

USING THE SORS INSTRUMENT TO EXAMINE METACOGNITIVE AWARENESS OF READING STRATEGIES

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ABSTRACT

This paper explores the SORS (Survey of Reading Strategies) instrument, a tool developed by Mokhtari and Sheorey [5] to assess metacognitive awareness of reading strategies among learners of English as a second or foreign language. Adapted from the MARSII instrument, SORS categorizes strategies into three groups: global, problem-solving, and support strategies. The paper outlines the development and structure of SORS, emphasizing its role in helping educators evaluate students' strategic reading behaviors and get information on necessary instruction.

A review of previous studies using SORS reveals consistent findings: while learners often use problem-solving strategies frequently, their use of global and support strategies varies. Studies in Malaysia, China, Turkey, and the U.S. highlight the need for explicit strategy instruction to enhance comprehension, particularly among less proficient readers. Key findings stress the importance of teacher involvement in developing students' metacognitive awareness and promoting the use of a broad range of reading strategies.

Ultimately, the paper supports the integration of SORS in educational settings to foster independent, reflective, and effective reading among English language learners. The findings suggest that raising awareness of strategy use can significantly impact academic success and long-term reading proficiency.

Keywords: global strategies, problem-solving strategies, support strategies, learners' perspectives, survey

INTRODUCTION

The SORS instrument (Survey of Reading Strategies) is a questionnaire that measures metacognitive awareness of the use of reading strategies when reading materials related to school and academic content. The basis for creating this questionnaire is the MARSII instrument, with the difference that this questionnaire is adapted for those who are learning English as a second or foreign language, rather than for native speakers, as in the case of those tested with MARSII. SORS was designed by Mokhtari and Sheorey in 2002.

The purpose of SORS is to determine the degree to which students are aware of using reading strategies, which are divided into several groups that will be discussed below. The goal of developing this instrument is to help teachers see to what extent their

students, who are learning English as a second or foreign language, are metacognitively aware of the strategies they use when reading school-related material.

Mokhtari and Sheorey [5], who designed this instrument, state that they were inspired by several reasons. First, there is strong evidence of a close relationship between students' metacognitive awareness of the reading process and their ability to read and develop academically. The second reason is that, although several instruments exist for measuring metacognitive awareness of reading in the mother tongue, there was no instrument to measure the same awareness when reading in a second or foreign language — in our case, English as a foreign language. The third reason is that, although many scholars agree that a large number of strategies are transferred from one language to another, there are still certain strategies — such as translating from English into the native language or using both languages to better understand the text — that would only be included in an instrument designed to test reading in a second or foreign language. Finally, teachers need an appropriate tool to measure their students' metacognitive awareness so that they can plan their lessons in more detail and effectively, focusing on the areas where students are lacking.

Lawrence [3, p. 59] writes about the development of the instrument SORS, saying that it is “the first tool in the hands of bilingual students” and is motivated by the strong relationship between students' awareness of their reading processes and the strategies they use in overall reading outcomes. She also adds that in this way, weaker strategy users can learn and discover useful strategies and thereby improve their reading. And teachers would have insight into their own students' awareness, and thus could organize additional instruction on the strategies that might help the students.

As we mentioned earlier, Mokhtari and Reichard [5] designed the instrument MARSİ, which shortly afterward, in the same year, inspired the design of SORS. MARSİ is designed for students who learn English as a first language, and is not suitable for those whose native language is not English. Further, the development of SORS is motivated by the experience of all those who have worked with students whose native language was not English. Auerbach and Paxton report the reflections of a student on reading [2, p. 237]:

“I believed that I had to know all the words when I read in English in order to understand what the text was about. Therefore, I read with a dictionary beside me all the time. I read English only for homework, before I came to the reading class. I never read something in English out of desire. I read something that I had to, because it was my homework. I loved reading in my mother tongue, but I could not read in English with the same feeling as I read in Chinese. The belief that I had to know all the words when I read contributed to my losing interest.”

This belief is common among most learners of English as a second or foreign language. Therefore, metacognitive awareness of the strategies used during reading is very important. Even more important is for teachers to have an instrument at hand that enables them to see where their students stand—what their weaknesses and strengths are—and to identify which areas deserve particular attention in instruction.

To develop the SORS instrument from MARSİ, three modifications were made [5]. First, some wording was adjusted to make it easier to understand for those who read English as a second or foreign language. Second, two key strategies were added that do not appear among native-language readers but are clearly present among second or

foreign language readers—translating into the native language and thinking in both the native and English languages. Finally, two strategies were removed from the MARSI questionnaire—summarizing the information read and discussing what has been read with others—since they do not directly relate to metacognition and reading comprehension, which are the main focus of the questionnaire.

In this way, a new questionnaire consisting of 30 items, that is, 30 strategies, was obtained. It is quite similar to the original instrument on which it is based but is nonetheless appropriate for assessing the metacognitive awareness of those who read in English as a second or foreign language.

DESCRIPTION OF THE SORS INSTRUMENT

As mentioned earlier, the purpose of the SORS instrument is to measure the conscious use of reading strategies among adolescent or adult readers when reading academic, school-related texts, such as textbooks, in English. In this study, we also applied it to elementary and secondary school students in order to make comparisons.

Like MARSI, SORS consists of 30 items (strategies), each rated on a five-point Likert scale according to how frequently the students use each listed strategy (1 meaning “Never or almost never” and 5 meaning “Always or almost always”). Each student reads the questionnaire individually and circles the number that best represents their use of each strategy. The higher the score, the more frequently the strategy is used [4, 5].

In addition, before administering the questionnaire, teachers may include a brief demographic survey to collect information about the students’ age, gender, and self-perceived proficiency in English, as well as their level of language mastery. Students can also comment on their results from standardized English tests such as TOEFL, and afterward, comparisons can be made to see whether those with higher TOEFL scores are also more metacognitively aware of the strategies they use when reading in English.

The questionnaire consists of three groups of strategies previously mentioned: Global Reading Strategies, Problem-Solving Strategies, and Support Reading Strategies, which will be described in more detail later. As with MARSI, in SORS the total score is divided by the number of items, either for each category separately or for the entire questionnaire. In this way, three categories of readers are identified according to the general guidelines of Oxford and Burry-Stock [6] for users of language-learning strategies:

- High strategy users (average score of 3.5 or higher),
- Moderate users (2.5–3.4), and
- Low users (2.4 or lower).

These guidelines are intended for analyses based on self-report questionnaires, allowing results to be obtained quickly and easily. Oxford and Burry-Stock add that the validity of these questionnaires can be confirmed when results are compared with those from standardized English language tests.

Thus, as stated, we understand the foundations and motivations for developing this questionnaire. The scoring procedures and classification of readers are not new but instead follow the standards established for the general evaluation of language learning strategies.

PREVIOUS RESEARCH USING THE SORS INSTRUMENT

In addition to the numerous studies on reading strategies conducted with various instruments, several research projects have also used the SORS questionnaire, as we did in our study. Below, we discuss some of these studies and their findings.

According to Rashid et al. [7], English language instruction in Malaysian schools does not place sufficient emphasis on metacognitive reading strategies that support critical thinking and meaningful engagement with texts. Current classroom practices do not adequately prepare students to use strategies such as predicting, hypothesizing, analyzing, and evaluating. Their study aimed to raise teachers' awareness of the relationship between the text, the student, and the teacher, and to explore whether more proficient students are aware of metacognitive strategies and apply them. Using the SORS questionnaire with 20 students, they found that only 4% were high users of reading strategies, while 80% were moderate users. Global strategies were mostly used moderately, problem-solving strategies frequently, and support strategies moderately or rarely. The authors concluded that skilled readers are metacognitively aware and rely heavily on problem-solving strategies, emphasizing the teacher's role in selecting materials and teaching techniques such as skimming, inferring, note-taking, and predicting, as well as encouraging pre- and post-reading discussions.

Another significant study is that of Xianming [8], who highlights reading as a fundamental skill for learners of English. His study involved 74 first-year students from various majors and used a questionnaire, classroom observations, and interviews. Results showed that students were aware of many reading strategies, such as using prior knowledge, context clues, skimming, rereading, and using dictionaries, but were less aware of strategies related to text organization, evaluating information, visualizing content, and paraphrasing. Most students were high or moderate users of global and problem-solving strategies, while support strategies were used moderately. This study helps teachers identify student strengths and weaknesses and underscores the importance of raising awareness of metacognitive strategies.

The SORS questionnaire was also used by Yuksel and Yuksel [9] with 16 Turkish university students enrolled in teacher-education programs. The overall mean strategy-use score was 3.70, indicating frequent use of reading strategies. By category, mean scores were 3.73 for global strategies, 3.91 for problem-solving strategies, and 3.45 for support strategies. The most frequently used individual strategy was "summarizing information from the text" (4.50), suggesting the importance of synthesis in academic reading.

A study similar to ours was conducted by Anderson [1], who compared online reading strategies used by learners of English as a second and as a foreign language. Using an adapted SORS questionnaire (OSORS) with 247 participants from Costa Rica and Utah, he found that second-language learners most frequently used problem-solving strategies and least frequently used support strategies. No significant differences were found between the two groups overall, except that foreign-language learners used problem-solving strategies even more frequently. Anderson concludes that exposure to English through media and the Internet has made the traditional distinction between second- and foreign-language learners less pronounced.

In conclusion, all the studies discussed above indicate that metacognitive reading strategies play a crucial role in acquiring English as a foreign language and that the

teacher's role is essential. As Xianming [8, p. 102] states, "Only when students are aware of the meaning of what they read can they become independent readers and gain confidence in the reading process."

THREE CATEGORIES OF STRATEGIES ACCORDING TO THE SORS INSTRUMENT

As previously mentioned, the SORS instrument is based on the MARSI instrument and adopts its classification of strategies into Global Strategies, Problem-Solving Strategies, and Support Strategies. To avoid confusing students, these categories were removed from the questionnaire itself. Below, we will explain each of the three groups of strategies separately.

1. GLOBAL STRATEGIES

Global strategies are the first group of strategies included in the SORS questionnaire. The questionnaire contains 13 global strategies [5, p. 6]: "Global strategies are those intentional, carefully planned techniques through which readers monitor or manage their reading, such as having a purpose in mind, previewing the text based on its length and organization, and using typographical aids like tables and figures."

Global strategies refer to an overall, holistic analysis of the reading text and to all visible features that may assist in comprehension. This includes having a clear goal before reading, thinking logically about the text, and identifying elements that can contribute to better understanding. At the end, the reader should evaluate whether the text met the reading purpose and whether information such as tables and figures aided comprehension. Furthermore, the reader should critically evaluate the text and use all contextual clues to infer the meaning of unknown parts or words. Finally, the reader should assess the text and determine whether their initial assumptions were correct [5, p. 10].

This means that certain strategies from other classifications discussed earlier may also fit into this group. If we consider the phases before, during, and after reading, global strategies could also be distributed according to that framework. Likewise, if we refer to Oxford's classification, some of these strategies can also be grouped accordingly.

2. PROBLEM-SOLVING STRATEGIES

As the name suggests, problem-solving strategies are the actions or techniques that help readers when they encounter difficulties in understanding a text. The SORS questionnaire includes eight such strategies [5, p. 6]: "Problem-solving strategies are the actions and procedures readers use while working directly with the text. These techniques aim to localize and focus comprehension difficulties—for example, adjusting the reading speed when the text becomes difficult or easy, guessing the meaning of unknown words, or rereading the text to ensure understanding."

Lawrence [3] agrees that these strategies assist readers in overcoming immediate difficulties that arise during reading. Such problems may involve defining unfamiliar words, increasing reading speed when the text becomes easier, or slowing down when it becomes more complex. Mokhtari and Reichard [4] explain that these strategies help

readers manage the text effectively and include corrective strategies that enable them to cope with reading difficulties.

Some ways to solve comprehension problems include reading more slowly to understand everything or rereading parts of the text that were unclear. If the reader loses concentration, they should find ways to refocus on the text or pay closer attention where comprehension is difficult. Occasionally, readers should pause and reflect on what they have read or try to visualize the content. When facing vocabulary problems, they should infer the meanings of unknown words from context [5, p. 10].

As we can see, these strategies can also be compared to previous classifications. Since the reader is actively and directly engaged with the text, all these strategies fall under those used during the reading process.

3. *SUPPORT STRATEGIES*

Support strategies refer to external resources or aids that can assist in understanding a reading text. This group includes nine strategies [5, p. 6]: “Support strategies are basic support mechanisms intended to help readers comprehend the text, such as using a dictionary, taking notes, underlining, and highlighting information.”

Mokhtari and Reichard [4] note that this group primarily involves external reference or guiding materials, such as note-taking and other practical or functional strategies. These strategies act as support mechanisms that help readers successfully accomplish the reading task.

Sometimes readers need to read a passage aloud to better understand it. They often underline or circle certain parts and paraphrase information to gain a clearer picture. They also look for connections between ideas and ask themselves questions to check their comprehension. This group also includes two strategies added to the SORS questionnaire by Mokhtari and Sheorey [5]: translating from English into the native language and thinking in both languages.

This group of reading strategies is also related to the earlier classifications discussed. Since support is often needed while directly engaging with the text, these strategies can be linked to those used during reading. However, because they also help ensure overall comprehension, they can additionally be associated with the strategies used after reading to verify understanding of the text.

CONCLUSION

The SORS instrument (Survey of Reading Strategies) has proven to be a valuable and reliable tool for assessing learners’ metacognitive awareness of reading strategies in English as a second or foreign language. Developed by Mokhtari and Sheorey [5] as an adaptation of the MARS instrument, SORS effectively captures how readers consciously apply strategies before, during, and after reading to enhance comprehension. Its structure has three parts—encompassing global, problem-solving, and support strategies—and it provides a comprehensive framework for examining how learners interact with texts and manage comprehension challenges.

A review of studies conducted in diverse contexts, including Malaysia, China, Turkey, and the United States, demonstrates that students most frequently rely on problem-

solving strategies, while the use of global and support strategies varies depending on proficiency level, instructional background, and exposure to English. These findings confirm that metacognitive awareness is not innate but can be cultivated through explicit instruction and reflective practice. Teachers, therefore, play a crucial role in helping learners recognize, apply, and evaluate their own reading strategies. By doing so, they empower students to become independent, critical, and confident readers capable of transferring strategic behaviors across languages and disciplines.

Moreover, SORS offers educators a diagnostic and pedagogical advantage. It allows teachers to identify students' strategic strengths and weaknesses and to design targeted interventions that address specific needs. Integrating SORS into classroom practice promotes a more reflective learning environment where students actively engage with reading as a purposeful, strategic process rather than a passive activity.

In conclusion, the consistent results across research studies demonstrate that the conscious use of reading strategies—particularly when supported by tools like SORS—significantly contributes to language learning success. Developing metacognitive awareness not only enhances reading comprehension but also fosters lifelong learning skills essential for academic and professional growth. Future research should continue to explore how SORS can be adapted to digital and multimodal reading contexts, as reading in the 21st century increasingly involves navigating complex online texts that demand even greater strategic flexibility.

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