

READING SKILLS INVOLVED IN GUIDED SUMMARY WRITING: A CASE STUDY

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Abstract: Guided summarization skills are widely used in tertiary education. Despite the more than five decades of research on summarization, information available about the reading sub-skills necessary for successful guided summary writing is still sparse. The aim of this article is to remedy this deficiency by exploring how reading strategies are used by English major BA students who have received explicit training in reading strategies and guided summary writing. Based on the reading strategies the participants applied, the analysis attempts to identify possible underlying reading sub-skills. The findings indicate that those students who can successfully solve a guided summary writing task use a variety of reading strategies and apply them very consciously. The reading sub-skills mostly involved in guided summary writing were skimming, search reading, scanning, and careful reading. The results suggest that in order to enhance students' reading abilities, explicit instruction of reading strategies is needed.

Keywords: academic writing, guided summary writing, reading strategies, reading sub-skills, EFL

1 Introduction

The ability to successfully process information is an indispensable skill in everyday life. Even the most basic activities such as reading a newspaper requires reading comprehension skills and a good ability to process incoming information. The relevance of these skills becomes even more important in the domain of education, especially in tertiary education, where students are constantly exposed to integrative tasks (i.e., listening-into-writing tasks such as lectures, or reading-into-writing tasks such as source-based essay writing). During the process of acquiring declarative knowledge, note taking, summarizing, and synthesizing skills are essential, and each requires excellent information processing abilities. The need for these abilities is also confirmed by high-stakes international academic examinations, such as IELTS, Pearson Academic or TOEFL, which effectively function as entrance examinations to higher education, and which all include tasks that measure the candidate's levels of information comprehension skills (IELTS, n.d.).

The need for summarization skills is further re-enforced specifically in the Hungarian context by the fact that the writing of a BA thesis requires successful synthesizing of the relevant literature on the investigated topic. According to the specifications of the BA thesis paper on the website of the School of English and American Studies at Eötvös Loránd University (henceforward: ELTE SEAS), excellent synthesizing skills constitute a

fundamental requirement at the end of the BA studies: “Students must be able to demonstrate a high level of academic achievement in synthesizing the knowledge acquired during their BA studies.” (SEAS, n.d.) The ability to successfully synthesize information also necessitates excellent information processing skills (Tankó, 2013). Students of the Institute of English and American studies at the University of Debrecen, for instance, receive a summary writing task in the Language Skill Assessment part of their state examination, where “the examinee is expected to produce a summary of 250-300 words of an original text of 600-800 words.” (“State examination topics,” IEAS). In comparison, students of the School of English and American Studies at Eötvös Loránd University are already expected to have excellent summarization skills by the end of the first semester of their studies because at the end of the autumn semester they all have to take an Academic Skills Test administered by the Department of English Applied Linguistics at ELTE SEAS (ELTE SEAS DEAL, 2014). The test contains one guided summary writing task, which involves “a reading passage of about 700 words on a general Applied Linguistics related topic.” (p. 2) After reading the passage, the candidates have to summarize only those parts of the texts that contain the relevant items of information that answer the guiding question (ELTE SEAS DEAL, 2014).

Based on the above, excellent information processing skills, especially reading comprehension skills, appear to be essential for a university or college student. However, according to previous research, students who are untrained in the conscious use of cognitive and metacognitive reading strategies tend to struggle with effective summarization, regardless of their cognitive abilities (Hill, 1991; Rose, 2001). Research evidence also suggests that explicit instruction in summarization and in the use of cognitive and metacognitive reading strategies is required to improve the summarization skills of students (Johns, 1985; Olson & Land, 2007; Plakans 2009; Yang & Shi, 2003). To be able to create and provide appropriate and effective training in summarization, teachers need a good insight into the complex cognitive processes underlying summarization and in-depth information about the skills assessed by the different summarization tasks.

The topic of summarization and the skills it requires is by no means an under-researched area. However, the skills required to successfully solve a guided summarization task have not yet been extensively researched either in the Hungarian EFL context, or on an international level. In view of the relevance of the issue and the lack of information available on the topic, the aim of this article is to contribute to filling this research niche by exploring the types of reading sub-skills the guided summary writing task involves.

2 Research on reading skills

2.1 The process of reading comprehension and a taxonomy of reading sub-skills

Since the late 1960s there has been an interest in exploring and defining the construct of reading comprehension for teaching and testing purposes. Over the years, three different major approaches have been adopted by researchers to establish what reading comprehension actually involves. First, there is the factorial approach, which attempts to uncover the components of reading comprehension through factorial analysis of students’ reading test performances (Davis, 1968; Guthrie & Kirsch, 1987; Rosenshine, 1980). Although the factorial approach offered some insight into the different capabilities students need to solve particular reading test items, the most important criticism levelled against it is that it cannot provide information about the actual processes occurring during reading (Weir & Khalifa,

2008). The second approach to the investigation of reading comprehension is the sub-skills approach, which is based on the belief that reading comprehension can be divided into several sub-skills. According to this approach, every reading sub-skill can be tested by a particular test item, which is supposed to tap specifically into that sub-skill (Lumley 1993, Weir & Porter, 1994). However, this approach has also been heavily criticized because it still does not explain the mental processes underlying reading comprehension (Weir & Khalifa, 2008). Finally, the most recent approach to defining reading comprehension is the cognitive processing approach, which attempts to explore, understand and explain the mental processes that reading comprehension involves (Weir & Khalifa, 2008). As the aim of the present article is to explore the reading processes of BA students while they are processing the text of the guided summary writing task, the following overview only focuses on the detailed presentation of the cognitive processing approach.

Researchers applying the cognitive processing approach have proposed various reading models (Birch, 2007; Cohen & Upton, 2006; Kintsch & van Dijk, 1978) each of which approaches the topic in a slightly different manner. However, they all seem to agree that the reading process always involves a combination of bottom-up and top-down processing. Top-down processing engages the world knowledge of the reader, whereas bottom-up processing engages the linguistic knowledge (orthographic, phonological, lexical and syntactic) (Anderson, 1977). Besides readers' linguistic and world knowledge, context also has a notable influence on reading comprehension. According to Stanovich (1980), skilled and unskilled readers draw on context differently. While unskilled readers mostly rely on top-down processing and contextual clues in their reading comprehension, skilled readers only use context to enrich their understanding instead of complementing incomplete information and compensating for a lack of lexical access. However, the view that is currently accepted on the issue is that every reader uses both top-down and bottom-up processing simultaneously to establish the meaning of a text (Weir & Khalifa, 2008).

According to Weir and Khalifa's (2008) model of reading, there are three major components of reading comprehension, namely the goal setter, the processing core, and the monitor. As the first step of the reading comprehension process, the goal setter decides what type of reading will be applied according to the purpose of the reading activity. Based on the purpose, the reading process will be either expeditious or careful, and it will take place on a local or a global level. Expeditious reading involves a selective type of reading, where the goal is to quickly and efficiently find the required information in the text; whereas in the case of careful reading, the intention is to extract the full meaning of all the information presented in the text. Both of these reading types can occur on a local level (i.e., microstructure) or on a global level (i.e., macrostructure). The second step of the reading comprehension is the central processing, which involves building up the meaning structure of a text from word recognition to the creation of the text-level structure. As part of this process, first the orthographic forms of the words are recognized and through the retrieval of the lexical entry from the lexicon, the form is attached to its meaning. This is followed by syntactic parsing, where the words are grouped into phrases and large sentence level units. In order to establish meaning, the background knowledge of the reader becomes involved through inferencing, and a mental model is built. The last step of the central processing is the creation of the text-level structure, where the information in the text is already organized into a hierarchical structure. Every step of the reading comprehension process occurs simultaneously and in a cyclical fashion, and the reader is constantly provided with feedback about the success of each reading process by the monitor.

As Weir and Khalifa's (2008) model suggests, reading comprehension is a highly intricate process. Furthermore, to execute the three steps (i.e., goal setting, central processing, and monitoring) of reading comprehension, certain reading sub-skills are required. Based on Urquhart and Weir (1998), these reading sub-skills are the following: skimming, scanning, search reading, careful reading, and browsing. When skimming, readers are trying to get the gist of the text and opt for extracting the main ideas. Similarly, in the case of scanning, readers are not concerned with processing all the information from the text, but are looking for very specific pieces of information, for instance a particular word, name or date. Search reading also involves selective reading; however, it is slightly different from the previous two because here the reader is looking for key ideas guided by pre-determined topics. In contrast, careful reading involves the processing of the majority of information presented in the text. Finally, the last type of reading sub-skill is browsing, where the reader does not have a defined goal, and parts of the text might be skipped at random.

In order to be able to explore what kind of reading sub-skills are involved when a student executes a guided summary writing task, the analysis of the present research will focus first on the metacognitive strategies students apply while reading the source text and searching for relevant content. As the second step of the analysis, an attempt is made to identify the underlying reading sub-skills based on the observed metacognitive strategy use. As the notion of metacognitive strategies tends to have many different, sometimes even contradictory interpretations, the following section attempts to clarify the meaning of the term and provide a working definition.

2.2 Metacognitive reading strategies

Reading comprehension is a very complex process involving the application of a series of highly intricate cognitive and metacognitive mechanisms. According to previous studies, metacognition refers to a series of conscious or subconscious processes used by the participants in order to successfully accomplish cognitive goals (Phakiti, 2003). For instance, metacognitive strategies refer to actions that are considered to be conscious, deliberate, and fully intentional, and they are typically used for planning and monitoring one's own task execution (Flavell, 1971). Phakiti (2003) suggests that they are "deliberate mental behaviours for directing and controlling [language users'] cognitive strategy processing for successful performance. They are conceived as higher order executive processing that provides a cognitive management function in language use and other cognitive activities" (p. 30). Furthermore, according to Bachman and Palmer (2010, p. 49), "language users create and interpret discourse in situationally appropriate ways" through the integration of affective schemata, topical knowledge, and language knowledge. They state that language users rely on metacognitive strategies for goal setting, appraising, and planning and therefore these strategies constitute their strategic competence. Bachman and Palmer (2010) further state that metacognitive strategies have "a management function in language use, as well as in other cognitive activities" (p. 48). Regardless of the numerous studies investigating metacognitive strategies, the terminology is still ambiguous. To resolve this ambiguity, in the current study the term metacognitive processes will refer to participants' verbalized conscious thoughts about task execution, and metacognitive strategies will denote the actions taken based on these thoughts.

Research suggests that every reader has to rely on the use of metacognitive strategies when they need to make sense of a text (Hayes & Flower, 1981; Olson, 2003; Olson & Land,

2007). However, they do this with different degrees of success, and supposedly, the only difference between successful and less successful readers originates from the level of their consciousness about their own strategy use. Those candidates who had an explicit declarative, procedural, and conditional knowledge about the use of cognitive and metacognitive strategies in reading and writing tasks performed better than their peers who lacked this explicit knowledge. As a result of the extensive research in the area, there are several models describing the strategy use of students in reading and reading-into-writing tasks (Hayes & Flower, 1981; Olson, 2003; Paris, Wasik, & Turner, 1991; Tierney & Pearson, 1983; Tompkins, 1997). Despite the minor differences in these taxonomies, they all seem to agree that experienced and successful readers and writers use metacognitive strategies consciously, manipulate them freely, and apply them recursively instead of using them in a fixed order.

The present study chose to follow Olson's (2003) taxonomy of reading strategies as that taxonomy was built for the Pathway Project, a programme targeting students' skills in academic literacy and providing them with explicit training in strategy use in reading and writing task execution. In a later study, Olson and Land (2007) claim that professional readers are successful because of their capability to access and confidently apply a wide variety of strategies, while also going back and forth between these strategies instead of insisting on a strict order of application (Olson & Land, 2007). Olson's taxonomy (2003) is based on the works of Hayes and Flower (1981), Paris et al. (1991), Tierney and Pearson (1983), and Tompkins (1997), and it gives a very detailed inventory of reading strategies. For this reason, the coding scheme used for data analysis in the present research was also built based on this taxonomy. In her model, Olson (2003) groups strategies into eight major categories, namely *Planning and Goal Setting*, *Tapping Prior Knowledge*, *Asking Questions and Making Predictions*, *Constructing the Gist*, *Monitoring*, *Revising Meaning*, *Reflecting and Relating*, and *Evaluating*. The category of *Planning and Goal Setting* refers to students' actions when setting a purpose and establishing the priorities of task execution. *Tapping Prior Knowledge* and *Reflecting and Relating* describe students' attempts to relate the issue to their previous experience and general knowledge. *Making Predictions*, *Constructing the Gist*, and *Revising Meaning* contain groups of strategies participants can apply to focus their attention, organize or re-organize ideas and identify meaning through analysis. Finally, strategies belonging to the category of *Evaluating* refer to participants' actions that concern review and critical comments on the task.

In the present study, the metacognitive reading strategies applied by the participants were investigated with the help of a guided summary writing task. Therefore, the following section gives a more detailed description of this task and provides an explanation as to why this particular task type is appropriate for the investigation of reading strategy use.

2.3 The guided summary writing task

As already mentioned in the Introduction, excellent summarization skills are essential for students in tertiary education because their summarization and synthesising abilities are constantly assessed through listening-into-writing and reading-into-writing tasks. For this reason, students need explicit instruction on how to summarize effectively, and if they are to be able to provide the necessary instruction, teachers need more insight into what it actually means to summarize a spoken or written piece of discourse and what kind of skills these tasks involve.

Johns (1988, p. 79) proposes that “summary is a superordinate term for a number of discourse types which have in common these relationships with the original: (1) being shortened versions, (2) including only the main ideas, and (in most cases) (3) retaining the original organization and focus”. Through summarization, a vast amount of data can be condensed into only a few sentences, and it can also be used to include information from already existing sources into one’s own work without over-quoting or committing plagiarism (Tankó, 2013).

Summaries can be categorized according to several criteria (Tankó, 2013), one of them being the way the source text is processed. Based on this criterion, summaries can be global summaries or guided summaries. Even though academic life requires students to write many different types of summaries, in the current piece of research the guided summary task was chosen as data collection instrument and topic of investigation because most information processing tasks encountered by college or university students are reading for specific purposes tasks. According to Tankó (2013), global summaries include all the main ideas of the source text, whereas guided summaries include only the ideas relevant to the specifically defined reading goal or purpose of the summarization (Tankó, 2013). The most important difference between these two types is the intention of the reader. In the case of global summary writing, the intention is to include and cover equally every main point discussed in the source text. However, because of the loosely defined rhetorical goal, one of the greatest risks of global summary writing is losing focus and only discussing some of the issues presented in the text, thus failing to create a summary that would be an adequate representation of the original source text in terms of content and rhetorical goals (Tankó, 2013). In contrast, in the case of guided summaries, the intention is to include specific ideas relevant to the rhetorical goal of the summarizer. In such a task, students have a very well defined rhetorical aim presented in the form of a guiding question that sets a distinct goal for information retrieval. This defined rhetorical goal should help the summarizer to stay focused and might make it easier to avoid missing the identification of relevant source text information (Tankó, 2013).

The high impact of the reader’s intention and goal setting on summarization suggests that the ability of effective summarization is not only connected to text production but is also a reliable indicator of the level of text comprehension. The ability to select the relevant pieces of information requires an excellent understanding of the source text and the hierarchical structure of the ideas presented in it, namely its macrostructure (Renkema, 2004). During text comprehension, Kintsch and van Dijk (1978) suggest that the creation and use of a macroproposition depends on whether the propositional content read in the texts is considered relevant or redundant by the pre-set categories and specifications defined by the purpose of the reader. As their example explains, a book such as the Decameron, can be interpreted as a series of interesting stories along the lines of the schematic structures of narratives; but it can also be read with the special purpose of finding information about the representation of the role of women in 14th century Italy. The resulting two macrostructures constructed by the reader are different yet equally valid because they are the results of naturally occurring reading activities (Kintsch & van Dijk, 1978).

Taking the above arguments into consideration, it can be concluded that guided summary writing tasks are cognitively very complex and highly challenging, and in order to provide students with instruction on how to successfully accomplish a guided summary writing task, the reading strategies and reading sub-skills this task involves should be mapped first. Despite the multitude of studies both on the topic of reading comprehension and L1 and

L2 summarization (Hill, 1991; Kintsch & van Dijk, 1978; Purpura, 1997; Yang & Shi, 2003), guided summarization tasks have not yet been extensively researched. The aim of the present study is to help fill this research niche by exploring the reading comprehension skills necessary for the successful accomplishment of a guided summary writing task, investigating the following research questions:

1. What kind of metacognitive information processing strategies do participants apply while they are interpreting the text of the guided summary writing task and are searching for relevant content?
2. What kind of reading sub-skills does the completion of the guided summary task require?

3 Studying English major students' reading strategies

This research project aimed to investigate what information processing strategies are applied while solving a guided summary writing task, and what kind of reading sub-skills this task requires. To explore this issue, think-aloud and semi-structured interview data were collected from five first-year English major BA students.

3.1 Data collection

The current study is a small scale qualitative exploratory study whose aim is to explore the reading sub-skills activated by a guided summary writing task. In order to investigate the issue, the guided summary task solving processes applied by five English major BA students were investigated following explicit training in guided summary writing. The data collection was carried out in December 2014, about two weeks before the end of the autumn semester. During the semester, the participants received formal training in guided summary writing and explicit instruction about the use of metacognitive information processing strategies. In the data set used for this study, two of the participants worked with a different text than the others. This is because the present piece of research is part of a larger project, which followed the development of the participants through the semester with two data collection occasions (September 2014 and December 2014), and in order to control for method effect, the tasks were applied in a counterbalanced design. However, this larger project extends beyond the scope of the present paper.

During the data collection, each participant met one of the researchers for a 1.5-2-hour interview. They were notified that the interviews would be audio recorded and were ensured that their privacy would not be compromised so, in order to maintain anonymity, they were given pseudonyms before the data analysis. As the first step of the data collection, the participants received approximately 15 minutes of training in metacognitive think-aloud, following the procedures described in Bowles (2010), and then they had to do a simple sentence formation task (for a sample of the English translation of the think-aloud practice task, see Appendix A). After the training, they were given a guided summary task and instructed to verbalize every thought emerging in their minds, irrespective of whether it was in their L1 or L2, in order to guide the researcher through their information processing and task execution process as much as possible.

The students were not allowed to use dictionaries or any other external help during their writing processes; however, they were allowed to ask questions concerning minor relevant practicalities (e.g., whether they could take notes on the margins of the text) any time during the interview, and the text they had to summarize was available for them during the whole process. Besides the instructions concerning how to perform the think-aloud procedure, they were provided no other input on how to solve the task, and they were asked to execute the tasks as they normally would for their academic writing class. To help the work of the researchers, not only the audio recorded think-aloud data were collected from the participants but also their written notes. At the end of the think-aloud session, they were asked questions concerning their personal data, language learning history, their training experiences, and the number of guided summaries they had to write during the semester.

During the data collection, the language of the source text and the language of the instruction of the guided summary task were English. The language of the training and interviews was Hungarian, but for the language of the think-aloud procedure participants were allowed to use both English and Hungarian, and they were asked to verbalize their thoughts in the language in which they were thinking while solving the task.

3.1.1 Participants

As the first step of participant selection, the listening and grammar parts of the Oxford Placement test (OPT) and an IELTS academic reading task were administered in two first year Academic Skills groups (28 students altogether) to ensure that all the participants have a good command of English. The tests were administered in two groups to make sure that there was a wide enough variety of students available with different levels of language skills. Based on the test results, specific students from the groups were approached and asked to take part in the study. However, participation was on voluntary basis; every student who was asked to participate was free to refuse. To ensure that the academic texts used as data collection instruments should not cause language difficulty to the participants, for the present study, only students with a language proficiency level higher than B2 were selected.

Based on the results of the placement test and the data about the volunteers' language learning background gathered through semi-structured interviews conducted with the participants, the following participant profiles emerged (see Table 1).

Participants					
Name	Béla	Alíz	Aladár	Károly	Krisztián
Age	20	18	20	20	20
Proficiency level	B2	C1	C1	C2	C2+
Oxford Placement Test Score (/200)	139	166	157	180	191
IELTS Academic Reading Test Score (/ 14)	6	9	10	12	10
Has learnt English for (in years)	10	13	10	10	14

Table 1. Participant profiles

As Table 1 shows, all of the participants, who were Hungarian native speakers between the ages of 18 and 20, had been learning English for at least ten years. Furthermore, from the semi-structured interviews it emerged that prior to the first semester of their university studies none of the participants had received any training in guided summary writing, and they had very limited or no experience in English academic writing and in reading academic texts.

However, the scores of the IELTS Academic Reading Test administered at the end of the semester suggest that at the time of the data collection, all the participants possessed average or good academic reading skills.

3.1.2. Instruments

As has already been stated, for the purpose of participant selection, first, the listening and grammar tasks of the 2004 edition of the Oxford Placement Test were used. A standard IELTS academic reading task was also included because the OPT does not provide information about reading skills. Secondly, for the training in metacognitive think-aloud, an arithmetic problem and four sentence formation practice tasks were used.

For the actual think-aloud and data collection, two expository texts of equal difficulty were used; both of them had been specifically designed for teaching and assessing the guided summary writing skills of BA students (Tankó, 2013). The selection of the tasks was informed by the course book author's (Tankó, 2013) notes, by pilot-based student feedback collected on the tasks by the author of the course book in earlier semesters (Tankó, 2013), and by data obtained with the help of readability formulas (see Table 2).

Readability formulas		
	Average Grade Level	Flesch-Kincaid Reading Ease
Responding to student writing	15.2	34.4
Teaching Online	14.9	41.1

Table 2. Readability formulas

In the process of task selection, the length and the topic of the reading passages were also taken into consideration. Both texts discussed issues with which first year university students can be expected to be familiar and to which they can relate on the basis of their own experience: Task A, entitled *Responding to student writing*, was a 19-sentence description of the types and effects of feedback teachers can give their students; Task B, *Teaching online*, discussed the problems and challenges of online tutoring. Both assignments required students to write a paragraph of 130 words (+/- 10%), summarizing in their own words ideas specified in the task from one of the texts. The participants working with the *Responding to student writing* text had to find four relevant ideas (i.e., content points, henceforward: CPs), whereas those who worked with the *Teaching online* text had to find six CPs.

Following the data collection procedure, interviews were conducted with the students according to a semi-structured interview protocol. The interview questions focused on the participants' language learning background and their experience with guided summary writing and academic writing in general.

3.2 Data analysis

At the beginning of the data analysis procedure, the audio recorded think-aloud protocols and the interviews were listened to twice by both of the researchers, notes were taken on them, and relevant parts of the think-alouds and relevant quotes from the participants

were transcribed. After the researchers had compared their respective notes and agreed on a finalized version, these notes and the transcriptions, together with the participants' own notes and drafts, were subjected to content analysis. The collected data were analysed for emerging themes, focusing specifically (1) on the metacognitive information processing strategies applied by the participants while reading the source text in the guided summary task and searching for relevant content and (2) on the reading sub-skills necessary for the use of these metacognitive strategies.

First, the notes taken on the think-aloud protocols of Károly and Béla were subjected to content analysis and coded for emerging themes. These two protocols were randomly selected for transcription. The coding scheme was developed using the think-aloud protocols of Károly and Béla, and it was based on Olson's (2003) taxonomy of cognitive strategies and Weir and Khalifa's (2008) model of reading comprehension. However, in order to fit every emerging theme, the two models had to be adapted. The rest of the think-aloud protocols were coded based on the emerging coding scheme, and further categories were introduced if it was necessary, so that the final version of the coding scheme accommodated all the themes that emerged. The coding was done manually, and in order to ensure the reliability, all protocols were coded by both of the researchers, and inter-coder agreement was calculated with Cohen's Kappa using SPSS 17.0. The inter-coder reliability for the codings was Kappa = 0.65 ($p < 0.001$), 95% CI (0.478 to 0.834). As the second step of the analysis, the reading sub-skills measured by the guided summary writing task were investigated. The reading strategies encountered were paired with possible underlying reading sub-skills based on Urquhart and Weir's (1998) taxonomy of reading sub-skills and Weir and Khalifa's (2008) model of reading comprehension.

4 Reading strategies and sub-skills used by the participants

4.1 Cognitive and metacognitive strategy use

As the first step of the data analysis, the cognitive and metacognitive strategy use of the participants was explored. During the analysis, 264 relevant think-aloud segments were coded, and in this data set, 26 emerging themes concerning strategy use were encountered, which could be grouped into three main categories, namely 'goal setting', 'information processing', and 'monitoring the comprehension'. The labels of the categories were based on Weir and Khalifa's (2008) model of reading. The category of 'information processing' can be further divided into 'global processing' and 'local processing', which also have their own sub-sections, such as 'establishing sentence level meaning', 'inferencing', 'building a mental model', and 'creating a text level structure'. For detailed information about the definitions of the categories and the emerging themes belonging to them, see Table 3.

Category	Definition of the category	Sub-categories	Emerging themes
Goal setting	The reader decides on the reading purpose and the focus of the reading process.	not applicable	<ul style="list-style-type: none"> • reading the task instructions • interpreting the task instructions • formulating a guiding question
Information processing	The reader builds up the interpretation of information presented in the source text.	Lexical access	<ul style="list-style-type: none"> • trying to interpret an unknown word based on its morphological form
		Establishing the meaning of a word at sentence level	<ul style="list-style-type: none"> • trying to interpret an unknown word based on its context • misinterpreting an unknown term
		Inferencing	<ul style="list-style-type: none"> • interpreting a word or term based on his/her own world knowledge • relating a topic discussed to his/her own experience
Information processing (<i>continued</i>)		Building a mental model	<ul style="list-style-type: none"> • note taking • skimming a paragraph • postponing the judgment about the relevance of a piece of information • deciding to skip parts of the text which were deemed irrelevant after quickly skimming the source text • reading one sentence from the source text • reading a whole paragraph of the source text • judging the relevance of one piece of information • judging the relevance of the information presented in a paragraph
		Creating a text level structure	<ul style="list-style-type: none"> • evaluating the logical relations between the sentences of the source text • organizing content points into a logical order • formulating a content point
Monitoring the comprehension	The reader monitors the reading process and constantly checks whether their understanding of the information presented is appropriate.	not applicable	<ul style="list-style-type: none"> • re-reading the guiding question • re-reading one sentence to ensure understanding • re-reading a whole paragraph of the source text to ensure understanding • re-reading those parts of the text which were deemed relevant • re-reading the source text to ensure that every content point (CP) was found

Table 3. Emerging themes and categories

When solving the guided summary task, the first step each participant took was to read the instructions for the task and to formulate a guiding question. The formation of a guiding question appeared to provide a focus for their attention, as most participants verbalized that during their reading process, they were going to focus on the pieces of information which contribute to the guiding question. “First of all, I am going to read the task and formulate a guiding question because that will give me an idea about the content points I have to look for in the text” (Béla). In every case, this was followed by the reading of the source text.

However, a difference could be observed among the participants' approaches to processing the text. Béla, and Károly started to read it by proceeding from sentence to sentence, carefully interpreting every piece of information they encountered, and moving forward to the next sentence only when they managed to evaluate the relevance of the analyzed piece of information. In contrast, Alíz, Aladár, and Krisztián only stopped to interpret and evaluate the relevance of the encountered information at the end of each paragraph.

While reading the source text, each participant took notes regularly on the relevant pieces of information they found. Looking at their notes on the content points, it can be concluded that to some extent, all the participants managed to successfully accomplish the guided extraction of the relevant propositional content, as everybody found most of the content points required by the task. Aladár found three out of four CPs, Béla found four out of six CPs, Alíz and Krisztián found five out of six CPs, whereas Károly found all the relevant information required by the task. This suggests that despite the different ways in which they approached text processing (i.e., proceeding sentence-by-sentence at first, or working with whole paragraphs already from the beginning) did not make a notable difference to the quality of their text comprehension and extraction of relevant propositional content. The only difference that could be observed was in the amount of time taken: Károly and Béla needed slightly more time to complete the task than the other three participants. However, this could also be the result of a higher verbosity in their think-aloud procedures.

After the first reading of the text, every participant performed a second reading cycle; however, this time they only seemed to focus on those parts of the text that were deemed to hold relevant information for answering the guiding question. Those paragraphs that initially were deemed irrelevant were completely skipped during the second reading. "Well, there was nothing interesting in the first two paragraphs, so I'm not going to check those again" (Károly). The main focus of the second reading appeared to have a double aim: firstly, the participants verified whether every piece of relevant information was found; and secondly, they also aimed to find the logical connection between the parts of the text and between the ideas presented, and to arrange the content points they had found into a logical order. "OK, so this is the part where they are going to talk about all the advantages. Well, let me check if I have all the relevant information from here" (Alíz). This way, as Alíz's quote also illustrates, the re-reading of certain parts of the source text did not only occur when the participant did not manage to comprehend a sentence or a paragraph. Throughout the reading process the constant application of monitoring strategies could be observed. They also returned to certain parts to monitor their process.

During the information processing phase, regardless of their language proficiency level, all the participants encountered the problem of not being able to interpret information at the first attempt. In these instances, the difficulty was either caused by the cognitive load the information density of a paragraph imposed on the reader, or by an unfamiliar word. The problem of the cognitive load was easily solved by re-reading the sentences or paragraphs in question. For example, "[...] this was too much to comprehend. I have to go back and read it again more carefully [...]" (Aladár). In comparison, the problem of an unknown word led to the use of three different comprehension strategies: First, the meaning of the unknown word could be inferred from its morphological structure. For instance, when Béla realized that he did not know the meaning of the word 'leverage', he turned to his knowledge of morphology: "Well, leverage [...] I have definitely never heard of this word. But it sounds like the verb form of 'level'" (Béla). Another way participants attempted to interpret an unknown word, was to look at its context. "To be honest, I have no idea what extrinsic motivation means. But

based on this paragraph, it must refer to some kind of way students can be motivated” (Károly). Finally, problematic expressions could also be understood by relying on the participant’s background knowledge: “They can write a reflection page? Wait, I know what that is. I also had to write one for my Academic Skills class” (Krisztián).

Based on the above-presented observations about the reading strategy use of the participants, it can be concluded that reading comprehension is indeed a very complex process (Kintsch & van Dijk, 1978). The findings of the present study on reading strategies appear to be in agreement with those of previous research, namely that successful information processing requires especially the conscious application of reading strategies (Olson, 2003; Olson & Land, 2007). All the participants approached the task with a very conscious routine going through a set of practiced steps, which resulted in rapid and successful understanding of the source text and very efficient identification of the relevant content.

4.2 Reading sub-skills

As the second step of the analysis, the possible underlying reading sub-skills were inferred based on the reading strategy use of the participants. Taking the emerging metacognitive strategies into consideration and mapping them onto Urquhart and Weir’s (1998) taxonomy of reading sub-skills, it appears that the guided summary writing task required good skimming, scanning, search reading, and careful reading skills.

First of all, during the first reading cycle, the skill most frequently applied by the participants of this study was skimming. Regardless of whether they later decided to work with the text proceeding sentence-by-sentence or paragraph-by-paragraph, during the first reading cycle, every participant aimed to get the main idea presented in each paragraph. This way, they could build up the macrostructure of the text. However, their comprehension process was not guided by the original macrostructure of the text; they were trying to focus on the items of information which provided answers to the guiding question. Furthermore, the heavy reliance on skimming also suggests that experienced readers first and foremost focus on the global comprehension of a text, and they try to get the gist of every paragraph. This supports the findings of previous studies: both Kintsch and van Dijk (1978) and Olson and Land (2007) suggest that skilled readers try to apply reading strategies involving global comprehension instead of only looking at the text at a local level.

The participants’ global comprehension skills were also used during the second reading of the text. In this phase, search reading was very often applied as the participants were already aware of the types of information presented in each paragraph. The main aim of the second reading was to make sure that no relevant information was overlooked, so they were looking for pieces of text referring to the advantages and disadvantages of online teaching, or the role of feedback.

Despite being very efficient readers with a high level of language proficiency, every participant encountered comprehension problems which could only be solved on a local level. For instance, when they encountered a word they could not understand, and they attempted to extrapolate it from its morphological form or its immediate environment in the sentence. Similarly, when the participants were scanning the text for a specific word, the activity engaged their local comprehension. For example, when Aladár in the end re-organized his notes on the CPs, he was not sure if the word ‘feedback’ was one or two words, so he quickly scanned the text to find the word.

As the collected data suggest, accomplishing the guided summary task mostly involved expeditious reading. However, in certain parts of the text the use of careful reading was needed. Altogether, there were two types of instances which required careful reading. First, when participants encountered a cognitively loaded sentence which could not be understood, they had to go back and re-read it more carefully. For example, “There was a lot of information in this sentence. Let me read it again” (Aladár). Second, reading the task instructions at the very beginning of the process also involved careful reading. The participants read the instructions very carefully, making sure not to miss anything important.

According to the findings of this study, the only sub-skill from Urquhart and Weir’s (1998) taxonomy which was not involved in guided summary writing is browsing. However, this is quite understandable as the task itself required reading with a specific purpose in mind. For this reason, aimless browsing of the text could not be part of any step of the task execution.

5 Conclusion

The aim of the research described was to investigate the cognitive and metacognitive reading strategies students use while accomplishing a guided summary writing task, and to explore the reading sub-skills involved in guided summarization. The students taking part in this research received formal instruction about both reading strategies and guided summary writing, and the outcomes of the study appear to be in agreement with previous research results. The conscious application of metacognitive reading strategies can provide a highly beneficial aid for students during the execution of a reading-into-writing task

Answering the first research question, it can be concluded that the participants used a multitude of reading strategies while executing the guided summary writing task. These reading strategies could be grouped into three major categories and these categories also corresponded with the steps of reading comprehension proposed by Weir and Khalifa (2008) in their reading model. The findings suggest that those readers who can successfully solve a guided summarization task apply the reading strategies consciously throughout every step of the reading comprehension process.

Taking the second research question into consideration, it appears that based on Urquhart and Weir’s (1998) taxonomy, the reading sub-skills involved in guided summary writing are skimming, search reading, scanning, and careful reading. Of these four sub-skills, the most frequently used one is skimming. Among the applied reading strategies, it appears that the participants put a major emphasis on the global comprehension of the text. However, in order to solve problems caused by unknown words or cognitively loaded sentences, they also had to focus their attention on local comprehension and strategies facilitating this.

6 Pedagogical implications

The ability to summarize information is an essential skill in both non-academic and academic contexts. Besides being a skill that is used daily, adequate summarization skills have a special importance for students because most gate-keeping examinations contain parts which test summarization skills. Because the ability to summarize effectively requires excellent information processing and text production skills, providing reliable formal training

in these areas would be essential. To be able to design a good curriculum, teachers require in-depth information on the topic.

The results of the present study suggest that the guided summary writing task measures not only the writing and paraphrasing skills of the students, but also their local and global reading abilities in the form of several reading sub-skills, such as scanning, skimming, and search reading among others. To prepare students for the successful execution of a guided summary task, teaching materials should focus on developing the students' reading abilities, and they should contain explicit instruction on reading strategies involving the aforementioned sub-skills.

7 Limitations and further research

The current study is a small-scale exploratory research featuring only five participants. A large-scale data collection and the analysis of cognitive and metacognitive reading strategies used in guided summary writing might perhaps prove to be useful in providing further information about the reading sub-skills required by the task. Furthermore, the current analysis relied on data collection through the think-aloud method, which is only able to provide information about the reading strategies and reading processes which participants execute fully consciously. Thus, using computer software to track the eye movements of the participants while they are reading the source text of the guided summary writing task might provide an even deeper insight into the reading sub-skills engaged in the task execution.

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APPENDIX A

Metacognitive think-aloud training practice task English translation

Create a meaningful, grammatically correct English sentence from the words below. Please, use all the words, and while solving the task, verbalize every single thought that emerges in your mind. You can verbalize your thoughts both in English and Hungarian. Please use the language you are thinking in.

Words: bundle doorstep that same immediately truly Jane Ricky flowers her on her of When just loved realized she that and she him found the loved a

Sample solution:

When Jane found a bundle of flowers on her doorstep, she immediately realized that Rick truly loved her, and that she loved him just the same.