

STRATEGIES FOR EXPOSITORY AND NARRATIVE TEXTS. STUDENTS' PERSPECTIVES ON TEXT TYPE-SPECIFIC COGNITIVE AND METACOGNITIVE READING STRATEGIES

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Abstract

Based on the assumption that reading strategies facilitate text comprehension and that they should differ regarding types of texts, this study aims at analysing which cognitive and metacognitive reading strategies are applied by university students (N = 54) for reading a narrative text compared to an expository text. To measure text-specific reading strategies, different channels of information were included such as highlighting of text segments qualitatively and quantitatively, qualitative and quantitative note-taking as well as the coherence of notes, and self-reported strategy use after reading. The findings show that students' highlighting of text segments and note-taking differ regarding the type of text in amount and depth of processing, indicating a greater depth of processing for narrative texts. The self-reported strategies for reading the two types of texts also reveal differences in terms of the frequencies of applying elaborative and metacognitive strategies. Moreover, correlation analyses show that there is more correspondence between the reading strategies in the narrative condition compared to the expository condition. In sum, the students adapt their reading strategies to the types of texts and it appears that narrative text was read in a more strategic and deeply oriented manner than the expository text.

Keywords: text comprehension; reading strategies; narrative text; expository text; German university students' perspective

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1. INTRODUCTON

Text comprehension is a key competence of social participation since most communication, knowledge acquisition and information exchange take place via texts (OECD, 2021). Beyond, reading comprehension, facilitates enculturation, imagination, and emotional experiences especially when literature comes into play. Since the 1980s, there has been a consensus that reading strategies facilitate text comprehension (Cromley & Azevedo, 2007; Palincsar & Brown, 1984; Weinstein & Mayer, 1986). Strategic readers process texts deliberately, they monitor and modify their strategy use as well as attempt to construct meaning from texts (Afflerbach, Hurt & Cho, 2020; Paris et al., 1983). Based on general learning strategies across domains, (Boekaerts, 1999; Fiorella & Mayer, 2015; Weinstein & Mayer, 1986) reading strategies explicitly refer to the field of text comprehension. They have a positive impact on comprehension and strategy application (Goldman et al., 2016; Souvignier & Mokhlesgerami, 2006) even for struggling readers (Edmonds et al., 2009). According to empirical evidence, reading strategies are implemented in manifold strategy trainings (e.g. Afflerbach et al., 2020) and at present, a transfer of strategies to multiple documents reading and digital reading is under discussion (Jian, 2022; Lim & Toh, 2020).

Despite the importance and evidence-based advantages of reading strategies for text comprehension, classroom research indicates the consistent finding that language arts teachers rarely instruct strategies, and if at all, they teach cognitive rather than metacognitive reading strategies when dealing with expository texts (Magnusson et al., 2018; Peters et al., 2022; Schmitz, 2019). Reasons for this are that teachers show a lack of understanding about the instructional principles (Seymour & Osana, 2003: for reciprocal teaching) and are hesitant about which strategies are appropriate for different types of texts (El-Dinary, 2002). The latter refers to the fact that most strategy tools suggest reading strategies exclusively for expository texts. Especially when dealing with literary texts, such as narratives, attention to reading strategies is uncommon (Janssen et al., 2006), although narrative text comprehension also requires strategic processing (Rosebrock, 2018). For language arts teachers, who are mainly responsible for the development of both informational and literary reading competence, all-encompassing strategy suggestions neglecting the characteristics and affordances of different types of texts are unsatisfactory. In line with this, Afflerbach et al. (2020, p. 101), as well as Dumas (2020, p. 16), argue that future research on reading strategies should be more contextualized by analyzing domain or subject-related strategies (National Reading Panel [NRP], 2000). Moreover, if we want to promote students' text comprehension in a targeted manner, we must know more about text type-specific reading strategies (Janssen et al., 2006, p. 36) in the

act of reading situations (van den Broek & Helder, 2017). Also, for critical reading in the 21st century and regarding increasingly challenging (multiple) texts in digital learning environments, a targeted application of reading strategies becomes more and more important (Bråten & Braasch, 2017).

The present study investigates which cognitive and metacognitive reading strategies university students apply for reading a narrative text (a contemporary short story) compared to an expository text (a newspaper article). To map the application of text type-specific reading strategies, we conducted a multi-method study (Veenman, 2005) assessing students' reading strategies by different channels of information such as highlighting, note-taking, and self-reported strategy use immediately after reading, which have proven to be valid measures for assessing reading strategies (Bråten & Samuelstuen, 2007).

2. COMPREHENSION OF EXPOSITORY AND NARRATIVE TEXTS: TEXT FEATURES, READING MODES, AND STRATEGIES

Most models of text comprehension describe complex cognitive processes during reading which result in a mental representation that captures an interpretation of the text (Kintsch, 1998; van den Broek & Helder, 2017). According to Kintsch (1998), readers build cognitive representations in cyclical interactions on the surface level, the propositional textbase level, and the level of a situation model. Beyond, readers develop an interpretation of the text, reflect individually on their understanding, and critically evaluate the text's intention and issues of language features (Rosebrock, 2018; Rosenblatt, 2019). During such comprehension processes many factors are intertwined: readers' prior knowledge and inference generation (Clinton et al., 2020), genre expectations (Schmitz et al., 2017; Zwaan, 1994, 1996), reading motivation, and reading strategies, but also the type of text, its structure, coherence, and readability (e.g. Denton et al., 2015; McNamara & Kintsch, 1996; Zwaan, 1994, 1996). Since the focus of the present study is on analyzing text type-specific reading strategies, only selected text and reader characteristics will be considered in detail.

2.1 *Characteristics of narrative and expository texts and specific reading modes*

Narrative and expository texts do not only differ in content, structure, and vocabulary, but also in their openness, presence of a protagonist, and the necessity of activating prior knowledge for comprehension (Janssen et al., 2006; Kraal et al., 2018). Many children find expository texts more difficult to comprehend than narrative texts, which is reflected in reading test scores (Best et al., 2008; Dickens & Meisinger, 2017; Kraal et al., 2018; Schmitz et al., 2017). Explanations for these differences are that expository texts often deal with unfamiliar content, contain abstract language, subject-specific terminology, and vary regarding their composition (Alexander & Jetton, 2000). In expository texts, structures such as comparison and contrast, cause and effect, problem and solution, and sequence and description can be integrated

within one text (Graesser et al., 2003), which can cause cognitive load for readers (van Dijk, 1995). In contrast, narrative texts often are intentionally ambiguous and aesthetically designed, and thus leave more space for individual interpretation and allow also a vague mental model (Janssen et al., 2006). Beyond, narrative texts may be perceived as easier because readers can rely to a greater extent on their everyday knowledge and experiences for closing coherence breaks (Graesser et al., 2003). Also, children become familiarized with narrative texts much earlier and more often during their lifetime than with expository texts. For instance, through reading aloud by parents, children acquire knowledge about superstructures playfully, e.g. the story grammar of narrative texts. Moreover, the scope of reading narrative texts is usually connected with pleasure compared to the prevailing knowledge extraction when reading expository texts (Lorch et al., 1993).

With respect to these text characteristics which are framed by issues of reading socialization and reading comprehension processes in cognitive-psychological models like the construction-integration-model (Kintsch, 1998) there is the need for some elaboration with regard to different processing stances (or modes) readers may take up while reading different types of texts (Duke & Roberts, 2010; Rosenblatt, 2019). According to Rosenblatt (2019), readers align their reading mode or stance on a so-called "efferent-aesthetic continuum" (p. 458). Expository comprehension is characterized by a "predominantly efferent stance" (Rosenblatt, 2019, p. 458), by which readers concentrate on extracting information, selecting, organizing, and integrating ideas given in the text to construct a coherent situation model. McDaniel & Einstein (1989) call this kind of reading "individual item processing" (p. 118). This assumption goes along with Jakobson's (1960) referential function in expository texts, where the focus lies on facts and state of affairs (see also: Zwaan, 1994, 1996). Prototypically, in such an efferent or individual-item processing mode, readers focus to a greater extent on a close-to-the-text comprehension or on the reading task which has to be fulfilled after the reading process (van den Broek & Helder, 2017). Rosenblatt (2019) illustrates this processing mode as the "tip of the iceberg" (p. 458). In comparison, when reading narrative texts or poetry, readers take a "predominantly aesthetic stance" (Rosenblatt 2019, p. 458) focusing on feelings, situations, figures, and emotions which represent the "hidden part of the iceberg". McDaniel & Einstein (1989) depict this kind of reading as "relational processing" (p. 118). Pieper & Strutz (2018) reveal that such a specific mode is already verifiable in sixth graders when reading metaphors. Regarding narrative texts, there is also evidence that readers continuously generate inferences (Clinton et al., 2020), respond and interpret (van den Broek & Helder, 2017) both during and after the reading event, and furthermore accept vague or incoherent mental models (van Dijk & Kintsch, 1983).

Important to mention is that readers are free to apply a more or less efferent or aesthetic reading mode to a text (Rosenblatt, 2019). Some studies prove that already task instructions and genre expectations affect reading modes and means in comprehension. McCarthy & Goldman (2015) show that two different task instructions

to the same narrative text (focusing either on the plot versus on personal statements) affects students' (N = 112, age about 20 years) essay writing being either more interpretative as well as reasoning versus more literally aligning to the text. Other studies by Zwaan (1994, 1996) indicate that when expecting to read a narrative text readers allocate more resources on the surface structure and the textbase compared to expecting an expository text where the focus is more on the construction of a situation model, even if the texts are identical and only the task instruction feigned different types of texts. Following Zwaan (1994, 1996), Schmitz et al. (2017) prove that the manipulation of expository or narrative genre expectations influence the effect of local and global cohesion markers on comprehension even if the texts are identical.

Corresponding to the features of narrative and expository texts and readers' adjustment of reading modes to (expected) types of texts, it can be theoretically assumed that they also adapt their cognitive and metacognitive reading strategies for different types of texts (see also Rosebrock, 2018).

2.2 Conceptualizations of reading strategies

Readers who struggle with reading comprehension often have difficulties with reading strategically (Paris et al., 1983). There is a direct and significant path between the usage of reading strategies and what is understood from the material (van Meter & Campbell, 2020). The reasons for these findings are that successful readers monitor their understanding while applying and coordinating reading strategies such as activating prior knowledge, summarizing content or paragraphs, highlighting word or text segments, and generating questions (Afflerbach et al., 2020, p. 103). These mental activities help readers during the complex comprehension processes (Kintsch, 1998) described above because strategies serve as mental tools to control and modify the comprehension of texts (Afflerbach et al., 2008). Compared to automatic reading skills, reading strategies are effortful, deliberate and goal-directed activities. We follow van Meter & Campbell (2020) who define a strategy as an "*effortful, goal-directed form of procedural knowledge that is stored in long-term memory*". There are different *types of strategies* and these strategies must be *coordinated* with one another during a complex task" (p. 87) [italics in original].

Because cognitive and metacognitive strategies are especially important for successful reading performance and affect comprehension directly (NRP, 2000), we focus on cognitive strategies and metacognitive strategies starting from the dimensions of self-regulated learning (Boekaerts, 1999). Resource management strategies such as maintaining motivation or setting up a conducive reading environment (Azevedo et al., 2013) are not part of our study, because resource management strategies play a distinct role in reading processes. Cognitive reading strategies refer to information processing from texts realized by strategies of organization, elaboration, and rehearsal. Organizational strategies include, for instance, highlighting techniques, summarizing, note-taking, and mapping. Elaborative strategies promote a

deep and meaningful understanding of information by asking questions, activating prior knowledge, drawing conclusions, formulating hypotheses, and generating examples or analogies. Rehearsal strategies serve to store information into long-term memory. Beyond, metacognitive reading strategies guide and direct cognitive processes by planning, monitoring, and evaluating comprehension activities (Weinstein & Mayer, 1986). These reading strategies can be further categorized regarding their level or depth of processing (Dinsmore & Hattan, 2020). While surface strategies aim at a basic understanding without the integration and transformation of information, depth-oriented strategies serve a sustainable comprehension and usage of information (Rogiers et al., 2020). Nevertheless, the transition between the strategy types and their depth of cognitive processing is seamless. For instance, both written summaries and note-taking can have a more organizational character when copying explicit text-based information, or they can have an elaborative character when readers abstract from the literal meaning and synthesize content coherently in their own words (Azevedo et al., 2013). Moreover, the strategies are distinguished regarding their perceptibility, such as that some strategies may work as covert mental strategies by monitoring, asking questions or summarizing mentally (Kardash & Amlund, 1991) and some can be applied and assessed overtly as they are physically existent (e.g. underlining, taking notes, drawing, or mapping). The latter serve as “fossilized strategy events” (Bråten & Samuelstuen, 2007, p. 4) expressed by underlining or highlighting text segments as well as note-taking which may give proper insight into text specific reading strategies (Azevedo et al., 2013).

2.3 Empirical studies on reading strategies for expository and narrative texts

The studies presented in the following vary in their definitions of reading strategies and methods of assessment regarding their granularity level and visibility (Rovers et al., 2019). However, they are not in conflict but complement each other (van Meter & Campbell, 2020).

When reading different types of texts, some studies investigated inference activities, and only partly reading strategies. Kraal et al. (2018) compared inferences when reading expository and narrative texts (N = 87, grade 2). The think-aloud study shows that when reading narrative texts, more text-based and knowledge-based inferences were observed. In contrast, the children made more comments and asked more questions when reading the expository texts, but they also expressed more invalid knowledge-based inferences. Literal repetitions and elaborate knowledge-based inferences were observed regardless of the text type. Narvaez et al. (1999) worked also with narrative and expository texts and compared if a study-goal versus an entertainment-goal affects students' (N = 20; about 23 years old) inferences, text comprehension, and metacognitive strategies. The think-aloud analyses indicate that the study-goal affected inference generation regardless of the types of texts, but not text comprehension. Further, the expository text seemed to evoke study type behavior expressed by more repetitions, more evaluations, and identification

of coherence breaks, whereas the narrative comprehension seemed to be less affected. Irrespective of the reading goals, the readers made more explanations and predictions when reading the narrative text. Readers' metacognitive strategies were not affected by the reading goals.

Another line of studies focused explicitly on the concept of reading strategies applying expository texts. Kardash & Amlund (1991) were interested in observable overt and covert (meta-)cognitive strategies, strategy combinations, and effects on learning from expository texts (N = 52, university students). Students' answers illustrate that overt and covert strategies were rarely combined, if at all highly individual, and not representative for the total sample. Self-reported covert strategies positively affected learning from expository text, while overt strategies were not related to it. Internal strategies (e.g. connecting ideas, combining information, summarizing content mentally), but also metacognitive strategies (e.g. ensuring comprehension and planning the task solution) were more profitable for expository learning than for example underlining main ideas, taking notes, and making charts. Bråten & Strømsø (2003) also studied reading strategies for expository texts in university seminars (N = 7, about 20 to 22 years old). They assessed students' strategies over time regarding memorization, elaboration, organization, monitoring, and evaluation by thinking aloud and interviews. Furthermore, reading goals were distinguished in terms of reading for keeping up with lectures versus reading for examination. The students used more organizational and comprehension confirmation strategies over time, but decreased the monitoring of problems and problem-solving strategies. This pattern is caused by shifted reading goals starting with keeping up with lectures to providing for an exam. In another study, Bråten & Samuelstuen (2004) show that students in secondary schools (N = 269, grade 10), who read an expository text for holding a discussion with classmates, reported to have applied more memorization and elaboration strategies, but no such relation was evident when the goal was reading for test-taking or summary writing. Furthermore, Bråten & Samuelstuen (2007) compared reading strategies for expository texts in 177 tenth-grade students with text traces (underlined segments, note-taking, written summaries) and a task-specific questionnaire after reading. A central finding of the study is that the self-reported strategies, notes and summaries correlated with text comprehension. In contrast, underlining techniques did not correlate with text comprehension (a similar finding also got evident in Kardash & Amlund, 1991). Beyond, Rogiers et al. (2020) investigated text-learning strategies in 51 secondary students (about 13 years old) when preparing for a test with an expository text. Think-aloud analyses, which were evaluated with Educational Process Mining, and self-reports reveal four strategy user profiles: Integrated strategy users applied diverse overt and covert cognitive as well as metacognitive strategies, and achieved the highest scores in text comprehension compared to limited strategy users who used only a few strategies like highlighting and rereading. So-called information organizers focused on note-taking strategies (e.g. highlighting and writing summaries), and finally, mental learners mostly applied

covert strategies (e.g. memorizing, rereading, and paraphrasing). Except for the limited strategy users, all profiles processed the text cyclically, but only integrated strategy users applied both planning and monitoring strategies as well as cognitive strategies.

To the present day, only few studies investigated strategies for narrative texts. Their strategy concepts differ from the above-mentioned construct of reading strategies (Rosebrock, 2018). Janssen et al. (2006) investigate reading activities for narrative texts with 19 Dutch students (10th grade). The authors observed reading activities like retelling, inferencing, detecting problems, evaluating, and responding emotionally to the text which can be broadly subsumed as elaborative and metacognitive reading strategies. Especially, stronger readers expressed more evaluations, detected more problems, and were emotionally more engaged than weaker readers who provided more retellings and focused on a basic understanding. A think-aloud study by Scherf (2017) with university students (N = 43) and pupils in secondary schools (N = 12, age 12-13 years old) discloses that the university students paid more attention to linguistic conspicuities or expressions which they tried to interpret (see also Zwaan, 1994, 1996). They also made more assumptions or hypotheses about the text, and accepted an incoherent situation model during reading in comparison to the pupils.

Although there is a lack of contrastive within-person analyses to investigate which strategies readers select for expository and narrative texts, the findings can be used as a starting point for the present study: When reading expository texts, readers seem to intuitively apply strategies like summarizing mentally or written, note-taking, highlighting, asking questions, repeating content, and planning as well as monitoring comprehension. The studies using narrative texts indicate that the construction of hypotheses and assumptions, emotional engagement, retellings, and the interpretation of linguistic expressions seem to be usual. In the following, a study is presented that aims at a text type-specific comparison which has not been done before.

2.4 Research questions

The study analyses students' strategies for reading a specific narrative and expository text. Their task was to read each text in order to retell the content of each text to a classmate by using written notes. For analyzing the cognitive and metacognitive reading strategies different channels of information were included: (1) the highlighting of text segments, (2) the quality, quantity and coherence of notes, and (3) the reported use of cognitive and metacognitive reading strategies. Given the theoretical and empirical findings and the tendency that expository texts require different reading strategies, the following three questions are investigated:

- 1) How do students highlight text segments and take notes with regard to reading an expository and a narrative text and to which extent do they apply these cognitive reading strategies differently?

- 2) Which cognitive and metacognitive reading strategies do students report for reading the specific expository and narrative text and which differences get evident?
- 3) How do highlighting, note-taking, and self-reported cognitive and metacognitive reading strategies correspond in the expository and narrative reading situation?

3. METHOD

3.1 *Sample*

The participants were 54 native-speakers of German studying language and literature to become German language teachers in primary and secondary schools. The students were attendees of five different German seminar courses at public universities in Western and Northern Germany at an undergraduate level. They were selected because as prospective language teachers a strategic reading approach could be expected from them as Scherf (2017) demonstrates when comparing a sample of university students with school students. They were informed about the project's goals and were requested to participate on a voluntary basis during regular course time. Informed consent of the participants was obtained prior to the study. The students were $M = 23$ years old (95% female, 5% male), which represents a prototypical sample of German language students in a teacher training program.

3.2 *Procedure and design*

Students' application of reading strategies was operationalized with a multi-method design (Veenman, 2005) to capture overt and covert (meta-)cognitive reading strategies. Data collection was organized in 2020 within 60 minutes in an online format. The study assessed students' reading strategies when reading two different texts on a computer. All participants read a narrative short story and an expository newspaper article to reproduce each content in order to tell it to classmates (within-persons design). This reading goal fits prototypical educational text-study situations expected at university but also at school. The students were asked to apply reading strategies they would usually select when comprehending such texts. Also, they were advised to take digital notes beside each text to remember each text's content properly for reproduction. The text and sheet for notes were presented in a landscape format with the text on the left side and the sheet for notes on the right side. After the reading task, the students answered retrospective interview questions reflecting on the previous reading situations, focusing on the cognitive and metacognitive strategies, and commonalities as well as differences regarding the applied reading strategies.

The independent variable was the type of text (expository versus narrative). The dependent variables were the highlighted text segments, the quality, the quantity as

well as the coherence of notes, and the self-reported cognitive and metacognitive reading strategies.

3.3 Materials

3.3.1 Reading texts and reading task

Students read an expository text, which was an updated newspaper article about Africa's Economic Development ("Africa Profits from Raw Commodity Boom") by Dieterich (2006) of 217 words and a contemporary short prose text about a characters' feeling of alienation ("Das schönste Mädchen/The Prettiest Girl") by Stamm (1999) of 345 words. These texts were selected as they could be placed at the ends of the efferent-aesthetic continuum, as mentioned earlier. Regarding the content, both texts serve to reflect on the consequences of globalization for countries and individuals, and shared responsibilities between society and individuals. The expository text contained a prototypical problem-solution structure and the narrative text can be characterized by an event which was partly enlightened in the end. Thus, both texts share similarities regarding their superstructures, but differences regarding vocabulary of being more complex in the expository text. Both texts presented a sufficient challenge for the sample and were well-suited to elicit effortful strategies during reading: the expository text, for instance, contained coherence breaks for identifying and tracking the referents which have to be closed for constructing a situation model. Also, the text contained pronominal references, technical terms and complex subordinate clauses. The narrative text also presented challenges regarding stylistic devices (symbols) and the description of inner as well as outer perspectives transporting content which have to be identified for interpreting the prose text. The narrative text contained no technical terms, but proper names, and also complex subordinate clauses. The German Flesch-Reading-Ease $FRE_{\text{German}} = 180 - \text{Average Sentence Length} - (58,5 \times \text{Average Number of Syllables per Word})$ was calculated for both texts. The expository text has a score of $FRE = 45$ (difficult) and the narrative text a score of $FRE = 60$ (medium difficulty).

3.3.2 Highlighting of text segments

The highlighted segments were counted quantitatively and were rated qualitatively by one of the authors and one research assistant with a coding system following roughly Bråten & Samuelstuen (2007). Regarding the quantitative coding, the total number of highlighted words was counted for each text. Additionally, it was coded if the students highlighted single words (coding of yes or no) or whole sentences (coding of yes or no). For the qualitative rating of the highlighted text segments, the authors developed an a priori coding system. In each text, 11 relevant segments were identified and distinguished from 3 less central segments. The relevant segments are

sufficient to form a coherent mental model of the text. In the narrative text, the relevant segments referred to core messages, information about locations and figures, specific language symbols, and text segments where the emotions of the protagonist are described. An example of a relevant text segment is where the protagonist identifies a lettering at the beach named "ALIEN" not standing for the word alien, but for a Dutch female name. A less relevant segment is where the reader is informed that the father of a further character was a skipper. In the expository text, there were also core messages, information about continents and figures, specific symbols, and examples. A relevant segment is that the OECD registers a profit for Africa, but that the mentioned boom is more of a disaster for the continent. Less important segments are for instance elaborations, which are not mandatory to comprehend the text. To verify the 11 relevant and 3 less central segments, two student assistants studying German language previously coded the texts, which lead to sufficient agreement of > 90%.

The highlighted text segments were coded as follows: if an important text segment was highlighted, the participant received 1 point, otherwise, the student received 0 points. Underlined less relevant segments were also given 1 point, otherwise 0 points. We decided to score not underlined less relevant segments with 0 points, because we cannot deduce from text passages that are not underlined whether this was done consciously. The interrater-reliability based on Cohen's Kappa for rating the highlighted segments was satisfactory for the narrative text ($\kappa = .850-1.00$) and also for the expository text ($\kappa = .765-1.00$).

3.3.3 *Note-taking*

The notes on the separate sheets beside each text were counted quantitatively regarding the number of words and were coded qualitatively in the same procedure as the highlighted text segments by one of the authors and one research assistant distinguishing between relevant segments and less central segments. The interrater-reliability (Cohens' Kappa) for coding the notes with this scheme of 11 relevant and 3 less central elements was satisfactory for both texts ($\kappa = .778-1.00$ for the narrative text; $\kappa = .761-1.00$ for the expository text).

Since the notes were expected to vary regarding their depth (Azevedo et al., 2013), e.g. ranging from literal formulations taken from the text up to paraphrases and interpretations, they were coded regarding their coherence which to some extent gives insight into students' comprehension levels. The notes were coded on a scale from 1 to 5. Notes in category 1 represent literal formulations taken or copied from the original text (text surface notes), category 2 contains unconnected paraphrases referring to the text (textbase notes), and category 3 represents connected paraphrases which means that the reader connected text segments with coherence markers such as conjunctions or used graphic arrows (Bråten & Samuelstuen, 2007). Notes in category 4 are interpretations which get evident through insertions of text-external information, and notes in category 5 are defined as reflections, indicating

that students reflect on the text's content regarding text features such as text structure, language style, or symbols. Students received 1 point for text surface notes up to 5 points for reflective notes in order to measure the depth of note-taking. Since on a single sheet all of the five categories could have been present, a maximum of 15 points could be expected. The coding of the coherence of notes gained a satisfactory interrater agreement of $\kappa = .787-.950$ for the narrative text and $\kappa = .847-1.00$ for the expository text.

3.3.4 *Interview questions and coding of reading strategies*

To get insight into the applied cognitive and metacognitive reading strategies the students were asked to answer the following questions: (1) Please reflect upon the two previous reading situations. Which reading strategies did you apply when reading the narrative and the expository text? (2) Where do you identify similarities or differences regarding your reading strategies? The interview answers were coded regarding cognitive and metacognitive reading strategy types (Afflerbach et al., 2020). Organizational strategies contained four different reading strategy types: highlighting text segments, summarizing content mentally, structuring the text, and skimming the text. Elaborative strategies also contained four types: Projection in other perspectives, asking questions about the texts' content, activating prior knowledge, and taking notes. In the category of rehearsal strategies repeated reading of the whole text and text segments was coded. Regarding metacognitive strategies, the following types were coded: setting a reading goal such as extracting content vs. interpreting the text, observing coherence construction and potential difficulties, and reflecting about comprehension. The interrater agreement for coding the interview questions was satisfactory yielding coefficients of $\kappa = .795-1.00$.

4. RESULTS

4.1 *Highlighting of text segments and note-taking in a specific expository and a specific narrative reading situation*

To address the first research question in order to measure differences of highlighting and note-taking with regard to the type of text, paired *t*-tests were conducted. First, the analysis of the quantity of highlighted text segments reveals that the students highlighted a different amount of text passages. In the expository text, the students highlighted 32% of the total text, in contrast to 20% highlighted segments of the narrative text. This difference is significant within persons ($t(53) = -6.918, p < .001$). Although the students highlighted fewer segments in the narrative text, they underlined more complete sentences (65%) in contrast to the amount of highlighted complete sentences in the expository text (36%). This difference is also significant within persons ($t(47) = 4.013, p < .001$). Regarding the qualitative analyses of highlighted text segments, the students highlighted in both texts the same number of relevant

text segments. In the expository text, they highlighted $M = 6.88$ ($SD = 1.87$) and in the narrative text $M = 6.84$ ($SD = 1.93$) of 11 relevant segments. Only when comparing the highlighting of the less central text segments it got evident, that the students more often highlighted less central segments in the expository text (expository: $M = 2.39$, $SD = 0.86$; narrative: $M = 1.37$, $SD = 0.83$) which differs significantly ($t(48) = -7.220$, $p < .001$).

Second, regarding the analyses of the notes, the students noted $M = 89.6$ words beside the narrative text and $M = 72.6$ words besides the expository text ($t(53) = 3.157$, $p < .001$). Furthermore, the qualitative coding of notes reveals that the students noted more relevant text segments of the narrative text than of the expository text (expository: $M = 5.71$, $SD = 2.02$; narrative: $M = 6.29$, $SD = 2.13$) which differs significantly ($t(51) = 1.884$, $p < .05$). Regarding the less central segments, the students noted more text segments of the expository text than of the narrative text (expository: $M = 2.12$, $SD = 0.88$; narrative: $M = 1.02$, $SD = 0.83$), ($t(51) = 8.140$, $p < .001$). The distribution of the coherence and depth of notes is illustrated in Table 1.

Table 1. Distribution of coherence of note-taking

Comprehension level in notes	Narrative text %	Expository text %	t	df	p
Text surface notes	1.9 (1)	51.0 (28)	-6.934	50	< .001***
Unconnected paraphrases	75.5 (41)	94.1 (51)	-2.854	50	< .01**
Connected paraphrases	69.8 (28)	62.7 (34)	0.742	50	.472
Interpretative notes	22.6 (12)	5.9 (3)	3.273	50	< .01**
Reflective notes	64.2 (35)	25.5 (14)	5.263	50	< .001**

Note. * $p < .05$, two-tailed, ** $p < .01$, two-tailed, *** $p < .001$. $N =$ amount of participants (N).

Table 1 reveals that regarding the narrative text the students took more reflective notes in contrast to the expository text. Even if the sample sizes in the section of interpretative notes are quite small, there is a tendency that slightly more interpretative notes were written down beside the narrative text. Contrary, more surface-oriented notes were noted on the sheet beside the expository text. Also, there is a tendency that students wrote down more unconnected paraphrases beside the expository text, although the difference is small. Connected paraphrases are equally distributed.

Regarding the coherence of notes, the students' means were for the narrative text $M = 7.75$ ($SD = 3.71$) and for the expository text $M = 5.78$ ($SD = 3.44$) from a maximum of 15 points. This difference is significant ($t(50) = 3.67$, $p < .001$).

4.2 Self-reported cognitive and metacognitive reading strategies for reading the expository and narrative text

For analyzing the organizational, elaborative, and rehearsal strategies as well as the metacognitive strategies the students reported to have applied for the narrative and

the expository text, the means of the coded strategies were compared with *t*-tests. Table 2 illustrates the means and differences of the strategy types.

Table 2. Comparison of cognitive and metacognitive strategies in the self-reports

Strategies (number)	Narrative text	Expository text	<i>t</i>	df	<i>p</i>
	<i>M (SD)</i>	<i>M (SD)</i>			
Organization strategies (4)	1.33 (0.85)	1.43 (0.90)	-0.647	53	.520
Elaborative strategies (4)	1.44 (1.19)	0.98 (0.84)	3.523	53	< .001***
Rehearsal strategies (2)	0.54 (0.57)	0.59 (0.63)	-0.830	53	.410
Metacognitive strategies (4)	1.31 (0.93)	1.48 (0.93)	-1.322	53	.192

Note. * *p* < .05, two-tailed, ** *p* < .01, two-tailed, *** *p* < .001.

The comparison reveals that the students distinguished their strategies regarding the application of elaborative strategies. They mentioned more often to have applied elaborative strategies for the narrative text than for the expository text. The other types of strategies were mentioned comparably often in the interviews. Table 3 gives insight into the types of strategies the students have reported to have used for reading the different types of texts.

Table 3. Amount of mentioned strategy types identified in the self-reports

Reading strategies	Narrative text %	Expository text %	<i>t</i>	df	<i>p</i>
Cognitive strategies					
Organization strategies					
Highlighting	72.2	66.7	0.704	53	.485
Summarizing	25.9	25.9	0.000	53	1.00
Structuring	5.6	27.8	-2.427	53	< .05*
Skimming	20.4	13.0	0.629	53	.532
Elaborative strategies					
Projection in other perspectives	37.0	0	5.364	53	< .001***
Asking questions	33.3	20.4	2.701	53	< .01**
Activating prior knowledge	20.4	25.9	-0.830	53	.410
Note-taking	50.0	53.7	0.814	53	.419
Rehearsal strategies					
Repeated reading of words/phrases	18.5	27.8	-1.937	53	.058
Repeated reading of the whole text	25.9	22.2	0.574	53	.568
Metacognitive strategies					
Setting a reading goal: focus on content	51.9	64.8	-1.847	53	.070
Setting a reading goal: focus on interpretation	27.8	1.9	4.307	53	< .001***
Observing coherence building and potential difficulties	35.2	44.4	-2.214	53	< .05*
Reflecting about comprehension	11.1	14.8	-0.629	53	.532

Note. * *p* < .05, two-tailed, ** *p* < .01, two-tailed, *** *p* < .001.

The self-reports reveal differences in terms of mentioned cognitive strategies, especially regarding the structuring of texts, the formulation of questions, and the projection into other perspectives. While the latter two strategies were frequently reported to have been applied for the narrative text, the structuring was more often mentioned for the expository text. Regarding the metacognitive strategies, the students' answers reveal that they focused to a greater extent on the content when reading the expository text and more on achieving a text interpretation when reading the narrative text. The monitoring of mental coherence construction was more frequent in the expository condition.

4.3 Correlation of highlighting, note-taking, cognitive, and metacognitive reading strategies in the expository and narrative reading situation

To address the third research question, how highlighting, qualitative and quantitative notes, the coherence of notes, and self-reported (meta-)cognitive strategies are related, correlations were computed. We compared the correlation by Pearson r with Spearman rho as an alternative. As the correlations hardly differ, we present the coefficients of Pearson r illustrated in Table 4.

Table 4. Correlation matrix for highlighted segments, notes and self-reported (meta-)cognitive strategies

	1	2	3	4	5	6	7	8	9
Highlighting quantitative	-	.561**	-.076	-.059	-.049	.432*	.115	-.056	.160
Highlighting qualitative	.649**	-	-.055	.100	.157	.075	.259	.083	-.038
Notes quantitative	.056	0.79	-	.585**	.545*	.013	.194	.126	.198
Notes qualitative	.072	.317*	.508**	-	.377*	.038	.131	.138	.151
Coherence of notes	.093	.036	.217	.286	-	.089	.393**	.134	.286*
Organizational strategies	-.035	-.112	.080	-.208	.062	-	.206	-.142	.344*
Elaborative strategies	.052	.019	.273*	-.102	.440**	.111	-	-.107	.315*
Rehearsal strategies	.111	-.138	.216	-.027	.034	.112	-.015	-	.137
Metacognitive strategies	.248	.042	.142	-.098	.231	.201	.231	.310*	-

Note. The results for the narrative correlations are shown above the diagonal. The results for the expository correlations are shown below the diagonal. * $p < .05$, two-tailed, ** $p < .01$, two-tailed.

In general, the correlations for the narrative reading situation reveal more significant coefficients than for the expository reading situation. Looking more closely at the differences, in the narrative reading situation, significant coefficients between the coherence of notes with quantitative and qualitative note-taking, and elaborative as well as metacognitive strategies are present. Beyond, the latter correlate with self-reported organizational and elaborative strategies. Only rehearsal strategies do not correlate with any other type of reading strategy. Furthermore, the different types of highlighting do not correlate with the narrative notes. In contrast, in the expository reading situation, the qualitative highlighting correlates with qualitative note-taking, and the self-reported metacognitive strategies correlate only with rehearsal strategies. In the expository situation, organizational strategies do not correlate with any other type of strategy, but the qualitative highlighting correlated with the qualitative notes. Regarding the similarities, correlations between the quality and quantity of highlighting, and the quality and quantity of note-taking. Also, the coherence of notes correlates in both reading situation with the self-reported elaborative strategies.

5. DISCUSSION OF THE FINDINGS

The multi-method study reveals text-specific strategy preferences by undergraduate students in terms of highlighting techniques, note-taking as well as self-reported cognitive and metacognitive reading strategies. In the following, the findings are summarized and related to theory as well as empirical findings before limitations of the study are mentioned.

5.1 *Specific strategies for expository and narrative texts*

With the present study, the theoretical assumption is corroborated that reading strategies are text-specific. The students highlighted more segments, especially single words and phrases, of the expository text compared to the narrative text, where less amount, but more complete sentences were highlighted. Although the students highlighted the same number of our a priori defined relevant text segments in both types of texts, they highlighted less central text segments in the expository text more often. Another finding is that the students took more notes on the sheet beside the narrative text: they noted down more relevant text segments of the narrative text compared to the expository notes. In case of the expository text, the students wrote down more less relevant text segments. Furthermore, the students' notes beside the narrative text were of more depth in terms of interpretations and reflections compared to the expository notes, where direct takeovers from the text as well as unconnected, incoherent paraphrases dominated. Such different highlighting and note-taking techniques correspond with the processing modes of "individual-item processing" of expository texts and "relational processing" of narrative texts (McDaniel

& Einstein, 1989, p. 118). In the latter processing mode, readers concentrate on relationships between segments, while during individual-item processing they focus more on distinctive information and stick more closely to the text while reading. Possibly, the students tried to capture every single proposition when reading the expository text content for closing coherence gaps and thus made more text surface notes and unconnected paraphrases compared to the depth-oriented notes beside the narrative text.

A further text type specificity of reading strategies is revealed in the retrospective self-reports. The students mentioned more often elaborative strategies such as the projection into other perspectives and the formulation of questions towards the text when reading the narrative text. The projections into figures and perspectives coincide with the emotional engagement when reading narrative texts (Janssen et al., 2006), while asking questions corresponds with Scherf's (2017) assumption that generating hypotheses could be a prototypical strategy for reading narrative texts. Thus, the students tended to apply more elaborative strategies in the narrative condition, although in the expository elaborative strategies (e.g. the activation of prior knowledge or asking questions) would also have been conceivable. Regarding the self-reported organizational and metacognitive strategies, the structuring, goal setting, and coherence monitoring differed. The students reported to have structured the expository text, formulated a content-oriented goal and observed their coherence building. When reading the narrative text, achieving an interpretation was reported more often as a goal while coherence monitoring was less often mentioned. This pattern is in line with the assumption that narrative reading processes are characterized by the acceptance of a vague situation model (van Dijk & Kintsch, 1983) compared to the coherence-oriented process of information extraction and formation of a clear situation model when reading expository texts (Rosebrock, 2018; Rosenblatt, 2019).

Furthermore, the correlation analyses show that there are more relations between the different reading strategies in the narrative reading situation than in the expository condition. Regarding the correspondence between highlighting and note-taking, it seems that the students have transferred the highlighted segments of the expository directly into literal text surface notes and unconnected paraphrases. This does not count for the narrative condition where highlighting and note-taking do not correlate, and where the students abstracted from the literal meaning to write down interpretations and reflections about the content. If coherent note-taking with interpretations and reflections in the narrative condition is triggered by metacognitive and elaborative strategies, or vice versa, it cannot be explained with correlations alone. However, theoretically, the correlation that occurred corresponds to the role of elaborative and metacognitive strategies for deep understanding (Weinstein & Mayer, 1986).

Overall, the presented findings illustrate the reading modes and preferred cognitive and metacognitive reading strategies of future teachers. We decided to work with undergraduate students enrolled in a German language and literature teaching

program as we expected conscious strategic reading processes and insights into text-specific reading strategies from them. As reading experts they adjusted their reading strategies to the types of texts in terms of an aesthetic and efferent reading mode defined by Rosenblatt (2019). Comparing our findings to empirical classroom research and recommendations for strategic reading instruction (Magnusson et al., 2008; NRP, 2000; Schmitz, 2019), the preferred cognitive and metacognitive strategies for the types of texts to some extent mirror the practice of common informational versus literary reading instruction. For instance, language arts teachers dealing with expository texts, often focus on cognitive organizational strategies for content extraction and coherence formation (Schmitz, 2019; Magnusson et al., 2018; Peters et al., 2022). This instruction differs from literature teaching where the attention is more on the elaboration and interpretation of texts, involving students in imagination, emotional response, enabling personal growth, and fostering pleasure in reading (Pieper, 2020). Such reading instructions, which the university students possibly experienced at school and affected their strategy selection (but would have to be controlled in future studies), could have affected their strategy selection in the present study. However, even if it is still an open research question, whether pupils at secondary schools also differentiate their strategies, it can be assumed that especially weaker readers have problems with the selection of appropriate strategies (see Scherf, 2017). This shows the need for future research to investigate how pupils work with different types of texts, where the challenges occur during reading, and how they can be best promoted.

5.2 Limitations and concluding remarks

The study has some limitations which should be mentioned for interpreting the results and for considering future studies on this topic. Firstly, two methodological aspects have to be taken into consideration: the findings are based on the handling of two exemplary texts which were read in an online setting. We decided to include these specific texts because they are prototypically read in educational settings, can be located at the ends of the efferent-aesthetic continuum (Rosenblatt, 2019) and were thus suitable to identify differential strategy selection. Hence, the study offers a detailed insight into the handling of these two texts, but these cannot be generalized to other narrative and expository texts on other topics and with different structures. Replicating our findings with other texts would be necessary to validate the text type-specific strategies. Further, the online setting (because of the COVID 19-pandemic) has a methodological constraint that reading strategies had to be applied with a computer. As a consequence, the students only used the marking function. Writing annotations into the text, mapping or drawing techniques, which are usually applied to printed texts (Jian, 2022), were not observable in this setting. Amjadi (2023) recently showed that students (grade 10/11) use more reading strategies in an offline testing mode compared to online testing. How university students work with both texts in a paper-pencil format is under investigation and the current state

of analyses reveals that students not only highlight, but also write comments, questions and question marks, directly into the texts.

Although the study unfolds text-specific reading strategies, students' strategic processing in terms of a strategic cycle is still unexplored, especially for narrative texts (compared to research with expository texts: Rogiers et al., 2020). Strategic processing is characterized by the engagement in and management of self-regulated cycles (van Meter & Campbell, 2020; Zimmerman, 2000). That means, readers select appropriate reading strategies before, during and after reading, and accordingly, depending on reading goals and comprehension success or failure, adapt their strategies. In future research subsequent studies should explore how readers coordinate and sequence the cognitive and metacognitive reading strategies for different types of texts, and also assess the reading performances for analyzing the impact of text-specific processing on expository and narrative text comprehension. Such research would be an important step for designing text-specific reading strategy interventions with appropriate strategies before, during and after reading for different types of texts.

AUTHOR'S NOTE

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REFERENCES

- Afflerbach, P., Hurt, M., & Cho, B.-Y. (2020). Reading comprehension strategy instruction. In D. L. Dinsmore, L. K. Fryer, & M. M. Parkinson (Eds.), *Handbook of strategies and strategic processing* (pp. 99-118). New York: Routledge. <https://doi.org/10.4324/9780429423635>
- Afflerbach, P., Pearson, P., & Paris, S. G. (2008). Clarifying differences between reading skills and reading strategies. *The Reading Teacher*, 61(5), 364-373. <https://doi.org/10.1598/RT.61.5.1>
- Alexander, P., & Jetton, T. (2000). Learning from text: A multidimensional and developmental perspective. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. 3, pp. 285-310). Mahwah, NJ: Lawrence Erlbaum.
- Amjadi, A. (2023). Does the mode of testing matter in reading comprehension? When learners' perception enters into the picture. *Reading & Writing Quarterly*. <https://doi.org/10.1080/10573569.2022.2159901>
- Azevedo, R., Harley, J., Trevors, G., Duffy, M., Feyzi-Behnagh, R., Bouchet, F., & Landis, R. (2013). Using trace data to examine the complex role of cognitive, metacognitive, and emotional self-regulatory processes during learning with multi-agent systems. In R. Azevedo, & V. Aleven (Eds.), *International handbook of metacognition and learning techniques* (pp. 427-449). New York, NY: Springer. https://doi.org/10.1007/978-1-4419-5546-3_28
- Best, R. M., Floyd, R. G., & McNamara, D. S. (2008). Differential competencies contributing to children's comprehension of narrative and expository texts. *Reading Psychology*, 29(2), 137-164. <https://doi.org/10.1080/02702710801963951>

- Boekaerts, M. (1999). Self-regulated learning: where we are today. *International Journal of Educational Research*, 31, 445-457. [https://doi.org.10.1016/S0883-0355\(99\)00014-2](https://doi.org.10.1016/S0883-0355(99)00014-2)
- Bråten I., & Braasch J. L. G. (2017). Key issues in research on students' critical reading and learning in the 21st century information society. In C. Ng, & B. Bartlett (Eds.), *Improving reading and reading engagement in the 21st century* (pp. 77-98). <https://doi.org.10.1007/978-981-10-4331-4>
- Bråten, I., & Samuelstuen, M. (2004). Does the influence of reading purpose on reports of strategic text processing depend on students' topic knowledge? *Journal of Educational Psychology*, 96(2), 342-336. <https://doi.org.10.1037/0022-0663.96.2.324>
- Bråten, I., & Samuelstuen, M. (2007). Measuring strategic processing: comparing task-specific self-reports and traces. *Metacognition and Learning*, 2, 1-20. <https://doi.org/10.1007/s11409-011-9075-7>
- Bråten, I., & Strømsø, H. I. (2003). A longitudinal think-aloud study of spontaneous strategic processing during the reading of multiple expository texts. *Reading and Writing. An Interdisciplinary Journal*, 16, 195-218. <https://doi.org/10.1023/A:1022895207490>
- Clinton, V. S., Taylor, T., Bajpayee, S., Davison, M. L., Carlson, S. E., & Seipel, B. (2020). Inferential comprehension differences between narrative and expository texts: a systematic review and meta-analysis. *Reading and Writing. An Interdisciplinary Journal*, 33(9), 2223-2248. <https://doi.org/10.1007/s11145-020-10044-2>
- Cromley, J. & Azevedo, R. (2007). Testing and redefining the direct and inferential mediation model of reading comprehension. *Journal of Educational Psychology*, 99(2), 311-325.
- Denton, C. A., Enos, M., York, M. J., Francis, D. J., Barnes, M. A., Kulesz, P. A., Fletcher, J. M., & Carter, S (2015). Text-processing differences in adolescent adequate and poor comprehenders reading accessible and challenging narrative and informational text. *Reading Research Quarterly*, 50(4), 393-416.
- Dickens, R., & Meisinger, E. B. (2017). Examining the effects of reading modality and passage genre on reading comprehension in middle school students. *Reading Psychology*, 38, 321-347. <https://doi.org/10.1080/02702711.2016.1263701>
- Dieterich, J. (2006). Afrika profitiert vom Rohstoffboom. (Africa Profits from Raw Material Boom). *Frankfurter Rundschau*, S. 12.
- Dinsmore, D., & Hattan, C. (2020). Levels of strategies and strategic Processing. In D. L. Dinsmore, L. K. Fryer, & M. M. Parkinson (Eds.), *Handbook of strategies and strategic processing* (pp. 29-46). New York: Routledge. <https://doi.org/10.4324/9780429423635>
- Duke, N. K., & Roberts, K. L. (2010). The genre-specific nature of reading comprehension. In D. Wyse, R. Andrews, & H. Hoffman (Eds.), *The Routledge international handbook of English, language and literacy teaching* (pp. 74-86). London: Routledge.
- Dumas, D. (2020). Strategic processing within and across domains of learning. In D. L. Dinsmore, L. K. Fryer, & M. M. Parkinson (Eds.), *Handbook of strategies and strategic processing* (pp.11-28). New York: Routledge. <https://doi.org/10.4324/9780429423635>
- Edmonds, M. S., Vaughn, S., Wexler, J., Reutebuch, C., Cable, A., Klingler Tacket, A., Wick Schnakenberg, J. (2009). A synthesis of reading interventions and effects on reading comprehension outcomes for older struggling readers. *Review of Educational Research*, 79(1), 262-300. <https://doi.org/10.3102/0034654308325998>
- El-Dinary, P. B. (2002). Challenges of implementing transactional strategies instruction for reading comprehension. In C. C. Collins, & M. Pressley (Eds.), *Comprehension instruction. Research-based best practices* (pp. 201-215). New York: Guilford Press.
- Fiorella, L., & Mayer, R. E. (2015). *Learning as a generative activity. Eight learning strategies that promote understanding*. Cambridge: University Press. <https://doi.org/10.1017/CBO9781107707085>
- Goldman, S. R., Snow, C., & Vaughn, S. (2016). Common themes in teaching reading for Understanding: Lessons from three projects. *Journal of Adolescent & Adult Literacy*, 60, 255-264. <https://doi.org/10.1002/JAAL.586>
- Graesser, A. C., McNamara, D. S., & Louwerse, M. M. (2003). What do readers need to learn in order to process coherence relations in narrative and expository text? In A. P. Sweet, & C. E. Snow (Eds.), *Re-thinking reading comprehension* (pp. 82-98). New York, NJ: Guilford Press.
- Jakobson, R. (1960). Closing statement: linguistic and poetics. In T. A. Seboek (Ed.), *Style in language* (pp. 350-377). Cambridge, MA: MIT Press.

- Janssen, T., Braaksma, M., & Rijlaarsdam, G. (2006). Literary reading activities of good and weak students: a think aloud study. *European Journal of Psychology of Education, 1*, 35-52. <https://doi.org/10.1007/BF03173568>
- Jian, Y.C. (2022). Reading in print versus digital media uses different cognitive strategies: evidence from eye movements during science-text reading. *Reading and Writing. An Interdisciplinary Journal*. <https://doi.org/10.1007/s11145-021-10246-2>
- Kardash, C. M., & Amlund, J. T. (1991). Self-reported learning strategies and learning from expository texts. *Contemporary Educational Psychology, 16*, 117-138. [https://doi.org/10.1016/0361-476X\(91\)90032-G](https://doi.org/10.1016/0361-476X(91)90032-G)
- Kintsch, W. (1998). *Comprehension: A paradigm for cognition*. Cambridge: University Press.
- Kraal, A., Koorneef, A. W., Saab, N., & van den Broek, P. (2018). Processing of expository and narrative texts by low and high-comprehending children. *Reading and Writing. An Interdisciplinary Journal, 31*, 2017-2040. <https://doi.org/10.1007/s11145-017-9789-2>
- Lim, F. W., & Toh, W. (2020). How to teach digital reading? *Journal of Information Literacy, 14*(2), 24-43. <https://doi.org/10.11645/14.2.2701>
- Lorch, R. F., Lorch, E. P., & Klusewitz, M. A. (1993). College students' conditional knowledge about reading. *Journal of Educational Psychology, 85*(2), 239-252. <https://doi.org/10.1037/0022-0663.85.2.239>
- Magnusson, C. G., Roe, A., & Blikstad-Balas, M. (2018). To what extent and how are reading comprehension strategies part of language arts instruction? A study of lower secondary classrooms. *Reading Research Quarterly, 54*(2), 187-212. <https://doi.org/10.1002/rrq.231>
- McCarthy, K. S., & Goldman, S. R. (2015). Comprehension of short stories: Effects of task instructions on literary interpretation. *Discourse Processes, 52*(7), 585-608. <https://doi.org/10.1080/0163853X.2014.967610>
- McDaniel, G. O., & Einstein, M. A. (1989). Material-appropriate processing: A contextualist approach to reading and studying strategies. *Educational Psychology Review, 1*(2), 113-145. <https://doi.org/10.1007/BF01326639>
- McNamara, D. S., & Kintsch, W. (1996). Learning from texts: effects of prior knowledge and text coherence. *Discourse Processes, 22*(3), 247-288. <https://doi.org/10.1080/01638539609544975>
- Narvaez, D., van den Broek, P., & and Barron Ruiz, A. (1999). The influence of reading purpose on inference generation and comprehension in reading. *Journal of Educational Psychology, 91*(3), 488-496. <https://doi.org/10.1037/0022-0663.91.3.488>
- National Reading Panel (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. Washington, DC: National Institute of Child Health and Human Development.
- OECD (2021). *21st-Century Readers: Developing literacy skills in a digital world*. PISA OECD Publishing: Paris. <https://doi.org/10.1787/a83d84cb-en>
- Palincsar, A. S. & Brown, A. L. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. *Cognition and Instruction, 1*(2), 117-175.
- Paris, S. G., Lipson, M. Y., & Wixson, K. K. (1983). Becoming a strategic reader. *Contemporary Educational Psychology, 8*(3), 293-316
- Peters, M. T., Förster, N., Forthmann, B., & Souvignier, E. (in press). Business-as-usual reading instruction in 2nd grade: Teacher centered and rarely evidence-based. *Reading and Writing. An Interdisciplinary Journal*.
- Pieper, I. (2020). L1 education and the place of literature. In B. Green & P-O. Erixon (Eds.), *Rethinking L1 Education in a Global Era*. (Educational Linguistics 48, p. 115-32). Springer: Cham. https://doi.org/10.1007/978-3-030-55997-7_6
- Pieper, I., & Strutz, B. (2018). Learners' approaches to poetic metaphor: A think-aloud study with secondary school students in grade 6 and 9. *L1- Educational Studies in Language and Literature, 18*, 1-35. <https://doi.org/10.17239/L1ESLL-2018.18.03.05>
- Rogiers, A., Merchie, E., & van Keer, H. (2020). What they say is what they do? Comparing task-specific self-reports, think-aloud protocols, and study traces for measuring secondary school students' text-learning strategies. *European Journal of Psychology of Education, 51*(1), 315-332. <https://doi.org/10.1007/s10212-019-00429-5>

- Rosebrock, C. (2018). Strategien des ästhetischen Lernens. Literarisches Lernen in rezeptionsästhetischer Perspektive. [Strategies of aesthetic learning. Literary learning in a reception-aesthetic perspective.] In A. Bertschi-Kaufmann, & D. Scherf (Eds.), *Ästhetische Rezeptionsprozesse in didaktischer Perspektive* (pp. 14-27). Weinheim: Beltz/Juventa.
- Rosenblatt, L. M. (2019). The transactional theory of reading and writing. In D. E. Alvermann, N. J. Unrau, M. Sailors, & R. B. Rudell (Eds.), *Theoretical models and processes of literacy* (pp. 451-477). New York, London: Routledge.
- Rovers, S. F. E., Clarebout, G., Savelberg, H. H. C. M., de Bruin, A. B. H., & van Merriënboer, J. J. G. (2019). Granularity matters: comparing different ways of measuring self-regulated learning. *Metacognition and Learning*, 14, 1-19. <https://doi.org/10.1007/s11409-019-09188-6>
- Scherf, D. (2017). Literarische Lektüre im Prozess. Lautdenkprotokolle von Literaturleserinnen und -lesern untersuchen [Literary reading in process. Investigating think-aloud-protocols of literary readers]. *Der Deutschunterricht*, 3, 28-36.
- Schmitz, A. (2019). Reading instruction in 5th grade. Teachers' perspectives on promoting self-regulated reading in language and content area teaching. *Research in Subject Matter Teaching and Learning*, 2, 16-31. <https://doi.org/10.23770/rt1822>
- Schmitz, A., Gräsel, C., & Rothstein, B. (2017). Students' genre expectations and the effects of text cohesion on reading comprehension. *Reading and Writing. An Interdisciplinary Journal*, 30, 1115-1135. <https://doi.org/10.1007/s11145-016-9714-0>
- Scott, D. B. (2008). Assessing text processing: a comparison of four methods. *Journal of Literacy Research*, 40, 290-316. <https://doi.org/10.1080/10862960802502162>
- Seymour, J. R., & Osana, H. P. (2003). Reciprocal teaching procedures and principles: two teachers' developing understanding. *Teaching and Teacher Education*, 19(3), 325-344. [https://doi.org/10.1016/S0742-051X\(03\)00018-0](https://doi.org/10.1016/S0742-051X(03)00018-0)
- Souvignier, E. & Mokhesgerami, J. (2006). Using self-regulation as a framework for implementing strategy instruction to foster reading comprehension. *Learning and Instruction*, 16, 57-71. <https://doi.org/10.1016/j.learninstruc.2005.12.006>
- Stamm, P. (1999). Das schönste Mädchen. (The prettiest girl). *Blitzes - Erzählungen* (p. 85-86). Hamburg/Zürich: Arche.
- van Dijk, T. A. (1995). On macrostructures, mental models and other inventions. A brief personal history of the Kintsch-van Dijk theory. In C. Weaver III, S. Mannes, & C. R. Fletcher (Eds.), *Discourse comprehension. Essays in honor of Walter Kintsch* (pp. 383-410). Hillsdale, NJ: Lawrence Erlbaum.
- van den Broek, P., & Helder, A. (2017). Cognitive processes in discourse comprehension: passive processes, reader-initiated processes, and evolving mental representations. *Discourse Processes*, 54(5-6), 360-372. <https://doi.org/10.1080/0163853X.2017.1306677>
- van Dijk, T., & Kintsch, W. (1983). *Strategies of discourse comprehension*. New York: Academic Press.
- van Meter, P., & Campbell, J. M. (2020). Commentary: A conceptual framework for defining strategies and strategic processing. In D. L. Dinsmore, L. K. Fryer, & M. M. Parkinson (Eds.), *Handbook of strategies and strategic processing* (pp. 82-96). New York: Routledge. <https://doi.org/10.4324/9780429423635>
- Veenman, M. V. J. (2005). The assessment of metacognitive skills: What can be learned from multi-method designs? In C. Artelt, & B. Moschner (Eds.), *Lernstrategien und Metakognition: Implikationen für Forschung und Praxis* (pp. 75-97). Berlin: Waxmann.
- Weinstein, C. E., & Mayer, R. E. (1986) The teaching of learning strategies. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 315-327). New York: Macmillan.
- Zimmerman, B. J. (2000). Attaining self-regulation: A social-cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 13-39). San Diego: Academic Press.
- Zwaan, R. (1994). Effect of genre expectation on text comprehension. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 20(4), 920-933. <https://doi.org/10.1037/0278-7393.20.4.920>
- Zwaan, R. (1996). Toward a model of literary comprehension. In B. K. Britton, & A. C. Graesser (Eds.), *Models of understanding text* (pp. 241-255). Mahwah, NJ: Lawrence Erlbaum.