READING STRATEGY TAXONOMIES: AN OVERVIEW

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Abstract: The crucial importance of reading in any language has stimulated a noticeable growth in the number of studies on reading strategies used in second and foreign language reading to improve readers' comprehension. This paper examined the classifications of reading strategies by providing a variety of reading strategy taxonomies by different authors. The comparisons of the most well-known reading strategy taxonomies by Oxford (1990) and three other best-known ones by O'Malley and Chamot (1990), Mokhtari and Sheorey (2002), and Oxford (2013) were also demonstrated clearly. Two questionnaires, one of which was modified by Nguyen (2016) from the one by Sheorey and Mokhtari (2002) were also presented as useful recommendations for researchers in the field. The results of the research offer a quite comprehensive insight into reading strategy taxonomies, which might be useful for researchers in the field of reading strategies in choosing an appropriate theoretical framework for their studies in the future.

Key words: reading strategies, taxonomies, comparisons, theoretical framework

1. Introduction

According to the Paris et al. (1991), reading strategies are defined as actions that readers select deliberately and control to achieve goals or objectives (Paris, Wasik & Turner, 1991). They actually refer to the mental operations involved when readers purposefully approach a text. Reading strategies, in this way, show how readers conceive a task, what textual cues they attend to, how they make sense of what they read, and what they do when they do not understand (Barnett, 1988; Block, 1986; Brantmeier, 2002). In other words, reading strategies are conceptualized as conscious and deliberate activities that readers take to help their reading in acquiring, storing, retrieving information and constructing meaning from the text (Yang, 2004).

Although different authors have defined reading strategies in different ways, they share the same viewpoint on the characteristics of reading strategies. Those are (1) deliberate, conscious plans, techniques and skills; (2) aiming to enhance reading comprehension and overcome comprehension failures; and (3) behavioral mental. They are of interest for what they reveal about the way readers manage their interaction with the written text and how these strategies are related to text comprehension (Carrell, Pharis & Liberto, 1989).

This paper provides an overview of reading strategy classifications focusing on the comparisons of the most well-known reading strategy taxonomies by Oxford (1990)'s and three other best-known taxonomies by O'Malley and Chamot (1990)'s, Mokhtari and Sheorey (2002)'s, and Oxford (2013)'s.

2. Classifications of Reading Strategies

Reading strategies have been classified variously by different authors. Based on three broad category classifications Chamot (1987) (as cited in Wenden & Rubin, 1987, p. 77) introduced twenty-two strategies which can be

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used in reading, categorized in Metacognitive, Cognitive, and Social and Affective strategies. Metacognitive category which allows readers think about the reading process, plan for reading, monitor the reading task, and evaluate how well one has read (Schramm, 2008; Sheorey & Mokhtari, 2001), consists of seven strategies: Planning, Directed attention, Selected attention, Self-management, Self-monitoring, Problem identification, and Self-evaluation. Cognitive strategies, on the other hand, encourage readers manipulate the reading material mentally or physically by using their prior knowledge, or applying a specific technique and various strategies in their efforts to construct meaning in the comprehension process (Chamot, 1987, as cited in Wenden & Rubin, 1987, p. 77; Pang, 2008). This strategy category consists of eleven specific strategies: Repeating, Resourcing, Grouping, Note taking, Deduction/ Induction, Substitution, Elaboration, Summarization, Translation, Transferring, and Inferencing. Four last strategies belonging to Social and Affective strategies allow readers to interact with others to assist reading or using affective control to assist a reading task. Those are Questioning for clarification, Cooperation, Self-task, and Self-reinforcement.

Oxford (1990) classifying language learning strategies into six groups of Direct and Indirect strategies proposed fifty strategies which can be applied in reading. The first group of Direct strategies is Memory, which consists of ten specific strategies categorized in four strategy sets: Creating mental linkages, Applying images and sounds, Reviewing well, and Employing action. The second group is Cognitive including thirteen strategies divided into four sets: Practicing, Receiving and sending messages, Analyzing and reasoning, and Creating structure for input and output. The last group of Direct strategies is Compensation with only one set named Guessing intelligently with two specific strategies Using linguistic clues and Using other clues. The last Indirect group consists of five strategies divided into three sets: Asking questions, Cooperating with others, and Empathizing with others. The names and definitions of all fifty strategies in this classification are presented in details in the Appendix 1.

In a very recent study Oxford (2013) introduced a quite different taxonomy of reading strategies (Appendix 2). The Self-Strategic Regulation (S2R) model includes strategies of three majors, mutually influential dimensions: cognitive, affective, sociocultural-interactive, and metastrategies. While Cognitive strategies help the reader construct, transform, and apply L2 knowledge, Affective strategies help the reader create positive emotions and attitudes and stay motivated. Sociocultural Interactive (SI) strategies, on the other hand, help the learner with communication, sociocultural contexts, and identity. All of these three strategy dimensions are powerfully influenced by three types of Metastrategies. Metacognitive strategies simply mean "beyond the cognitive" and include strategies that provide general control of cognitive strategies and help the reader control cognitive strategy use. Similarly, meta-affective strategies facilitate readers control of affective strategy use, and meta-SI strategies enable the readers to control SI strategy use. Metastrategies, by virtue of their executive-control and management function, help the readers know whether and how to deploy a given strategy and aid in determining whether the strategy is working or has worked as intended. Strategies and metastrategies in the model are highly dynamic, because they respond to changing needs of the learner for varying purposes in different sociocultural contexts.

A different classification of reading strategies was proposed by Shih (1992) and Baker-Gonzalize and Blau (1995) when they suggested three stages of reading strategy use: before reading, while reading, and after reading. Before, or pre-reading strategies are believed to activate prior knowledge, or schemata, essential for understanding texts; during, or while-reading strategies help to locate the main idea; and after, or post-reading strategies are used to review, detect and cogitate upon the information (Paris et al., 1991; Young & Oxford, 1997).

Other scholars classified reading strategies using different terms. Anderson (1991) groups reading strategies to five categories: 1) supervising strategies, 2) support strategies, 3) paraphrasing strategies, 4) strategies for establishing coherence in the

text, and 5) test-taking strategies. Meanwhile, Jimenez, Garcia, and Pearson (1996) divided reading strategies into text-initiated, interactive, and reader-initiated strategies.

Studies in both L1 and L2 reading generally indicate a binary categorization of "bottom-up" and "top down" strategies. These strategies have quite the same functions as local strategies and global strategies by Block (1986) and Carrell (1989). Bottom-up or local strategies include focusing on identifying the meaning and grammatical category of individual words, sentence structure, and details of the text (Salataci & Akyel, 2002). As the readers process information that each sentence gives they check to see how this information fits by using top-down or global strategies, such as activating background knowledge, predicting, getting the gist of the text, and skimming (Barnett, 1988; Block, 1986; Carrell et al., 1989).

Brown (1990) listed five specific strategies that can help students read more quickly and effectively: Previewing, predicting, skimming and scanning, guessing from context, and paraphrasing. Sharing a quite similar view Brantmeier (2002) agreed that reading strategies "may involve skimming, scanning, guessing, recognizing cognates and word families, reading for meaning, predicting, activating general knowledge, making inferences, following references, and separating main ideas from support ideas" (p. 1).

Mokhtari and Sheorey (2002) and Mokhtari and Reichard (2002) introduced the Survey of Reading Strategies (SORS) and Metacognitive Awareness of Reading Strategies Inventory (MARSI) to "measure the type and frequency of reading strategies that adolescent and adult ESL students perceive they use while reading academic or school-related materials in English" (p. 4). The authors proposed thirty items using three broad categories as Global, Problem-solving, and Support strategies. These three classes of strategies interact with and support each other when used in the process of constructing meaning from the text.

3. Comparisons of Most Well-Known Reading Strategy Classifications

3.1. Comparing the O'Malley and Chamot (1990)'s and the Oxford (1990)'s Reading Strategy Systems

O'Malley and Chamot (1990)'s reading strategy system derived from cognitive psychological theory of information processing (Brown & Palincsar, 1984) distinguishes three broad types of reading strategies: cognitive, metacognitive, and socio-affective (or sometimes called socio-affective or social-affective). Oxford (1990) classifies learning strategies into two major areas: direct and indirect strategies which are subdivided into a total of six classes (memory, cognitive, and compensation under the direct class; metacognitive, affective, and social under the indirect class). Direct and indirect strategies support each other and each strategy group is capable of connecting with and assisting every other strategy group (Oxford, 1990, p. 14). However, in research practice, particularly in the Strategy Inventory for Language Learning (SILL) and Strategy Applications Listed According to Reading Skill, Oxford did not use the direct/indirect dichotomy. In fact, she introduces fifty reading strategies divided into memory, cognitive, compensation, metacognitive, affective, and social strategies.

There is a considerable degree of overlap between the two strategy systems, although there are also many differences (Appendix 3). O'Malley and Chamot's (1990) metacognitive strategies generally match those of Oxford (1990). The general function of this category is planning, organizing, and evaluating one's own reading process. The number of metacognitive strategies introduced by O'Malley and Chamot (1990) and Oxford (1990) are not the same (seven compared with ten). However, according to Oxford (1990) paying attention strategy involves two modes: directed attention and selective attention, which are separated in O'Malley and Chamot (1990)'s system. Obviously, the two systems share six metacognitive strategies. Besides O'Malley and Chamot (1990) add problem identification strategy and Oxford (1990) adds six more (Overviewing and linking with already known

material, Identifying the purpose of a language task, Setting goals and objectives, Seeking practice opportunities, Finding out about language learning, and Organizing). It can also be said from this difference that setting goals and purpose of reading is considered important in Oxford (1990) system while O'Malley and Chamot (1990) ignore this. In general, metacognitive strategies are quite consistent in both classifications.

The cognitive strategies of O'Malley and Chamot (1990) roughly correspond to a combination of Oxford's cognitive and memory strategies although the number of strategies of these two systems are quite different (eleven strategies compared with twenty-four). The classification by Oxford (1990) has six cognitive strategies and eight memory strategies more than those in O'Malley and Chamot (1990)'s. However, inferencing strategy of O'Malley and Chamot (1990)'s system is listed as a compensation strategy in Oxford (1990)'s (using linguistic and other clues to guess - of guessing intelligently strategy set). The reason for this, according to Oxford (1990) is that this strategy is essential to make up for inadequate knowledge while reading.

Oxford (1990) intentionally separates memory strategies from the cognitive category because memory strategies appear to have a very clear, specific function which distinguishes them from many cognitive strategies. Naturally, memory strategies serve cognition. However, the actions included as memory strategies are particular mnemonic devices that aid learners in moving information to long-term memory for storage purposes and in retrieving it from long-term memory when needed for use. Most of the memory devices do not tend to contribute to deep processing of language information, although cognitive strategies do contribute to deep processing (Hsiao & Oxford, 2002).

Both systems mention strategies dealing with affect and social interaction. Affective strategies are techniques whereby the reader manages his/her emotions, feelings, and motivational states. One of the most basic social interactions is asking questions, an action from which learners gain great benefit. In addition, social strategies are techniques involving learning with other people.

O'Malley and Chamot (1990) group affective strategies and social strategies together to form a category known as social-affective or socio-affective strategies. In contrast, Oxford (1990) classifies affective and social strategies as separate categories and there are six more individual strategies of these categories in Oxford (1990)'s than in O'Malley and Chamot (1990)'s.

Both O'Malley and Chamot (1990)'s and Oxford (1990)'s reading systems have made an important contribution to and have advanced our understanding of how reading strategies can be systematically categorized. Nevertheless, in their research Hsiao and Oxford (2002) suggest that "it may be preferable to subdivide O'Malley and Chamot (1990)'s cognitive strategies into memory, cognitive, and compensation dimensions than to consider cognitive strategies as a unitary dimension" (Hsiao & Oxford, 2002). In addition, O'Malley and Chamot (1990)'s socio-affective strategies should be separated into affective and social dimensions (Hsiao & Oxford, 2002, p. 378). Concluding that the six-factor model without the two higher-order strategy constructs is more consistent with learners' strategy use than other models (Hsiao & Oxford, 2002), Oxford (1990) emphasizes the classification is more comprehensive and detailed; it is more systematic in linking individual strategies, as well as strategy group; and it uses less technical terminology (Oxford, 1990, p. 14). Furthermore, this comprehensive classification system has provided the foundation for the Strategy Inventory for Language Learning (SILL), which has been employed in numerous studies across the world to validate the effectiveness of reading strategies to reading comprehension. It is estimated that the SILL has been used in major studies on reading strategies around the world and involved 10,000 language learners (Kaylani, 1996). Moreover, it has been translated into more than twenty languages (Oxford, 2001). However, it appears that there could be other approaches that might help to advance theories of reading strategy classification and explain variability in learners' strategy use as well as or better than the six-factor strategy model.

3.2. Comparing Oxford (1990)'s and Mokhtari and Sheorey (2002)'s Reading Strategy Systems

In 2002, Mokhtari and Sheorey introduced the Survey of Reading Strategies (SORS), which was initially inspired by the review and use of another instrument Metacognitive Awareness of Reading Strategies Inventory (MARSI) by Mokhtari and Reichard (2002) as a measure of students' metacognitive awareness of reading strategies. The SORS is intended to measure the type and frequency of reading strategies that adolescent and adult EFL students perceive they use while reading academic materials in English. Here is a comparison of the reading strategy classifications by Oxford (1990) and that by Mokhtari and Sheorey (2002) (Appendix 4).

The two systems show that Oxford (1990) and Mokhtari and Sheorey (2002) share twenty-one strategies, such as using previous knowledge, repeating, guessing, taking notes, translating, using clues, etc. though the strategies are categorized differently by the authors. As mentioned earlier Oxford (1990) proposes fifty strategies categorized in four groups while there are only thirty strategies divided into three groups in Mokhtari and Sheorey's (2002) classification. Although Oxford's (1990, p. 14) classification is comprehensive and detailed, with so many strategies, it is very difficult to decide which are the most important to learning. In addition, there is a tendency to find overlapping strategies, which cannot be attributed to any particular theory of learning. For example, three strategies of Cooperating with peers (Social), Cooperating with proficient users of the language (Social), and Discussing your feelings with someone else (Affective) can be combined as one strategy: Interacting to Learn and Communicate (in S2R model); or four strategies of Organizing (Metacognitive), Setting goals and objectives (Metacognitive), Identifying the purpose of a language task (Metacognitive), and Planning for a language task (Metacognitive) can be grouped as Planning (in S2R model).

It can be noticed that the classification by Mokhtari and Sheorey (2002) is simply organized and the number of reading strategies are moderate for readers to assess themselves. Mentioning SORS, Mokhtari and Sheorey (2002) indicate "SORS is presented as a simple and effective tool for enabling students to develop a better awareness of their reading strategies, for teachers assess such awareness, and for assisting students in becoming constructively responsive readers" (p. 2). Furthermore, the title of each strategy group (Global, Problem-solving, and Support) can also be considered as a useful guide for readers when they deal with reading texts. Global strategies can be applied in all kinds of texts, at any time, while problem-solving strategies help readers cope with problems emerging during their reading. Besides, they can make the best of support strategies when facing difficulties in reading. In addition, many researchers have applied SORS in their studies to investigate readers' strategies used while reading English academic materials as a foreign/second language (Alsheikh, 2011, 2014; Al-Sohbani, 2013; Jafari & Shokrpour, 2012; Monos, 2005; Sheorey & Baboezky, 2008; etc.).

3.3. Comparing Oxford (1990)'s and Oxford (2013)'s Reading Strategy Systems

Oxford's (2013) new model of reading strategies has addressed the gaps in her initial 1990 taxonomy. In the new model the divisions of direct and indirect strategies, which were considered as the main limitation of Oxford (1990)'s taxonomy (Uztosun, 2015), have not been used any longer.

With the new concept of self-regulation, the S2R model shifted the focus of language learning strategies to the assumption that "learners actively and constructively use strategies to manage their own learning" (Oxford, 2013, p. 7). There are obviously important differences between Oxford's (2013) S2R model and her 1990 strategy classification.

The most important difference is that S2R model includes metastrategies for each strategy dimension: metacognitive strategies, meta-sociocultural-interactive strategies, and meta-affective strategies. Oxford's explanation for this is that metaknowledge is not only relevant to cognitive strategies but also affective and sociocultural-interactive ones. To explain for this innovation Oxford (2013) claims that

deploying any type of strategy requires using a meta-strategy which "help[s] the learner know whether and how to deploy a given strategy and aid[s] in determining whether the strategy is working or has worked as intended" (Oxford, 2013, p. 18).

In the S2R model, the role of memory (ME) and compensation (COM) strategy categories is not mentioned. Some individual strategies of these categories have been put into the category of cognitive strategies, such as Using linguistic clues (COM), Using other clues (COM), Using keywords (ME), and Using imagery (ME). The others, for example, Using physical response or sensation (ME), Using mechanical techniques (ME) have not been used any more.

The new model also highly emphasizes the role of culture in reading process by including strategies which are used to deal with sociocultural contexts and identities namely 'sociocultural-interactive'.

According to Hsiao and Oxford (2002), Oxford's S2R Model (2013) is different from other strategy taxonomies, which shows the advantages of this new model. The most significant differences can be demonstrated as follows.

Firstly, three major traditions of learning theory and research: psychological, socialcognitive, and sociocultural are systematically integrated. The psychological tradition of strategies is very diverse, including strategies related to schema (mental structure) development, comprehension, cognitive information-processing, metacognition, motivation, emotion, and beliefs. The social-cognitive strand deals with strategies as associated with task phases, self-efficacy, and social comparisons. The sociocultural tradition involves strategies (often called "higher mental functions" or "operations") as linked with mediated learning, instrumental enrichment, the ZPD, communities of practice, and cognitive apprenticeship. Secondly, by proposing affecting and sociocultural interaction subscales of strategies, especially by recognizing the significant importance of metastrategies, Oxford (2013) indicates that second language reading is not just a cognitive/metacognitive process but is also influenced by a complex web of beliefs, emotional associations, attitudes, motivations, sociocultural relationships, personal interactions, and power dynamics. Thirdly, the S2R Model states that metastrategies, such as Planning, Organizing, Monitoring, and Evaluating, are naturally usable at either the task level or the whole-process level. Meanwhile, several social-cognitive models of self-regulated learning view these as only related to a particular task-phase (e.g., strategies used before, during, and after the task). Finally, the S2R Model includes the fewest strategies and metastrategies (a total of nineteen) needed for self-regulated L2 learning; therefore, the model can be viewed as scientifically elegant.

4. The Applications of the Strategy Taxonomies

Many studies on reading strategy use have been taken applying the reading strategy classifications by the authors mentioned above. The author herself has conducted some studies on students' reading strategy use.

Nguyen (2018) used the framework by Oxford (2013) to design a questionnaire to explore the use of strategies in English reading comprehension by university students in Vietnam. The results of Cronbach's Alpha revealed that both external and internal reliability and validity of the questionnaire was assured. The internal reliability of the questionnaire was high with Cronbach's Alpha = 0.935 for 19 items of reading strategies categorized into Metastrategies, Cognitive strategies, Affective, and Socio-cultural strategies. In addition, the correlation between coefficient variables and total of each item was high with the score ranging from 0.454 to 0.758. The overall mean score of 2.90 indicates that the participants used reading strategies at moderate scale of frequency when they read English for general academic purposes. Considering the use of each reading strategy category, the most frequently used category was Cognitive strategies (M = 3.24; S.D = 0.85), followed by Affective strategies (M = 2.89; S.D = 0.85), Socio-cultural Interactive strategies (M = 2.80; SD = 0.85), and Metastrategies were reported being used at the lowest level of frequency with M = 2.69, SD = 0.83.

In addition, a modified SORS was also proposed by Nguyen (2016) to investigate the use of reading strategies. Based on the meaning and correlation of strategies of each component by Mokhtari and Sheorey (2002), the researcher re-categorized the strategies into five subscales with titles and meanings presented in the table below.

No.	Subscale	Usage
1	OVERVIEWING	Used at the first stage of the reading process when the readers plan to monitor or manage their reading.
2	PROBLEM DEALING	Used when the readers meet difficulties while working directly with the text
3	SUPPORTING	Used when the readers need aids to understand the text. The aids may be from reference materials or the readers' own ways, or from other readers, for better comprehension.
4	GUESSING	Used during reading process, when the readers want to guess the meaning of the text without any aids
5	INFORMATION DEALING	Used when the readers want to check their understanding of the read information

A full modified SORS with 31 items categorized in five subscales mentioned above can be seen in Appendix 5.

The reliability of the modified SORS has been confirmed by the results of different necessary tests. The most significant thing of this modified SORS is that beside it covers all appropriate strategies proposed by other authors it helps readers decide what strategies to use at each stage of reading process. In this way readers can use the strategies in a more appropriate way to gain more effectiveness for their reading. Any readers who want to assess their own use of reading strategies themselves, and researchers who need to investigate readers' strategy awareness can use this modified SORS with a Likert scale.

The modified SORS has twofold usefulness. First, it can help teachers get information to measure students' reading strategy use and to instruct them to comprehend a text strategically. Data obtained from the SORS can be used as a means to monitor students to become effectively responsive readers. Second, students can use the model as an instrument to increase their own awareness of reading strategies. They can evaluate themselves and adjust their way to achieve the most effectiveness. Application of good strategies will help students become better readers which motivate them to read more and be more interested in reading in particular and language learning in general.

5. Conclusion

To conclude, this paper has provided an overview of classifications of reading strategies. Two reading strategy frameworks, one of which was modified by Nguyen (2016) from the one by Sheorey and Mokhtari (2002), were also presented as useful recommendations for researchers in the field. As demonstrated above, each existing classification system in and on itself involves an implicit theory about the nature of reading strategies. However, how best the use of the strategies presented by the authors can be depends on types of readers and their reading purposes. Using appropriate strategies for reading helps learners think and process the reading in specific contexts (Chamot, 2005; Cohen, 2007; Oxford, 2013). Nevertheless, how many strategies are available to learners to assist them in reading and how these strategies should be classified are open to debate (Hsiao & Oxford, 2002). It may also cause a problem that many researchers are very easy to be puzzled with which classification to follow when they conduct studies on reading strategy. The comparisons among best known taxonomies as presented might help researchers decide an appropriate reading strategy classification for their study in the field.

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APPENDIX 1

Strategies Applied in Reading Proposed by Oxford (1990)

No.	Strategy group	Strategy set	Strategy	Definition
	DIRECT STRATEGIES			
1.	Memory	Creating mental linkages	Grouping	Classifying or reclassifying what is read into meaningful groups, thus reducing the number of unrelated elements. It sometimes involves labeling the groups.
2.	Memory	Creating mental linkages	Associating/ elaborating	Associating new language information with familiar concepts already in memory, making the material easier to remember
3.	Memory	Creating mental linkages	Placing new words into a context	Placing new words or expressions that have been read into a meaningful context, such as a written sentence, as a way to remember it
4.	Memory	Applying images and sounds	Using imagery	Creating a mental image of what has been read; remembering a written item by picturing the place where it is located
5.	Memory	Applying images and sounds	Semantic mapping	Arranging concepts and relationships on paper to create a semantic map, a diagram in which the key concepts are highlighted and are linked with related concepts via arrows or lines
6.	Memory	Applying images and sounds	Using keywords	Combining images to remember more easily what has been read in the new language. Two steps: identifying a familiar word in one's own language or another language that sounds like the new word; then generating a visual image of the new word and the familiar

				one interacting in some way
7.	Memory	Applying images and sounds	Representing sounds in memory	Linking the new word with familiar words or sounds from any language
8.	Memory	Reviewing well	Structured reviewing	Reviewing new material in the target language at different intervals
9.	Memory	Employing action	Using physical response or sensation	Physically acting out what has been read or associating physical sensations with specific words found in reading passages
10.	Memory	Employing action	Using mechanical techniques	Writing the new expressions in a full sentence on a flashcard
11.	Cognitive	Practicing	Repeating	Reading a passage more than once for a better understanding
12.	Cognitive	Practicing	Recognizing and using formulas and patterns	Recognizing and using unanalyzed expressions in the target language
13.	Cognitive	Practicing	Practicing naturalistically	Using the language in an authentic way for reading comprehension
14.	Cognitive	Receiving and sending messages	Getting the idea quickly	Skimming- searching for the main ideas Scanning- searching for specific details
15.	Cognitive	Receiving and sending messages	Using resources for receiving and sending messages	Using resources such as dictionaries, word lists, grammar books, and phrase books to find out the meaning of what is read
16.	Cognitive	Analyzing and reasoning	Reasoning deductively	Deriving hypotheses about the meaning of what is read by means of general rules the learner already knows
17.	Cognitive	Analyzing and reasoning	Analyzing expressions	Breaking down a new word, a phrase, a sentence, or even a paragraph into its component parts for better understanding
18.	Cognitive	Analyzing and reasoning	Analyzing contrastively	Analyzing elements of the new language to determine likeness and differences in comparison with one's own native language
19.	Cognitive	Analyzing and reasoning	Translating	Using the reader's own language as the basis for understanding
20.	Cognitive	Analyzing and reasoning	Transferring	Directly applying previous knowledge to facilitate new knowledge in the target language
21.	Cognitive	Creating	Summarizing	Making a condensed, shorter version of

		structure for input and output		the original passage
22.	Cognitive	Creating structure for input and output	Taking notes	Writing key points in the reader's own language or in the target language
23.	Cognitive	Creating structure for input and output	Highlighting	Emphasizing the major points in a dramatic way, through colour, underlying, boxes, circles…
24.	Compensation	Guessing intelligently	Using linguistic clues	Using previously gained knowledge of the target language, the reader's own language such as suffixes, prefixes and word order for guessing meaning
25.	Compensation	Guessing intelligently	Using other clues	Using other resources which are not related to language such as titles or nicknames, summaries, conclusions, transitions, etc. for guessing the meaning of what is read
	INDIRECT STRATEGIES			
26.	Metacognitive	Centering your learning	Overviewing and linking with already known material	Previewing the basic principles and/or material for an upcoming language activity and linking these with what the reader already knows
27.	Metacognitive	Centering your learning	Paying attention	Directing attention and selecting attention. Deciding generally or globally to pay attention to the task and avoid irrelevant distractors and deciding in advance to notice particular details
28.	Metacognitive	Arranging and planning your learning	Finding out about language learning	Uncovering what is involved in language learning
29.	Metacognitive	Arranging and planning your learning	Organizing	Creating the best possible physical environment, scheduling well, and keeping a language learning notebook
30.	Metacognitive	Arranging and planning your learning	Setting goals and objectives	Writing aims for language learning in the language learning notebook, along with deadlines for accomplishing them and an indication as to whether those deadlines were met
31.	Metacognitive	Arranging and planning your learning	Identifying the purpose of a language task	Determining the task purpose

32.	Metacognitive	Arranging and planning your learning	Planning for a language task	Identifying the general nature of the task, the specific requirements of the task, the resources available within the reader, and the need for further aids
33.	Metacognitive	Arranging and planning your learning	Seeking practice opportunities	Finding additional chances to practice the language
34.	Metacognitive	Evaluating your learning	Self- monitoring	Noticing and correcting the reader's own errors in reading by writing down the most difficulties in his/ her language learning notebook and trying to eliminate them
36.	Metacognitive	Evaluating your learning	Self- evaluating	Gauging progress in reading by using checklists, diaries, journals
36.	Affective	Lowering your anxiety	Using progressive relaxation, deep breathing, or mediation	Alternately tensing and relaxing all the major muscle groups, one at a time
37.	Affective	Lowering your anxiety	Using music	Listening to soothing music for some minutes before or during reading to get calmness
38.	Affective	Lowering your anxiety	Using laughter	Laughing to reduce anxiety during reading
39.	Affective	Encouraging yourself	Making positive statements	Using positive statements to encourage themselves
40.	Affective	Encouraging yourself	Taking risks wisely	Consciously deciding to take reasonable risks regardless of the possibility of making mistakes or encountering difficulties
41.	Affective	Encouraging yourself	Rewarding yourself	Discovering how to reward learners themselves for good work in reading
42.	Affective	Taking your emotional temperature	Listening to your body	Paying attention to what the body says
43.	Affective	Taking your emotional temperature	Writing a language learning diary	Using language learning diaries or journals to describe the reader's feelings, attitudes, and perceptions about the reading process
44.	Affective	Taking your emotional temperature	Using a checklist	Using an everyday checklist to assess students' own feelings and attitudes about reading
45.	Affective	Taking your emotional temperature	Discussing your feelings with someone else	Discussing the reading process with other people

46.	Social	Asking questions	Asking for clarification and verification	Asking the more proficient reader for clarification and verification
47.	Social	Cooperating with others	Cooperating with peers	Working together with other readers with a common goal or reward
48.	Social	Cooperating with others	Cooperating with proficient users of the language	Cooperating with proficient readers during the reading process
49.	Social	Empathizing with others	Developing cultural understanding	Improving background knowledge of the new culture for better understanding what is read
50.	Social	Empathizing with others	Becoming aware of others' thoughts and feelings	Purposefully being aware of fluctuations in the thoughts and feelings of particular readers

APPENDIX 2

Oxford's Strategic Self-Regulation (S2R) Model of L2 Learning (2013)

Metastrategies and strategies in the Strategic Self-Regulation (S2R) Model of L2 learning	
Metastrategies and strategies	**Purpose**
8 Metastrategies (metacognitive, meta-affective, and metasociocultural-interactive)	
Paying Attention	Managing and controlling L2 learning in a general sense, with a focus on understanding one's own needs and using and adjusting the other strategies to meet those needs
Planning	
Obtaining and Using Resources	
Organizing	
Implementing Plans	
Orchestrating Strategy Use	
Monitoring	
Evaluating	
6 strategies in the Cognitive dimension	
Using the Senses to Understand and Remember	Remembering and processing the L2 (constructing, transforming, and applying L2 knowledge)
Activating Knowledge	
Reasoning	
Conceptualizing with Details	
Conceptualizing Broadly	

Going Beyond the Immediate Data	
2 strategies in the Affective dimension	
Activating Supportive Emotions, Beliefs, and Attitudes	Handling emotions, beliefs, attitudes, and motivation in L2 learning
Generating and Maintaining Motivation	
3 strategies in the Sociocultural-interactive dimension	
Interacting to Learn and Communicate	Dealing with issues of contexts, communication, and culture in L2 learning
Overcoming Knowledge Gaps in Communicating	
Dealing with Sociocultural Contexts and Identities	

APPENDIX 3

Comparing the Strategy Systems by O'Malley & Chamot (1990) and Oxford (1990)

O'Malley & Chamot (1990)	Oxford (1990)
METACOGNITVE	
Planning (M)	*Planning for a language task (M)*
Directed attention (M)	*Paying attention (M)*
Selected attention (M) (Oxford, 154)	
Self-management (M)	
Self-evaluation (M)	*Self- evaluating(M)*
Self-monitoring (M)	*Self- monitoring (M) (Oxford, 160)*
Problem identification (M)	Overviewing and linking with already known material (M)
	Identifying the purpose of a language task (M)
	Setting goals and objectives (M)
	Seeking practice opportunities (M)
	Finding out about language learning (M)
	Organizing
COGNITIVE	
Repeating (C)	*Repeating (C)*
Resourcing (C)	*Using resources for receiving and sending messages (C)*
Note taking (C)	*Taking notes (C)*
Summarization (C)	*Summarizing(C)*
Translation(C)	*Translating (C)*
Transfer (C)	*Transferring (C)*

Deduction/ Induction(C)	*Reasoning deductively (C)*
Grouping (C)	*Grouping (ME)*
Elaboration (C)	*Associating/Elaborating (ME)*
Inferencing(C)	*Using linguistic clues (Com), Using other clues (Com)*
Substitution (C)	Analyzing contrastively (C)
	Practicing naturalistically (C)
	Getting the idea quickly (C)
	Analyzing expressions (C)
	Recognizing and using formulas and patterns (C)
	Highlighting (C)
	Using imagery (ME)
	Placing new words into a context (ME)
	Semantic mapping (ME)
	Using keywords (ME)
	Representing sounds in memory (ME)
	Structured reviewing (ME)
	Using physical response or sensation (ME)
	Using mechanical techniques (ME)
SOCIO-AFFECTIVE	
Cooperation (SA)	*Cooperating with peers (S)*
Questioning for clarification (SA)	*Asking questions for clarification and verification (S)*
Self-reinforcement (SA)	*Making positive statements (A)*
	Rewarding yourself (A)
Self-task (SA)	Using progressive relaxation, deep breathing, or mediation (A
	Using a checklist (A)
	Using music (A)
	Using laughter (A)
	Taking risks wisely (A)
	Listening to your body (A)
	Discussing your feelings with someone else (A)
Notes: C: Cognitive strategy; M: Metacognitive; SA: Socio-affective.	Notes: ME: Memory strategy; C: Cognitive strategy; Com: Compensation; M: Metacognitive; A: Affective; S: Social.

APPENDIX 4

Comparing the Strategy Systems by Oxford (1990) and Mokhtari & Sheorey (2002)

Oxford (1990)	Mokhtari & Sheorey (2002)
Planning for a language task (M)	
Paying attention (M)	*Paying closer attention (P)*
Self- evaluating (M)	Critically analyzing and evaluating the information (G)
Repeating ©	*Rereading (P)*
Using resources for receiving and sending messages ©	*Using reference materials (S)*
Grouping (ME)	*Finding relationships among ideas (S)*
Taking notes ©	*Taking notes (S)*
Summarizing©	*Summarizing (S)*
Translating ©	*Translating (S)*
Cooperating with peers (S) *Discussing your feelings with someone else (A)*	*Discussing with others (S)*
Transferring ©	*Thinking about what known (G)*
Reasoning deductively ©	*Guessing (G)*
Asking questions for clarification and verification (S)	*Asking oneself questions (S)*
Using linguistic clues, Using other clues (Co)	*Using context clues (G)* *Using typographical aids (G)*
Self- monitoring (M)	Checking the guesses (G) Checking understanding (G)
	Deciding what to read closely and what to ignore (G) Thinking about whether the content of the text fits reading purpose (G)
Overviewing and linking with already known material (M)	*Previewing the text (G)*
Identifying the purpose of a language task (M) *Setting goals and objectives (M)*	*Having a purpose in mind (G)*
Seeking practice opportunities (M)	
Analyzing contrastively (C)	*Stopping from time to time and thinking about what is being read (P)*
Practicing naturalistically *(C)*	
Getting the idea quickly (C)	*Skimming the text (G)*

Oxford (1990)	Mokhtari & Sheorey (2002)
Analyzing expressions (C) *Recognizing and using formulas and patterns (C)*	*Guessing the meaning of unknown words or phrases (P)*
Highlighting (C)	*Underlining or circling information (S)*
Using imagery (ME)	*Using tables, figures, and pictures in text (G)*
Placing new words into a context (ME)	
Semantic mapping (ME)	*Picturing or visualizing information (P)*
Using keywords (ME)	
Representing sounds in memory (ME)	
Structured reviewing (ME)	
Using physical response or sensation (ME)	
Using mechanical techniques (ME)	
	Paraphrasing (S)
	Reading aloud (S)
Associating/Elaborating (ME)	
	Reading slowly but carefully (P)
	Getting back on track (P)
	Adjusting reading speed (P)
Making positive statements (A) Rewarding yourself (A)	Thinking about information in both English and mother tongue (S)
Using progressive relaxation, deep breathing, or mediation (A	
Using a checklist (A)	
Using music (A)	
Using laughter (A)	
Taking risks wisely (A)	
Listening to your body (A)	
Discussing your feelings with someone else (A)	
Notes: ME: Memory strategy; C: Cognitive strategy; Com: Compensation; M: Metacognitive; A: Affective; S: Social.	Notes: G: Global strategy; P: Problem solving; S: Support.

APPENDIX 5

A MODIFIED SORS by Nguyen (2016)

No.	Strategies	1	2	3	4	5
OVERVIEWING STRATEGIES						
1	I have a purpose in mind when I read.					
2	I think about what I know to help me understand what I read.					
3	I take an overall view of the text to see what it is about before reading it.					
4	I review the text first by noting its characteristics like length and organization.					
5	When reading, I decide what to read closely and what to ignore.					
6	I use typographical features like boldface and italics to identify key information.					
PROBLEM DEALING STRATEGIES						
7	I try to get back on track when I lose concentration.					
8	I adjust my reading speed according to what I am reading.					
9	When text becomes difficult, I pay closer attention to what I am reading.					
10	I stop from time to time and think about what I am reading.					
11	I read slowly and carefully to make sure I understand what I am reading.					
12	When text becomes difficult, I re-read it to increase my understanding.					
13	When text becomes difficult, I read aloud to help me understand what I read.					
SUPPORTING STRATEGIES						
14	I take notes while reading to help me understand what I read.					
15	I underline or circle information in the text to help me remember it					
16	I use reference materials (e.g., dictionary) to help me understand what I read.					
17	When reading, I translate from English into my native language.					
18	I paraphrase (restate ideas in my own words) to better understand what I read.					
19	I go back and forth in the text to find relationship among ideas in it.					
20	I summarize what I read to reflect on important information in the text					
21	I discuss what I read with others to check my understanding					
GUESSING STRATEGIES						
22	I try to guess what the content of the text is about when I read.					
23	I check to see if my guesses about the text are right or wrong.					

24	When I read, I guess the meaning of unknown words or phrases.					
25	I use context clues to help me better understand what I am reading.					
INFORMATION DEALING STRATEGIES						
26	I critically analyze and evaluate the information presented in the text.					
27	I check my understanding when I come across new information.					
28	I ask myself questions I like to have answered in the text					
29	I use tables, figures, and pictures in text to increase my understanding.					
30	I try to picture or visualize information to help remember what I read.					
31	When reading, I think about information in both English and my mother tongue.					

PHÂN LOẠI CHIẾN LƯỢC ĐỌC:
MỘT NGHIÊN CỨU TỔNG QUAN

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Tóm tắt: Tầm quan trọng cốt yếu của việc đọc bằng bất kỳ ngôn ngữ nào đã tạo nên sự gia tăng đáng kể về số lượng các nghiên cứu về việc sử dụng chiến lược đọc nhằm cải thiện năng lực đọc hiểu của người học ngoại ngữ. Bài viết này nghiên cứu về sự phân loại các chiến lược đọc thông qua việc cung cấp các mô hình phân loại chiến lược đọc đa dạng của các tác giả khác nhau. Việc so sánh các phân loại chiến lược đọc của Oxford (1990) và ba phân loại chiến lược đọc thông dụng khác của O'Malley và Chamot (1990), Mokhtari và Sheorey (2002), và Oxford (2013) cũng được trình bày rõ ràng. Hai mô hình phân loại chiến lược đọc, trong đó có 1 mô hình được Nguyen (2016) điều chỉnh trên cơ sở khung phân loại của Sheorey and Mokhtari (2002) cũng được giới thiệu nhằm đưa ra những gợi ý cho các nhà nghiên cứu trong lĩnh vực này. Kết quả của nghiên cứu đã đưa ra cái nhìn khá toàn diện về việc phân loại các chiến lược đọc nhằm hỗ trợ các nhà nghiên cứu chiến lược đọc lựa chọn một khung lý thuyết phù hợp khi thực hiện các nghiên cứu trong tương lai.

Từ khoá: chiến lược đọc, phân loại, so sánh, khung lý thuyết