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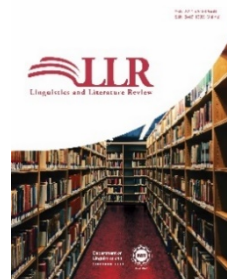|	
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A Review of Factors Affecting the Acquisition of Second Language Reading Skills

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Abstract

Effective reading skills are essential prerequisites for L2 reading proficiency which demand different metacognitive and cognitive skills to deal with the problems before and during the reading. These reading strategies adopted by L2 proficient readers are effective methods to handle the primary factors that influence reading proficiency. Therefore, the current research provided a comprehensive review of factors affecting the acquisition of second-language reading skills. The review consisted of thirty-two research articles related to L2 reading acquisition. The results demonstrated primary factors which impacted the L2 reading skills and a wide range of reading techniques adopted by proficient English language learners to construct meanings from the written text. Finally, it is likely to expect that the review of factors affecting reading skills can provide English language teachers and English language learners with in-depth insights into social and cognitive factors affecting L2 reading literacy.

Keywords: components of reading*,* cognitive reading factors, metacognitive reading factors, reading, reading comprehension, social reading factors

Introduction

Reading is a communicative process used by English Language Learners to integrate the details of a text and their contextual backgrounds in order to discern meanings (Anderson, 2003). The understanding of the meanings encoded in a written text is called reading comprehension. For better reading comprehension, strategic reading refers to the ability of proficient readers to achieve a goal for reading. Proficient readers skillfully encounter difficulties during reading a complex text which makes their reading fluent. Fluent reading refers to a capacity to read at an adequate pace with appropriate understanding. Using contextual information, the reader

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generates meanings from the text. Thus, it can be deduced that reading is the integration of the text, the reader, strategies, and fluency.

A plethora of researches proposed different reading strategies for effective reading comprehension according to the factors affecting second language reading. A section of the researches (e.g., Alenka & Božica, 2019; Cai & Kunnan, 2020) emphasizes cognitive and metacognitive strategies to overcome difficulties confronted by the readers before and during reading the text. In cognitive strategies, learners manipulate the tasks towards completion (Rianto, 2021). The cognitive strategies regarded as learner-centered strategies are based on environmental and situational context. Deploying intrinsic motivation, learners empower their reading abilities to attain information via the utilization of cognitive and metacognitive methods. In addition to cognitive strategies, metacognitive knowledge includes awareness of the learning process, supervision of learning tasks, and assessment of one's level of learning (Chamot & Kupper, 1989). Metacognitive strategies mentioned by Oxford (1990) involve three categories of strategies namely planning, arranging, and centering, however, the metacognitive framework proposed by Pintrich (1999) comprises planning, monitoring, and regulating. Planning refers to determine the aims of skimming and studying a text before reading and raising the queries. Monitoring points to self-regulated learning used to maintain attention while reading a text and self-appraising via generating many queries to confirm a deeper understanding of the text. Closely associated with the monitoring strategy, the regulatory strategy involves questioning to examine learners' reading comprehension, decreasing the speed of a rather difficult text, studying material for evaluation, and delaying questions.

The other section of researches (e.g., Babapour et al., 2019) reinforces the significance of reading strategies supported by sociocultural theories to utilize the ideas of different learners in a group to construct meanings from the text. Two prominent reading strategies include collaborative strategic reading (CSR) and Shadow Reading (SHR) (Babapour et al., 2019). CSR mostly emphasizes the monitoring of comprehension via posing and responding to questions. CSR based on the theoretical underpinnings of cognitive psychology (Flavell, 1992) and sociocultural theory (Vygotsky, 1978) improves students' reading strategies in large classroom settings and supplies more opportunities to them for taking more responsibility for their

learning. Commander and Guerrero (2013) further explained SHR that the oral reading of a learner as a reader is the input for another student, that is, shadower, to imitate and, then summarize the central points of the text. The other significant factor of the shadow strategy is the interaction between learners that assist the learners to remark on the text and construct meaning. The next section of studies (e.g., Jeong & Gweon, 2021; Nourinezhad & Kashefian-Naeeini, 2020) confirm reading attitude having a significant role in reading proficiency.

To provide a comprehensive review of the factors affecting second language reading, the primary purpose of the current paper was to review the factors affecting the acquisition of second-language reading skills. The review was based on thirty-two research articles related to reading from 2017 to 2022 and the research articles were retrieved from the highly cited research journal to provide an extensive and exhaustive review. The review first provides an extended definition of reading and, then, the essential components of reading that can influence reading proficiency. Finally, the theoretical underpinnings behind the factors affecting reading skills were also presented to theoretically conceptualize the factors. Based on the purpose of the review article, the following research questions would be answered:

Research Question No.1: What are the factors that affect reading skills? The following sub-questions would also be answered.

1. What is an extended definition of reading skills in the field of Applied Linguistics?

2. How do specific factors impact the acquisition of reading skills in English language learners (ELLs)?

3. Which theoretical frameworks provide support for the factors affecting the acquisition of reading skills?

4. What are the commonly used instruments employed to measure the factors influencing the acquisition of reading skills?

5. Which specific factors related to reading skills acquisition are frequently emphasized in studies conducted between 2017 to 2022?

Research Methodology

A Theoretical Grounding of the Review

The theoretical ground of the review is based on the stance taken by Housen et al. (2019) that most researches conceptually consider the second language complexity distinct and operationally a separate notion to overemphasize the syntactical complexity of L2. The overemphasis on syntactical structures is defined as the absolute or structural complexity of L2. On the other hand, the cognitive complexity of L2 is related to user-related complexity. The cognitive complexity concentrates on the primary issues regarding learnability, viz., the factors contributing to the difficulty of second language learning, the general difficulties faced by ELLs in some L2 linguistic forms, and the earlier development of some language features in L2 learning (Housen et al., 2019, p. 10). These cognitive factors point to L2 proficiency, the impact of L1 proficiency on L2, aptitude, and memory capacity. The cognitive factors affecting the L2 complexity are known as relative or subjective complexity.

The review contends that cognitive and metacognitive skills of second language reading skills cannot only be comprehended through linguistic structures (To & Mahboob, 2018) but also through social and cognitive factors (for instance, motivation, gender, attitude, cognitive and metacognitive strategies) as endorsed in the following researches (Cai & Kunnan, 2020).

Framework

In order to answer the research questions, a framework of the systematic review was chosen to analyze the selected research articles pertaining to the factors affecting the acquisition of second language reading skills. The systematic review article was, primarily, written to extensively summarize the current literature relevant to research questions (Nunn & Chang, 2020). The analytical methods used in a systematic review article followed two steps. Firstly, secondary data was obtained and then it was examined thoroughly. As the sub-type of evidence synthesis, the systematic review article formulates specific research questions which may vary in their scope. These research questions may range from narrow to broad, enabling the systematic review to effectively gather and analyze relevant data pertaining to the identified research questions. The basic aim of the systematic review

article is to utilize a transparent and rigorous approach for the research synthesis by assessing and mitigating biases generally found in the findings.

Data Collection and Sampling

The research design used to gather the research articles related to reading skills is a purposeful random sampling. The following six criteria were applied to select the research article for the meta-analysis of the review:

1. The research articles of the past five years, that is, 2017 to 2022, were selected.

2. Only those particular research articles that mentioned the impacts of various cognitive and social factors on second language reading were chosen.

3. Only W and X category research articles were selected for the review. W and X category research articles are the nomenclatures given by HEC (Higher Education Commission) Journal Recognition System used in Pakistan to mark highly cited research journals that are vetted by the peer-review process.

4. Mostly, empirical studies (, that is, experimental research) presenting the effects of socio-cognitive factors on reading skills were selected for the review which could show the impact of different variables on the second language reading skills.

5. Only those researches who focused on the reading skills of adult English language learners were selected.

6. The titles of the research studies related to the L2 reading skills having the following keywords, for instance, skill, L2/ second language, factors, influence, relationship, affect, impact, and causes, were preferably selected.

For research articles, the following electronic databases were used: Google Scholar, Tylor and Francis online, Z Library, Wiley Online Library, Sci-hub, SAGE Open, and Language Testing.

Data Collection Procedure

The following steps were adopted for the data collection:

1. Selecting the keywords, such as the impact of motivation and attitude on reading proficiency.

2. Using various databases for searching the research articles, for instance, Google Scholar, Tylor and Francis online, and Z-library.

3. Choosing W and X category research articles related to reading proficiency from 2017 to 2022.

4. Finally, an annotated bibliography was designed in the Microsoft excel sheet to systematically review the factors affecting the second language reading, for instance, the name of the article, author and journal, publication year, education, and proficiency level of Second Language Learners (ELLs) and the instruments used in the research articles (, for instance, interviews, observations, and tests).

Analysis and Discussion

This section consists of two sub-sections. The first section gives the definitions of L2 reading discussed in the research articles and the second section presents a review of the most frequent factors affecting L2 reading acquisition.

Extended Definition of Reading Skills

After the review of the research articles on reading skills, the main points of reading definitions can be summarized as follows:

Table 1

Main Points of Definitions of Reading

Research Articles	Main Points of Definitions of Reading
Chen (2020, p. 3)	• Dynamic interaction between language and thought • Encoding thought as language by the writer and decoding the language to thought by the writer
Alenka and Božica (2019, p. 55)	• An active or interactive process • Entials both bottom-up and top-down models of text processing and interaction
Amini et al. (2020, p. 2)	• Requires various metacognitive and cognitive tactics • Needs persistent and complete understanding

Research Articles	Main Points of Definitions of Reading
Par (2020, pp. 223-224)	- A dynamic and communicative process of making meanings - Consists of readers and varied types of reading material - Certain reading strategies used by a reader to understand the essential points of the reading texts or materials - Uses purposeful strategies to support understanding and monitor meaning
Fathi and Afzali (2020, pp. 475-476)	- A complicated and innovative concept and a primary source of linguistic input - Establishes an interactive connection among readers, authors, and texts
Babpour et al. (2019, p.1.)	- A process of relating information encoded in a text to one's own contextual schema to make meanings - A communicative procedure comprising the text and the reader

Based on the above definitions of reading skills, reading is a process of inextricably dynamic interrelation between language and thought in which the writer encodes the thought in the form of language and the reader, in return, decodes language in the form of the thought. The decoding process depends upon the transformation of written forms into phonological symbols to comprehend the basic idea of the written text. The relation between language and thought also denotes an interactive process utilized by the reader to attain meanings from written discourse. The interactive process includes both top-down and bottom-up models for enhancing the comprehension of an L2 reader through the understanding of the meanings of the content of the reading materials. The understanding of the meanings demands knowledge of vocabulary, the composition of sentences, and the process of extracting information from the passages based on background knowledge. The complete comprehension of the text requires linguistic skills, global knowledge, and different reading strategies.

The Most Frequent Factors Affecting L2 Reading Acquisition

Reading Strategy

Reading strategies are purposeful and conscious procedures used by readers in their reading processes to comprehend the text (Yeom & Jun, 2020). Learners most likely use more reading strategies with respect to the difficulty of the text. Various types of researches (Amini et al., 2020; Babapour et al., 2019; Chen, 2020; Feller et at., 2020; Li et al., 2022; Par,

2020; Rianto, 2021) confirm that proficient readers employ varied reading strategies to grasp the written text. Such active readers possess particular objectives and deploy a wide range of reading strategies to improve and control their own comprehension. Reading techniques come under the main category of learning strategies which positively affect and facilitate language learning operations. A significant relationship is found between successful second language learning and successful strategy use. Thus, it can be ascertained that reading strategies, as sub-categories of language learning strategy, are plans of mental actions to accomplish a reading goal.

Self-report is one of the common ways to measure the use of reading strategies. Although, numerous self-report instruments are utilized to measure reading strategies, the Metacognitive Awareness of Reading Strategies Inventory (MARSI) is the most effective method to measure three sub-categories of strategies. These sub-categories include global strategies used for summarizing points, problem-solving strategies used to repair problematic points, and support strategies utilized for noting points (Mokhtari & Reichard, 2004). MARSI presumes that reading strategies are naturally metacognitive, which means that readers know how and when to utilize the strategies to control cognitive/behavior activity. The instrument contains thirty items and self-report scale is used to evaluate the readers' use of reading techniques and their awareness. Moreover, it comprises three scales that show three different reading strategies, that is, global, problem-solving, and support strategies. The items from 1 to 13 present global reading strategies which are globally used to empower the comprehension of text. The items from 14 to 22 reflect problem-solving strategies used by the readers to solve or repair issues confronted during reading a text. Finally, the items from 23 to 30 denote the support mechanism adopted to construct meanings from the written text.

The Relationship of Reading with Cognitive Strategies, Metacognitive Knowledge, and Self-regulated

Effective reading comprehension needs the interrelation and implementation of varied skills and strategies. These strategies entail metacognitive, cognitive, and test-taking strategies (Alkhateeb, 2021; Lindholm & Tengberg, 2019). In cognitive strategies, learners manipulate the tasks towards completion (Rianto, 2021). The cognitive strategies, as learner-centered strategies, are based on environmental and situational context. Deploying intrinsic motivation, learners empower their reading

abilities to attain information via the utilization of cognitive and metacognitive methods. For instance, the skills deployed to predict the type of written discourse primarily demand students' background knowledge, their expertise in analyzing textual organization by focusing on specific structures, preparing a summary, and getting notes by noting the main points along with transferring, translating, and inferring. These cognitive strategies enhance and improve learners' understanding to read a text.

In addition to cognitive strategies, metacognitive knowledge includes awareness regarding the learning method, regulation of learning tasks, and examination of one's level of learning (Chamot & Kupper, 1989). Metacognitive strategies, according to Oxford (1990), involve three kinds of strategies, that is, planning, arranging, and centering. The metacognitive framework comprises planning, monitoring, and regulating (Pintrich, 1999). Planning is used to set goals for skimming and studying a text before annotating the important points and raising queries. Monitoring regulates self-learning used to maintain attention during reading a text and self-appraising via generating many questions to effectively understand the text. Closely linked to the monitoring strategy, the regulatory strategy involves questioning to examine learners' reading comprehension, decreasing the reading speed of a more difficult text, studying material for evaluation, and delaying questions.

As mentioned above, self-regulation is linked to self-regulated learning (SRL). Self-regulation points to "self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals" (Zimmerman, 2000, p. 14). The better use of SRL means effective use of metacognitive elements to plan towards personal objectives. Self-regulated learning also indicates the active participation of an individual in one's own learning process and control of metacognitive, cognitive, emotional, motivational, and behavioral aspects of one's learning. The causal link among meta-cognitive strategies, cognitive strategies, and self-regulated strategies is further validated in the hypothesized structural model proposed by Amini et al. (2020). The three sub-components of metacognitive reading strategies are global, problem-solving, and support reading strategies. Global reading strategies include general reading techniques, for instance, utilization of textual patterns, setting of particular goals, match-making between the content and reading goals, contextual clues, and skimming. Problem-solving strategies are used

during the reading to handle the problems confronted by learners by keeping attention, visualizing, thinking about the reading, and guessing the meanings from the context. Support reading strategies are effective in evaluating reading comprehension during and after the reading, for instance, the use of a dictionary, summarizing the key points, note-taking, paraphrasing, and self-reflection. The effective deployment of the aforementioned reading strategies, according to Amini et al. (2020), increases the reading proficiency of L2 learners. The following figure illustrates the hypothesized relationships among reading proficiency, self-regulated learning, and metacognitive strategies.

Figure 2

A Hypothesized Relation between, Self-regulated Learning, Reading Proficiency, and Metacognitive Strategies (Amin et al., 2020, p. 5)
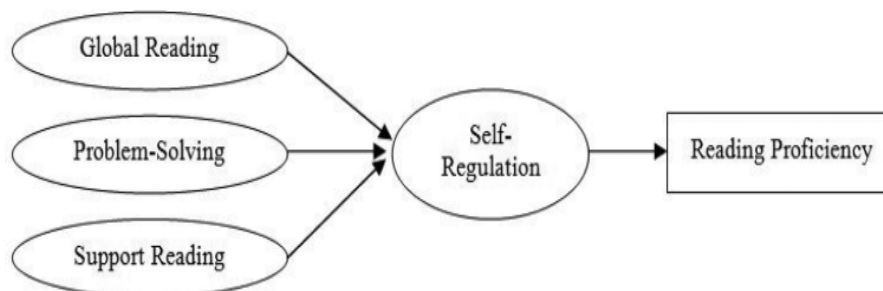
The strategies of information processing for English Language Teaching (ELT) can broadly be categorized into top-down and bottom-up approaches (Chen, 2020). Most proficient L2 learners employ both top-down and bottom-up processing. The interaction of both processing strategies helps students in using information from multiple sources to make meanings of the written text. The bottom-up approaches concentrate on parts, for instance, words, grammar, and syntax, whereas the top-down approaches demand background knowledge in terms of the content schema (that is, general information premised on previous information) and textual schema (that is, the selection of information according to a situation). The integration of bottom-up and top-down approaches can effectively help English language learners in utilizing the background knowledge about any

topic and its related vocabulary and sentences. This integrated attempt is termed as an interactive approach.

Impact of Vocabulary on Reading Proficiency

Vocabulary knowledge is instrumental in the evaluation of reading comprehension. The following researches (e.g., De Wilde et al., 2020; Krepel et al., 2021; McLean et al., 2020) indicated a close correlation between L2 reading skills and vocabulary knowledge. The foregoing researches present diverse conceptualizations on the role of vocabulary in reading. The researches emphasize the receptive-productive continuum, that is, a shift from passive recognition of vocabulary to active recall. The researches seem to be uncertain whether receptive or productive vocabulary predicts reading proficiency. The vocabulary tests commonly prefer to examine a receptive skill of vocabulary in order to test the reading proficiency. It means that most vocabulary tests utilized to evaluate reading proficiency are, primarily, receptive tests of vocabulary knowledge. The receptive tests of vocabulary (, e.g., the Vocabulary Levels Test; the Vocabulary Size Test) are criticized because of not evaluating vocabulary words in their appropriate context. (McLean et al., 2020). The meaning-recall tests of vocabulary proficiency are more effective to evaluate learners' form-knowledge as compared to the receptive tests. In meaning-recall tests, learners write or speak meaning themselves.

Impact of Reading Attitude on Reading Proficiency

Reading attitude holds a significant role in reading proficiency (Jeong & Gweon, 2021; Nourinezhad & Kashefian-Naeeini, 2020). In comparison to reading strategies, the low adoption of reading attitude in L2 reading research is most probably due to three valid reasons. The concise definition of attitude is relatively difficult because of its interaction with numerous variables. However, most researches highlight the emotional aspect of reading attitude. The possible definition of reading attitude, according to Alexander and Filler (1976, p.1), is "a system of feelings related to reading which causes the learner to approach or avoid a reading situation". According to the definition proposed by Fishbein and Ajzen (1975, p. 6), reading attitude means "a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object". The definitions of reading attitude refer to three interrelated concepts of attitude, that is, learners' feelings based on their accumulated experiences

concerning an object, individuals' beliefs in an object, and students' behavioral intentions related to the object.

The second issue pertaining to reading attitude is a lack of psychometrical tools needed to appropriately measure attitude. Despite the dearth of reading attitude tools, Elementary Reading Attitude Survey (ERAS), constructed by McKenna and Kear (1990), includes twenty-four items on recreational attitudes towards reading and fifteen items on academic attitudes related to reading to particularly measure the impact of L1 reading. Yamashita (2007), further, devised the tool for the measurement of L1 and L2 reading attitudes of university students. His tool targeted beliefs and emotions. The tool formulated by (Yamashita, 2007) contained five factors namely linguistic value, practical value, intellectual value, anxiety, and comfort. The aforementioned five sub-components of attitude come under two main factors of evaluative beliefs (that is, linguistic value, practical value, and intellectual value) and emotional beliefs (, that is, anxiety and comfort). The final cause for the paucity of reading attitude is the representation of ungeneralized findings based on a small sampling.

Impact of Motivation on L2 Reading Acquisition

In addition to reading attitude, motivation also affects L2 reading acquisition. Researches (e.g., Griffin et al., 2020; Li et al., 2022; Liebfreund, 2021) pointed out motivational and cognitive variables related to reading comprehension. Reading motivation comprises several sub-components namely interest, work avoidance, compliance, recognition, grades, involvement, competition, and curiosity. Liebfreund (2021) defines intrinsic motivation as a learner's active participation in the reading activity without any external pressure. The two sub-categories of intrinsic motivation are "object-motivated intrinsic motivation" commonly known as curiosity and "experience-oriented intrinsic motivation" termed as involvement (Liebfreund, 2021, p. 182). Objective-motivated intrinsic motivation denotes the reading process influenced by a reader's thematic interest and experience-oriented intrinsic motivation refers to the encouragement of a reader's positive experience during reading, leading the learner to be immersed in the text. Thus, intrinsic motivation can be linked to reading growth and reading ability.

Impact of Reading Comprehension on L2 Reading Acquisition

Comprehension in reading means the formulation of coherent mental models in readers' minds to reflect the interrelated ideas conveyed in the text through the use of background knowledge for explicating the content (Feller et al., 2020). The effective use of these connections influences reading comprehension. Therefore, the following researches (e.g., Alenka & Božica, 2019; Löwenadler, 2019; Toprak & Cakir, 2021) explain the concept of the reading comprehension. Gani et al. (2016, p.1) further confirmed that reading comprehension comprises a cognitive and complex meaning-making process used to combine the reader, the discourse, and the context. While comprehending the text, the reader simultaneously extracts and constructs the meanings from the written language. Reading comprehension involves the explanation of lexico-grammatical information and discourses (Babapour et al., 2019). In the complicated cognitive process of reading comprehension, the reader utilizes one's background knowledge in the interpretation of the texts. The foregoing transactional viewpoint metaphorically creates a dialogic relationship between readers and the author of a particular text in which they actively construct meanings. The occurrence of reading comprehension is closely associated with the proper decoding of the textual meanings. The textual meanings formulated by the reader are a process of notions explicitly and implicitly embodied in the text, and, consequently, the reader's reaction to those ideas which are premised upon the professional, personal, social, and cultural experiences.

Reading processes used in reading comprehension, according to Löwenadler (2019), can be divided into two primary categories, that is, low-level and high-level processes. The meaning of low-level process contains the skills needed to be automatized for fluent reading. Lower-level reading processes consist of word recognition (, that is, orthographic and phonological processes for accessing lexis), morpho-syntactic parsing (that is, lexico-grammatical relations), and semantic-proposition encoding (,that is, constructing clause-level meanings from lexico-grammatical information). On the other hand, high-level reading processes present a text model of comprehension (,that is, building inferences based on the integration of important details from various components of the text), a situation model of interpretation (, that is, interpretation of a text with regard to background knowledge), and reading skills related to working memory

(,that is, comprehension monitoring, inferences, background knowledge, strategies, and goals).

Observing the reading comprehension in L2 readers, a plethora of researches affirms that English language learners encounter problems in formulating a cognitive schema of a text while facing limited background knowledge and surface-level restrictions, that is, decoding and syntactic knowledge. These constraints increase the load of working memory (that is, the amount of information a person can activate in the mind) which, ultimately, disrupts reading comprehension because of not employing all available mental resources.

Impact of Academic Reading Proficiency on L2 Reading Acquisition

The connections between academic reading and reading proficiency are explained in the following researches (Stanley et al., 2018). Academic reading refers to the effective utilization of reading strategies related to a specific discipline and the interpretation of details according to the purposes of the discipline. The criticality and complexity of academic reading demands interpretation and synthesis of dense discourse and to address the intricate topics in detail. In other words, a deep recognition of the topic and metacognitive awareness are the prerequisites for the comprehension of academic reading. The reason is that the reader utilizes one's own understanding of the text's logic and the issues emerging during reading, the socio-cultural background of the text, and the metacognitive techniques to comprehend the criticality of the text.

Impact of Gendered Adolescent Reading Habits on L2 Reading Acquisition

The following researches (Loh et al., 2020; Rianto, 2021) found the relations between gendered differences and reading habits. The earlier studies (e.g., Zasacka & Bulkowski, 2017) indicated that girls were comparatively more comfortable in reading than boys. Although both genders like to read when they consider reading as a desirable activity. Loh et al. (2020) pointed out that, rather than highlighting the underperformance of boys in reading, the focus of studies should be on their socioeconomic status. For instance, mediocre boys observe themselves as efficient readers and proficient boy readers are as efficient as female readers. Thus, boys participate in reading when they feel it to be an interesting activity.

Impact of Instruction/ Pedagogical Practices on L2 Reading Proficiency

Second language reading instruction refers to a teaching methodology which integrates strategy instruction and L2 reading based on students' needs (Li et al., 2022). The studies (for instance, Li et al., 2022) analyzed teaching instructions on reading comprehension and, resultantly, observed a positive impact of reading instruction on reading strategy. For instance, Zhang (2008) observed the impacts of pedagogical practices and strategy instruction on second-language reading comprehension. The treatment group in Zhang's research (2008) was taught via two-month pedagogical practices labelled as reciprocal teaching. On the other hand, the controlled group was taught through teacher-centered instruction and no strategy instruction was given to the controlled group. The reading comprehension of participants was evaluated via the reading test. After implementing the targeted intervention in the treatment group consisting of ELLs, the results demonstrated that reading strategy instruction enhanced reading comprehension and reading strategies among the participants.

Impact of Listening on Reading Proficiency

The studies (for instance, Choi & Papageorgiou, 2020) revealed the impact of listening on reading proficiency. Choi and Papageorgiou (2020) analyzed the proficiency level of reading and listening of undergraduate foreign language US students. After the collection of data from three thousand participants from twenty-one universities and colleges, reading proficiency can be easily achieved as compared to listening proficiency at graduation level. The need is to develop varied approaches in order to achieve listening proficiency. The emphasis on listening proficiency improves professional academic L2 listening skills and professional speaking skills.

Impact of Working Memory on L2 Reading Proficiency

Working memory denotes the temporary ability used by the learners for storing and controlling a battery of information in the memory during cognitive tasks (Brunfaut et al., 2021). Scholars (e.g., Brunfaut et al., 2021; Sok et al., 2021) indicated the influence of working memory on L2 reading proficiency. They posited that working memory is a multi-componential phenomenon consisting of "a phonological loop" used for processing and storing phonological pieces of information, "a visual-spatial sketchpad" utilized for processing and storing visual and spatial fragments of

information, "an episodic buffer" used for storing information in terms of "multidimensional codes" and "episodes", "a central executive" related to update and update information (Brunfaut et al., 2021, p. 4). Analyzing the effect of the phonological working memory on L2 reading acquisition, Vulchanova et al. (2014) observed that the phonological working memory of 4th class EFL learners is closely associated with second language vocabulary and listening comprehension.

Impact of Reading Fluency on L2 Reading Acquisition

The following studies (Nisbet et al., 2021) proposed cognitive and affective explications for the positive correlation between fluency and reading comprehension that fluent reading is one of the effective methods to reduce inattentiveness which enhances learners' capability in reading material. Novice L2 readers pass through the laborious process of reading to extract meanings from the text which reduces their motivation of reading. The consequent impact of slow reading leads to the development of poor reading habits which undermine students' comprehension of numerous types of texts. Linguistically, fluency means decoding the printing words for the achievement of word recognition (Nisbet et al., 2021). This ability is, primarily, a prerequisite for the accomplishment of high-level reading comprehension.

Impact of Computerized Dynamic Assessment on L2 Reading Acquisition

Dynamic Assessment (DA) originates from sociocultural theory presented by Vygotsky which specifically focuses on his view of the zone of proximal development (ZPD) (Vygotsky, 1978). Human cognitive faculties develop from interaction with the environment. In comparison to animals, having direct interactions with the world, human interaction depends upon mediation. The development of new cognitive functions in human life comprises "the intermental and intramental planes" (Vygotsky, 1978). Firstly, the intermental emergence of functions is attributed to a person's interaction with other people in particular circumstances, for instance, working with others, or the utilization of culturally based patterns, for instance, language and symbols to comprehend the world. Afterwards, the internalization of these functions' transfers from intermental to intramental plane in which an individual independently performs functions. Vygotsky's notion of ZPD is conceptualized as "the distance between the actual developmental level as determined by independent problem solving

and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers" (1978, p. 86). It means that the possible level of development is more significant than the real level of development. The reason is that the potential development emphasizes individuals' capabilities that are in the process of formation and, resultantly, presents more in-depth insights into teaching. Students' actual level of development can be examined via conventional forms of static assessment (SA), however, their potential level of development can be possible through the learners' active response to the mediation in terms of conversation with experts or more proficient fellows. DA provides mediation to integrate teaching and assessment according to the needs of learners during the evaluation procedure and embodies an appropriate approach for examining students' ZPD.

Computerized Dynamic Assessment (CDA) selects possible mediation prompts provided in the computerized program to work within the zone development of the group. The form of mediation, according to Lantolf and Poehner (2004), can be divided into interactionalist DA and interventionalist DA. The former form of mediation occurs between the learner and the mediator, while the latter one is pre-scripted. CDA comes under interventionalist mediation because of its limited forms of mediation due to the computerized program.

The complicated process of reading includes numerous skills, for instance, knowledge of lexical and grammatical features, use of prior knowledge, and particular cognitive and metacognitive reading strategies. Among nine reading skills identified by Jang (2009), inferential reading items are cognitively complex because the test taker has to employ multiple reading skills to solve them. Inferential reading skills represent important information regarding reading comprehension. The essential feature of DA is the indication of learners' strengths and weaknesses in L2 reading.

Conclusion

The current study reviewed thirty-two research articles related to reading in order to find out the factors that may possibly affect L2 reading proficiency. The review showed reading as an interrelated process between language and thought embedded by the writer via linguistic structures and the reader comprehends the language through decoding the thought. The review of thirty-two research articles is divided into two main sections. The first

section discusses the cognitive and metacognitive factors affecting the reading process. The second section is related to the sociocultural factors influencing the reading process. The cognitive strategies of reading depend on a situational context and the learners employ their reading competencies to understand the reading details. Empowering their reading abilities, second language learners further use metacognitive techniques, for instance, understanding the requirements of learning tasks and estimation of their level of learning. To deal with sociocultural factors affecting reading, the researches deploy different reading strategies which are mostly comprised of social theories. Despite a small sampling, the findings of the review are quite likely to be helpful for the Second English language community to adopt effective reading strategies in order to provide comprehensive guidelines to their learners.

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