeskustelun tehostamista. Artikkelin kirjoittaja on toiminut yläkoulun äidinkielen ja kirjallisuuden ja luokanopettajakoulutuksen äidinkielen ja kirjallisuuden didaktiikan lehtorina useita vuosia ja kokenut, ettei fiktiivisen kirjallisuuden pohjalta käytävää keskustelua oppilaiden kanssa tahdo aina onnistua, vaikka luettavaksi valittu teos olisi oppilaita kiinnostava tai oppilaat muuten olisivat innokkaita keskustelijoita.

Artikkelin taustalla on kirjoittajan vuonna 2010 ilmestynyt väitöstutkimus, jonka yhtenä tavoitteena on löytää välineitä kirjallisuudesta käytävän keskustelun monipuolistamiseen ja oppilaslähtöisempään opetuskeskusteluun. Tutkimuksessa ennakointikertomusta käytetään kahdeksasluokkalaisten oppilaiden kirjallisuudesta tekemien tulkintojen konkretisointina ja pohditaan ennakointikertomuksen käyttökelpoisuutta kirjallisuuskeskustelun välineenä (Aerila 2010).


Keskustelut kirjallisuudenopettamisen työtapaana


Ennakointikertomus – kuullun tai luetun fiktiivisen tekstin tulkinta


Ennakointikertomus saattaa sopia fiktiivisen kirjallisuuden tulkinnan välineeksi myös siitä syystä, että kertomus on tekstiläji, jonka perusopetuksen oppilaat hallitsevat parhaiten (Silverström 2006, 144). Lisäksi ennakointikertomusta voi pitää hyvänä
tapana oppilaan ei-kirjaimellisen päättelytaidon kehittämisessä, varsinkin sellaisten oppilaiden kohdalla, joiden ajattelun abstraktiotaso ei ole kovin korkea ja joille kerronta voi olla ainoa ”tapa abstrahoida”. Ennakointikertomuksen kirjoittaminen tai muu fiktiivinen kerronta voikin olla nuorelle oppilaalle lähes ainoa keino ilmaista ja ymmärtää asioita. (Toivonen 1998, 87 – 88.)


Kirjallisuuskeskusteluiden kehittäminen oppilaslähtöisemmiksi


Arvonen (2002) kuvaa väitöstutkimuksessaan erilaisen toiminnan, kuten kirjoittamisen, piirtämisen ja draaman, käyttämisestä luettynä ymmärtämisen tykuena. Ajatuksia herättävää on Arvosen vastaväittäjän Linnakylän esitarkastuslausunto
(2002), jossa hän toteaa, että fiktiivisen kirjallisuuden pohjalta on helppo tuottaa monenlaiista toimintaa, mutta paljon kehitettävää on siinä, miten tätä toimintaa osataan hyödyntää kirjallisuuskeskusteluiden materiaalina ja oppilaiden fiktiivisen kirjallisuuden tulkinnan taitojen kehittämisessä. Ennakointikertomusten tehokkuus kirjallisuuskeskustelussa perustuu ennakointikertomusten yksityiskohtaiseen luokitteluun ja niiden vertailuun sekä keskenään että alkuperäisen tekstin kanssa. Erilaiset ennakointikertomukset, tulkinnat, auttavat oppilasta ymmärtää työssäsi ja kehittämään sitä. Oppilaan voi olla vaikea kertoa luokkakeskustelussa omia mielipiteitänsä, mutta käytettäessä ennakointikertomuksia kirjallisuuskeskustelussa oppilas saa varmuutta vastaukseen, kun huomaa, että luokassa on oppilaita, jotka ovat ymmärtäneet ennakointikertomuksen taustalla olevan fiktiivisen tekstin samoin. Toisaalta omasta tulkinnasta on helpompi puhua, kun tulkinta on etäännytetty kirjoitettamalla siitä ennakointikertomus. (Aerila 2010, 68 – 72; 186 - 189.)

Lähteet


Brozo, W. G. 2002. To be a boy to be a reader. Engaging teen and preteen boys in active literacy. The University of Tennessee: Knoxville, Tennessee USA.


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Historian lukemisen taito – avain historian ymmärtämiseen

Tiivistelmä


Johdanto

menneisyyttä koskevaa tietoa ja arvioida sitä kriittisesti sekä ymmärtää sen monitulkintaisuuden, suhteellisuuden ja syy-yhteyksien moninaisuuden”.


**Historian lukemisen ja ymmärtämisen taito**

Husbands (2003, 37) toteaa: ”the linguistic difficulty of history is also what we can call an interpretive and epistemological difficulty”. Kielelliset seikat ovat kiinteästi yhteydessä historian ymmärtämiseen ja samalla oppiaineen perusluonteen.

Historian lukeminen on enemmän kuin tekninen taito tai neutraali prosessi, jossa selvitetään sanojen merkitykset ja tekstin ilmisisältö. Luetun ymmärtämisessä on kysymys käsitteiden, tekstikokonaisuuden ja tekstin taustalla olevan ajatusrakennelman ymmärtämisestä. Lukijan on tunnistettava myös tekstin piiloviestit ja vinoumat ja opittava soveltamaan ja analysoimaan tekstin välittämää tietoa. Historian tutkimuksen perusmetodi on lähekritiikki, johon muun muassa kuuluu lähteiden aitouden selvittäminen ja lähteessä olevien stereotypioiden, asenteiden, aukkojen ja piiloviestien paljastaminen. Historiataitot ovat kysytytä, mikä sisälöstä on faktaa ja mikä tulkintaa ja perustuko lähteen tieto joihinkin muihin lähteisiin vai onko se riippumaton.


**Historian tekstitaito ja tiedonmuodostus**


**Historian moniperspektiivisyys ja monet genret**


Historian suurten, kansakunnan yhteishenkeä kohottavien kertomusten tilalle on syntynyt lukuisia pieniä historioita. Historiaa kirjoitetaan monien eri ryhmien näkökulmasta. Historiaa popularisoidaan ja hyödynnetään erilaisia kanavia ja tyyliä, joilla historian käyttäen, ja ammattimaisesti tuotettu historia (tutkimus, yleisesitykset) on yksi genre monien joukossa. Lisäksi voidaan mainita historian historialliset romanit ja nuortenkirjat, sarjakuvat, filmit, tietokonepelit, CD-romit ja nettisivustot. (Ks. Virta 2007.)

On myönteistä, että historia viihdyttää ja tarjoaa esteettisiä elämyksiä, mutta viihteelliset esittämismuodot voivat olla pinnallisia ja niihinkin voi olla sisäänrakennettuna manipulointia ja asenteellisuutta. Historiaa voidaan käyttää ja myös väärinkäyttää yhteiskunnassa, politiikassa ja kulttuurissa, myös vähemmistöryhmien keskuudessa, lukemattomilla tavoilla.

Koska oppilaita kohtaavat väistämättä koulun ulkopuolella erilaisia historiakulttuurin muotoja, myös epähistoriallisia ja propagandistisia, korostuu koulun historian opetuksen tehtävänä kriittisen otteen harjaannuttaminen. Historiatiedon kirjavointi markkinoida lukijan on oltava monitaitoinen: hänen on hallittava taito tulkita erityyppisiä tekstejä ja erilaisia kulttuurituotteita ja ottaa vastaan informaatiota kriittisesti eri kanavienkin käytäen. Historian genren monimuotoistuminen ja pirstoutuminen luo näin ollen vielä suuremmat vaatteet kriittiselle lukutaidolle ja ajattelulle kuin työskentely esimerkiksi perinteisen oppikirjatekstin parissa.

**Monipuolisten opiskelutekstien ja näkökulmien tarpeellisuus**

problematisoi tai perustele esittämääsi asioita. Tietoa ei esitetä suhteutettuna tieteenaan tutkimuksiin ja tiedonmuodostukseen, jonka tuloksena tieto on luotu. Oppilas ei näin saa kuvaa tieteenaan ajatteluprosesseista vaan koettaa omaksumu pelkkää faktasisältöä.


Tässä artikkelissa on rajoitettu kirjallisten tekstien lukutaitoon. Se ei kuitenkaan yksin riitä. Kuvat, sähköinen tiedonvälitys, verkkolukutaito ja medialukutaito ovat yhä keskeisempiä historiassa.

Ideaaleista luokkahuoneen todellisuudeksi


Kriittinen lukutaito ja moniperspektiivinen tarkastelu voivat olla ongelmia sisällölliseen kattavuuteen tähtäävälle opetukselle. Pohjimmiltaan on kysymys opetuksen ja

Lähteet


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Luovan kirjoittamisen mahdollisuuksista tekstin ymmärtämisessä ja oppimisessa


Johdanto


Tässä artikkelissa tarkastellaan, miten Suomessa historian, uskonnon ja luonnontieteellisten (luonnonhistoria-biologia, matematiikka, fysiikka-kemia) oppiaineiden edustajat näkevät luovan kirjoittamisen mahdollisuudet oppimisessa ja miten sen käyttöä perustellaan sekä sitä, miten eri oppiaineiden didaktiikan oppikirjat tuovat esille luovan kirjoittamisen mahdollisuuksia.
Menetelmä


Löydöksiä

1. Kirjoittaminen aktiivisen oppimisen tukena – historia-yhteiskuntaoppi

Historiassa korostettiin aktiivistaa (konstruktivistaa), oppijan aktiivisuutta painottavaa oppimisnäkemystä, pyrittiin siis aktiivisteen historian oppimiseen. Kirjoittaminen nähtiin tätä edistävänä keinona. Kirjoittaminen avulla tuotiin empathia oppimistilanteeseen, esimerkiksi voitiin eläytyä jonkun henkilön osaan ja kirjoittaa hänen näkökulmasta:

"Eletään vallankumousta edeltävää aikaa Ranskassa, vaikkapa vuotta 1776 Opiskelijat valitsevat roolikseen esimerkiksi nuoren ranskalaisen lakimiehen, markiisin tai työläisen. Tästä rooliistaan käsin kukin kirjoittaa, miltä yhteiskunnallinen tilanne näyttää." 

"Oppilaat voivat eläytyä espanjalaisnuorukaisen osaan Kolumbuksen aikana ja kirjoittaa jollekulle kirjeen, jossa he pohtivat mahdollista lähtöään Kolumbuksen matkaan löytöretkelle.”


"Eläytmistehtävät ovat historian ymmärtämisen kannalta tärkeitä, kun oppilaalla on tietopohja, jota hän voi soveltaa. Muutoin vastauksista tulee fiktiviisiä seikkailutarinoita” (Pilli 1992, 155.)
Eläytymiseen ja tietojen soveltamiseen johtavasta tehtävästä oli haastateltavan suosittelemassa didaktisessa oppikirjassa muun muassa seuraava esimerkki:

“Ulkomaalainen kauppia on käynyt ostamassa tuotteita rautakautisilta suomalaisilta. – Kirjoita, mitä hän kertoo kotona tästä kansasta ja sen elintavoista.” (Pilli 1992.)


2. Kirjoittaminen ajatusten jäsentäjänä ja selkiyttäjänä – uskontoelämänkatsomustieto


Uskonnon edustaja korosti kirjoittamisen merkitystä oppimisessa: "On tärkeää tukea oppilaan kirjallisen ilmaisun kehittymistä.” Opettajaopiskelijat suhtautuivatkin haastateltavan näkemyksen mukaan myönteisesti kirjoittamiseen opetuksen työvälineenä.

3. Kirjoittaminen käsitteiden ja matemaattisen ajattelun oppimisen tukena

Matematiikan edustajan haastattelussa korostui kirjoittamisen merkitys käsitteiden ja matemaattisen ajattelun oppimisessa. Kielellisiä ilmaisuja tulisi hänen mukaansai suosia symbolimerkitysten rinnalla.

Opettaja voisi *luoda tilanteita* ja näin helpottaa abstraktia tehtävää:

"Tehtävä voisi olla tarina, koska lasten on vaikea ymmärtää sanallista tehtävää, ts. tilannetta.”
Aistit voisi ottaa käyttöön tehtävissä:


Ongelmanratkaisussa kirjoittaminen voi auttaa:

"Ongelmanratkaisu on keskeistä matematiikassa. Siinä luova kirjoittaminen olisi tärkeää. Esimerkkinä voisi olla tilanne, jossa oppilaat ovat lähössä luokkaretkelle: tämän verran rahan käytönä, mitä tehdään."

Avointa kirjoittamista tulisi haastateltavan mukaan suosia:

"Oppikirjoissa vain vähän tällaisia tehtäviä: voisi olla tarina, josta puuttuu loppu tai puuttuu kysymys. Näihin tehtäviin kuluu paljon aikaa. Siksi niitä ei käytetä paljon. Jos alaluokkien opettajien laskutaito on heikko, he haluavat tehtävän, johon on yksi oikea vastaus."

Ajtusten kirjallista ilmaisua matematiikan edustaja piti oppimisen kannalta tärkeänä, mutta luovuuden tukematta tärkeänä, mutta eläisten opettajien tehtävänsä vaati opettajalta rohkeutta.

4. Kirjoittaminen luovuuden edistäjänä – fysiikka-kemia

Fysiikka-kemian oppiaineessa korostettiin luovuutta ja yleisesti toivottiin eseesyntyiä ensimmäin:

"Kemia on luova tiede ja keksii uusia tutkimusmenetelmiä; luovuus liittyi moneen asiaan, esimerkkinä arvioinnin eri oma-alueet; monet keksinnöt syntuneet vahingossa: joku on yhdistänyt odottamattomalla tavalla; kirjoitustehdä liikoi tehdä opettajaksi opiskelevien kanssa enemmän."


5. Kirjoittaminen motivoinnin ja oppilaantuntemuksen apuna sekä luovuuden herättäjänä – maantiede-biologia

Maantieteen ja biologian edustajat (haast.1 ja haast.2) esittivät seuraavan esimerkin luovan kirjoittamisen hyödyntämisestä. Esimerkki osoittaa, miten luovasta kirjoittamisesta lähtien voidaan kehittää ja muuntaa oppilaiden tietorakenteita.

Kiven tarina

1. opiskelija kirjoittaa 10 –15 min kiven tarinaa.
3. Laaditaan uusi tarina ryhmittäin ja annetaan opiskelijoille muutama jäsentävä kysymys, johon ohjelma on tultu maapalloille, mitä sille voi luonnossa tapahtua, mikä on sen rakenteen. Tässä tehtävässä kirjoittajat voivat lähestyä jo luonnontieteen näkemystä asiasta.
4. Tehtävät luetaan luokassa ja opiskelijat saavat kiviä jatkotutkittavaksi.


Pohdintaa ja johtopäätöksiä

tavoin oppimista: motivointia, luovuutta, tietojen soveltamista, aistien yhdistämistä oppimiseen, oppimistilanteiden luomista, oppilaantuntemusta, empatian herättämistä, ongelmanratkaisua ja käsitteellistä muutosta.


Lähteet


Liite 1. Työssä käytetty pedagoginen kirjallisuus


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Sadun piirteiden erottaminen tekstitaitokokeessa

Tiivistelmä


Tosin sadun moraali ja opetus tulivat esille. Kansansadun ja taidesadun välisiä eroja eivät käsiteltynyt.

Tutkimusaineisto ja -ongelma


Koetehtävänä ei ollut tekstien vertailu vaan ainoastaan sadun piirteiden esittely.

Koska koevastaus edellyttää 1—2 sivun suorassa tekstiä, abiturientit analysoivat satua piirteitä luettellessaan. Tarkastelen seuraavassa satua genrenä ja satuanalyysin mahdollisuuksia. Myös Punahilkasta esitettyt aiemmat satuanalyysit on syytä ottaa esiin.

Mikä on satu ja miten Punahilkka edustaa genreään?

Ennen kuin tutkija voisi vastata kysymykseen, mitä sadun piirteitä Punahilkassa on, hänen pitää määritellä genre eli tekstilaji.

Satu on mielikuvitukseen, kansan uskomuksiin ja myytteihin perustuva, "aika- ja paikkasuhteista, samoin kuin arkitodellisuuden rajoista piittaamaton opettava tai huvittava kertomus" (Kuivasmäki & Heiskanen-Mäkelä 1990, 83). "Satu on kertomataidetta, jossa on useita episodeja ja jossa on normaalitajunnan ylittäviä kokemuksia." Siinä on ainakin yksi todellisuudessa mahdoton asia, esim. ihmisen ja eläimen keskustelu.

Siinä voi olla taikasanojen käyttöä. Ovi avautuu taikasanan avulla. (Ylönen 2000, 9.)


Abiturienttien havaitsemat piirteet

Kokelas joutui siis koevastauksessaan luettelemaan Punahilkasta havaitsemiaan sadun piirteitä. Esitys ei saanut olla kuitenkaan luettelo vaan suorasanaisesti kerrottu analyysi sadun piirteistä. Tutkimus ei ole määrittely, jotenn aineistosta ei tehty muuttujaluetteloa, jossa olisi ollut kunkin oppilaan esittämät piirteet muuttujina.


Taulukko 1. Sadulle ominaiset piirteet

<table>
<thead>
<tr>
<th>Piirre</th>
<th>Aineistoesimerkki</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Todellisuudessa mahdoton asia</td>
<td>Saduissa on paljon samankaltaisia piirteitä. Yksi piirre on se, että sadut eivät yleensä ole realistisia. Punahikkkakaan ei ole realistinen, sillä sadun susi osaa puhua, se osaa pukeutua ja se syö ihmisiä hotkaisemalla heidät kerralla. (Vastauksesta annettu pistemäärä 3). Ihmee: suden vatsan leikkaaminen tämän heräämättä ja isoäidin ja Punahilkan hengissä säilyminen, ovat hyvin luonteenomaisia sadulle. (4)</td>
</tr>
<tr>
<td>3) Aika</td>
<td>Olipa kerran – alkua käytetään, koska sillä ei tarkoiteta mitään tiettyä hetkeä tai aikaa eikä se sisällä paikkatietoa. Tämä tekee sadusta ajattoman ja sitä voidaan lukea vielä pitkien aikojen kuluttua ilman, että sen merkitys tai tulkinta muuttuu. Satu on näin riippumaton aikakausista eikä lukija tee johtopäätöksiä esimerkiksi historiallisilla tiedoilla. (3)</td>
</tr>
<tr>
<td>5) Teema</td>
<td>Punahilkassa teemana on vieraisiin luottaminen ja tottelevaisuus ja tätä on saduksi hyvin tyypillinen. (5)</td>
</tr>
</tbody>
</table>
6) Moraali

Loppu on yleensä onnellinen, paha saa palkkansa ja hyvyyys voittaa. (5)

7) Symboliikka

Punahilkan susi symboloi pahuutta, mikä näkyy niin suden huonossa kohtalossa kuin ” paha eläin” -vertauksessakin. Vastaavasti äiti, isoäiti, ruoka ja kukat symboloivat hyvyyttä ja viattomuutta. (5)

8) Henkilö

Punahilkka kiltti, naiivi, nuori – lapsen helppo samaistua häneen”

”Puhuva susi on metafora maailman pahuudesta. (5)

9) Sankari

Saduissa on usein myös sankari, eikä Punahilkkka ole mikään poikkeus. Metsästäjä pelastaa pulassa olevan tytön ja hänen isoäitinsä. Asetelma on sama kuin tunnetuissa ritaritarinoissa. Salskea riti pelastaa pulassa olevan neidon, mutta tällä kertaa teema on vain erilainen. (4)

Useissa saduissa on myös sankari, joka pelastaa hyvät pahojen kynsistä. Punahilkan sankarin roolia näyttelee rohkea metsästäjä. (5)

10) Opetus

Saduissa on aina opetus. Punahilkan tapauksessa mitään pahaa ei olisi sattunut ellei hän olisi poikennut tieltä, mikä johti siihen että susi ennätti ennen Punahilkkaa isoaidin talolle. Tosin tapettuaan kaksi sutta hän palaa iloisena kotiin, läksyn opittuaan tietenkin. (4)

Punahilkka saa opetuksen, että äitiä pitää totelua, eikä vieraiden matkaan saa lähteää. (3)

11) Neuvot

Sadun alussa päähenkilölle annetaan usein neuvoja, joita hänen tulisi noudattaakin. Hyvät neuvot kuitenkin unohtuvat matkan varrella ja päähenkilö joutuu pulaan. Näin käy myös Punahilkassa, sillä kaikista äidin viisaista neuvoista huolimatta susi onnistuu huijaamaan Punahilkkaa. (5)

12) Kerronta

Myös tekstin kerronnasta voidaan päätellä, että kyseessä on satu. Tekstin kertoja puuhu koko ajan imperfektissä ja tällaiset 1800-luvulla tehdyt sadat ovat usein imperfektimuodossa. (2)

Kertoja on saduille tuypillinen ulkopuolinen ja kaikkittetvä. Tekstiin ei myöskään ole juurikaan jätetty aukkoja, jotta myös lapset pysyisivät juonessa mukana. (5)

Kerronta on oikeastaan piirrelyhmä, sillä siihen kuuluvat havainnot sadun alusta, juonen etenemisestä (kliimaksi (huippukohta), kääntekohdja) ja loppuratkaisu. Havainnot kertojasta, aukkokyhdistä ja myös dialogista kuuluvat tähän piirrelyhmään, vaikka dialogi on
otettu omaksi ryhmäksi tässä sadussa, koska suden puhelu Punahilkan kanssa on erityisen erottuva.

13) Dialogi

Dialogin suuri määrä on sadun ja näyttelän ominaispiirre. Kerrontaa edistetään puheen voimin. (4)

14) Matka ja metsään meno

Henkilöiden esittely. Tämän jälkeen annetaan tarkat ohjeet matkalle. Varsinkaan metsään ei ole menemistä, koska paha piilee saduissa yleensä metsän syvyydessä. (3)

15) Personifikaatio

Susi ja Punahilkka keskustelevat keskenään, samoin isoäiti ja susi. Susi myös pukee vaatteet yllänsä, ajattelee ihmisen tavoin ja nukkuu vuoteessa. (5)

16) Nimet

Sadulle tyypilliset henkilönimet. Punahilkkaa ei kutsuta hänen oikealla nimellään, isoäitiä sanotaan vain isoäidiksi ja metsästäjää metsästäjäksi. (3)

17) Luku kolme

Punahilkan kuvaillessa sudelle isoäitinsä taloa, tulee esiin yksi sadulle tyypillinen asia – luku kolme, sillä isoäidin talo sijaitsee 'kolmen suuren tammen varjossa'. (4)

**Esimerkki oppilaan vastauksesta**

*Punahilkan satumsaisuus (pistemäärä 5)*


Punahilkka-sadun henkilöt ovat tekstilajille tyypillisiä hahmoja. Itse Punahilkka on varsin ominainen, viaton, sinisilmäinen ja hyväntahtoinen pikkutyttö, johon sadun lukijoiden (lasten) oletetaan pystyvän samaistumaan. Hän on kuuliaisen ja elää sadun alussa maailmassa, josta pahuus puutuu. Tuota pahuutta kuitenkin satuu tuo kiero, ovela ja inhottava susi, joka onnistuu pettuttamaan niin Punahilkkaa kuin tämän sairasta, heikkoa, mutta silti tietyllä tavalla vahvatahtoista isoäitiäkin. Siinä
missä susi tuo satuun häivähdyksen pahuutta, pelottavuutta ja uhkan tuntua, tuovat Punahilkan äiti ja isoäiti turvallisuutta ja varmuutta. Sattumalta paikalle saapunut metsästäjä on sadun odottamaton sankari; se, jonka ansiosta asiat järjestyvät ja onnellinen elo satumaailmassa voi jatkuu.


Päätelmät


Erityisesti äidinkielen opetustieteen kannalta sitä selvittäviä tutkimuksia tarvittaisiin.


Tekstistä tai useammasta on kuitenkin tuotettava tehtävänannon mukainen koevastaus, joka ei edusta mitään tiettyä tekstilajia, pätsi joissakin tapauksissa, jolloin tehtävänannossa mainitaan tekstillä (uutinen, mielipidekirjoitus, vastine, kommentti ym.).


lukijasta vaikuttaa enemmän määrälliseltä kuin laadulliselta. Tarkoituksena oli kuitenkin tuottaa laadullinen luettelo. Siitä ei ole tehty taulukkoa. Opettajan ja sensorin välisen pisteityksen pysyvyyttä olen tarkastellut eri tutkimuksessa (Sarmavuori 2010b).

Seitsemäsluokkalaisiin verrattuna abiturienttien havainnot ovat lisääntyneet melkoisesti, sillä seitsemäsluokkalaiset erottivat satujaksonsa jälkeen sadun piirteitä 13 (Sarmavuori 2011, 347). Lukiovuosien aikana on tekin tarkkuuden havainnointi lisääntynyt.


Lähteet


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