

**Exploring the Relationship between Reading Maturity, Reading Strategy Use, and Gender with
Reading Comprehension of EFL Undergraduates in Iran**

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Abstract

This research investigated the relationship between reading maturity, reading strategy use, and gender with Iranian EFL undergraduates' reading comprehension. The results revealed that the most preferred strategies were cognitive in nature. Moreover, the Iranian EFL undergraduates were intellectually enriched by most of what they read and enjoy reading materials that teach them the things that they did not know before. Also, it was found that the most observable effect of gender was on interpreting the text while reading, followed by reading the text again when some parts are difficult to understand. In both of these cognitive strategies, females outperformed the male students in using these two strategies. Furthermore, no correlation was observed between the most applicable reading strategy (**b6**: I read the text again when some parts are difficult to understand) and reading comprehension. What's more, there was no correlation between reading maturity and reading comprehension. However, it was proved that there was a significant correlation between gender and reading comprehension. Reading maturity and the most applicable reading comprehension strategy (**b6**) had no significant correlation with reading comprehension as shown by the multiple regression results while gender revealed such a correlation. There was no significant correlation between the most applicable reading strategy (**b6**) and reading maturity. Furthermore, there was no relationship between gender and the mentioned reading maturity subgroups (**c**, **d**, **e**, and **g**) but gender correlated between subgroups **f** and **h**. At last, it was found that there was no relationship between gender and the most applicable reading strategy.

Keywords: Reading Comprehension, Reading Maturity, Reading Strategy Use, Gender

1. Introduction

Teaching English as a foreign language (EFL) occupies an important place in the Iranian education system. Although it is not the medium of instruction in elementary and secondary stages, accessing key information at higher education in a great variety of fields is often dependent on having reading ability in English. Reading is, therefore, one of the most important skills for foreign language learners, because they have little exposure to the target language outside the classroom and most of the information in English comes through reading (Boss, 2002). In such context, students get more opportunities to read rather than to listen to English (ibid). This is why the main emphasis in most programs of EFL is usually on the written skills specially reading.

Alderson (1984, p.1) states that, "in many parts of the world a reading knowledge of a foreign language is often important to academic studies, professional success, and development. This is particularly true of English as so much professional, teaching and scientific literature is published in English". Furthermore, Sookchotirat (2005) suggests that reading skill is the most important skill as it is the basis of all the successes in one's life. There is this contention that good readers can gain more knowledge of any kind from reading. Reading, in fact, makes the reader more knowledgeable, have wider perspectives and vision. "Reading helps the reader get new ideas leading to cognitive development. That is, when readers transfer what they read to apply with their own idea, a new perspective or idea is created." (Thongyon and Chiramanee 2011, p. 2). Broadly speaking, reading as a significantly successful approach to boosting learners' exposure to English input improves learners' reading skills (McLean & Rouault, 2017).

1.1. Reading Definition

During the past forty years there have been various controversial debates over the definition and interpretation of reading not only in first language (L1) but also in second/foreign language (L2) (Zoghi et al. 2010). This variety ranges from a very simplistic perspective toward reading to a highly complex one. Some used to describe literacy in terms of being able to read, so developing the competence to be able to read was a very important skill. On the other hand, more recently the other extreme puts forward reading as a complex, interactive process that involves features of readers, texts and tasks (Grabe & Stoller, 2002; Rumelhart, 1997).

In the reading process, the reader is an active participant, constructing meaning from clues found in printed text (Anderson and person, 1984; Bernhardt, 1991; Carrell, 1991; Grabe, 1991; Rumelhart, 1980). Less competent readers employ limited range of strategies (Griva et al. 2009a) and display lower-level text processing skills and engage in bottom-up strategies (Griva, Alevriadou and Geladari, 2009b). They often focus on decoding single words and seldom are engaged in monitoring comprehension (Cotteral, 1990; Palincsar and Brown, 1984; Salataci and Akyel, 2002).

In contrast, more competent second language readers seem to utilize top-down processing strategies (Devine, 1988; Griva, Alevriadou and Gelandari, 2009b) and follow higher-level semantic processes (Nassaji, 2003). They also display higher awareness and monitoring abilities (Carrell, 1989) and are more efficient in adapting strategies to their learning needs (Green and Oxford, 1995; Oxford, 1996; Wenden, 1991). Finally, they are metacognitively strategic in reading texts and they can modify their comprehension strategies based on the purposes for reading (Hulstijin, 1993), their understanding of the topic and the text structure (Spencer and Sadoski, 1988).

1.2. Cognition vs. Metacognition

Regardless of the crucial role of a reader, good reading comprehension is the basic purpose of this skill. Reading comprehension is a process through which the reader attempts to unlock meaning from connected text. Reading is an area or skill where both cognitive and metacognitive strategy use is important (Peacock, 2001; Rosenshine, 1997; Rubin, 1987). Reading is also regarded as a two-way, dynamic and interactive process between the reader and the text, as well as a cognitive process involving strategy use.

Readers decode, visualize, infer, predict, conceptualize, imagine, reread, paraphrase, classify information, guess from the context and clarify words by looking them up in a dictionary as they read (Geladari et al. 2010). These are some of the governing instances in the cognitive view to reading. In fact, cognitive view includes potential utility in guiding reading intervention research (Deshler and Hock, 2007). The central contention in this postulation is that reading is an interaction between reader and text, which can be further segmented into different levels as elucidated in the previous paragraphs. To put it simply, reading comprehension in this postulation is sequential, that is to say it is composed of a series of stages, "each of which

is complete before the next stage begins” (Urquhart and Wire 1998, p. 39). Kralik et al (2018) delineate cognition differently in various fields and contexts. “Because an intelligent agent executes a repeating perceive-decide-act cycle, we define cognition to capture that cycle, thus incorporating perception and action”. (Kralik et al., 2018, p 731). Overall, decoding skills in this perspective, “account for a moderate, but significant portion of L2 reading variance” (Koda 2005, p. 25).

In contrast, reading is an area which includes not only cognitive but also metacognitive strategy use relatively (Peacock, 2001; Rosenshine, 1997; Rubin, 1987). Taking metacognitive aspects into account, reading involves goal setting, selective attention, planning for organization, monitoring, self-assessing, and regulating (Santrock, 2008). Kralik et al. (2018, p.731) state that “metacognition can be defined as cognition about cognition”. To be more precise, it encompasses “reasoning about reasoning”, “reasoning about learning”, and “learning about reasoning”.

Metacognitive strategies are those intentional, carefully planned techniques by which learners monitor or manage their reading. “Such strategies included having a purpose in mind, previewing the text as to its length and organization, or using typographical aids, tables and figures” (Tercanlioglu 2004, p. 568). O’Malley and Chamot (1990) set out these strategies to be vital for successful learning in reading in an ESL context. There is a substantial number of studies which attribute potential use of strategies for effective reading to the level of the metacognitive awareness of the students both in L1 and L2. “Although metacognition has become a buzz word in education, it seems that meaning is often assumed” (Bulware-Gooden et al. 2009, p. 3). Kuhn (2000) defined metacognition as, “Enhancing **(a)** metacognitive awareness of what one believes and how one knows and **(b)** meta strategic control in application of the strategies that process new information” (ibid, p.178).

The concept of “metacognitive awareness is key in proficient reading” (Auerbach & Paxton 1997, p. 240). Metacognition hinges upon the reader’s competence to attribute “mental states to oneself” (Kim et al., 2020, p.2). Many researchers have overemphasized the involvement of developing students’ metacognitive abilities in the field of reading strategy instruction since this significant trend extensively occurs in most competent readers (Brown et al. 1986; Ruddel and Unrau, 2004). On the other hand, it is crucial to point out that teaching metacognitive strategies along with strategies used by good readers could enable students to be aware of when and how

to use such strategies. Therefore, teachers in this case should not only provide their students with a repertoire of reading strategies used by good readers (Sarig, 1987; Anderson, 1991) “because these reading strategies alone cannot account for the effectiveness of reading comprehension” (Al-Tamimi 2006, p. 3).

To learn successfully, significant levels of motivation ought to be accompanied by likewise high levels of metacognition and autonomy (Calafato, 2020). The history of research in metacognition in learning reflects the move of emphasis from metacognitive knowledge to the role of metacognitive experiences or the relationship between metacognition and affect, knowledge and strategy use (Fauzan 2003, p. 29). Baker and Brown (1984) put forward the notion that regardless of the direction or emphasis of research toward the area of thinking about reading, there is a general agreement among researchers that metacognition is an important dimension that enables readers coordinate and regulate deliberate efforts at efficient reading and effective studying. Basically, all these features facilitate the process of comprehension and a better comprehension hinges on readers’ thinking about their own thinking and controlling their own learning which is generally a broad definition of metacognition.

1.3. Reading Maturity

Reading strategies reveal how readers conceive a task, what textual clues they attend to, how they make sense of what is read, and how they react when they do not understand (Block, 1986; cited in Maarof & Yaacob 2010, p. 213). Oxford and Crookall (1989) define strategies as learning techniques, behaviors, problem-solving or study skills which make learning more effective and efficient.

Bearing in mind these text-dependent aspects, reading maturity is contrastively defined as “the attainment of those interests, attitudes and skills which enable young people and adults to participate eagerly, independently, and effectively in all reading activities essential to a full, rich, and productive life” (Gray & Roges 1956, p. 56). Thomas (2001) believes that the concept of reading maturity needs to be the “undergirth” of the everyday effort to understand proficient reader subtypes and higher-order reading.

Thomas (2001) defines and interprets reading maturity construct considering six categories labeled as reading attitudes and interests, reading purposes, reading ability, reaction to and use

of ideas to apprehend (higher-order literacy), kind of materials read, and personal adjustment to reading (that is transformational reading), which all overemphasize text-independent features of reading comprehension.

Mature readers have genuine enthusiasm with a tendency to read widely and intensively (Manzo, Manzo, Barnhill & Thomas, 2000). Readers have the ability to grasp words, moods, and sentiments, as well as the ability to apply concepts learned via reading. Such readers are also said to be capable of reading critically in both intellectual and emotional circumstances in order to successfully relate them to past knowledge.

Thomas (2008, p. 12) contends that “reading maturity should be treated deliberately, not left to chance as a hoped-for-by-product of schooling that some students acquire but others apparently do not. To do this, it seems that we should move next to issues of measurement or monitoring”. However, these skills are not easy to achieve (Chall, 1983).

1.4. Gender

Both reader variable and text variable are two important factors that affect the process of reading and consequently the process of comprehension (Keshavarz & Ashtarian, 2008). Regarding the former variable, various studies have been carried out to examine the strategies readers use in the process of reading and comprehension such as their background knowledge, motivation, attitude, age, personality and sex (Bugel & Buunk, 1996; Chavez, 2001; Brantmeier, 2003, 2004, 2007).

Gender, as one of the most important variables, "marks a sociocultural distinction between men and women on the basis of traits and behavior that are conventionally regarded as characteristics of and appropriate to the two groups of people" (Keshavarz & Ashtarian 2008, p. 98). Martin et al. (2017, p. 173) state that gender can be evaluated as the apparent comparability between “oneself and own-gender peers” and correspondently to “other-gender peers”. In most psychological research, it is appropriate to talk of gender differences rather than sex differences, because the participants are categorized on the basis of their outward appearance and behavior, not on the basis of biological characteristics (Thorne, Kamarae, & Hanley, 1983).

Although remaining contested, it is now generally accepted that there are distinct differences in men and women's approaches to and use of language. Despite large amount of

research on this issue, Daughy and Long (2005) assert that a few studies have focused on gender differences as a source of explanation for second language acquisition variability. With regard to reading, girls seem to be in a better position. As Wardhaugh (1993) notes, there is more reading failure in schools among boys than girls, but it does not follow from the fact that boys are inherently less well-equipped to learn to read, for their poor performance in comparison to girls may be socio-cultural in origin than genetic.

1.5. Reading Comprehension

In line with the issues mentioned regarding reading comprehension and how it has a major effect on language learning in general and on reading ability in particular all around the world, this study attempts to investigate both the text-dependent and text-independent factors in reading process. Reading comprehension is a complicated interactive process on a word-, sentence-, and text-level (Gruhn et al., 2020). Research in reading has tended to focus in great measure on "reading the lines," to a lesser degree on "reading between the lines," and to a far lesser degree on "reading beyond the lines". As a result, most studies have developed precise understanding of the text-dependent reading process, especially for beginning and intermediate readers. However, there is still much to be learned about students' text-independent reading, or their ability to "read beyond the lines".

The Landscape Model illustrates how readers attempt to incorporate new information from passage into prior knowledge employing partially strategic processes, thereby indirectly connecting them to an executive function, or a "collection of top-down control processes" (Diamond, 2013, p. 136), and includes abilities such as "working memory, shifting, inhibition, and planning and organization" involved in scientific research relevant to reading comprehension (Wu et al., 2020, p.2).

On the one hand, reading strategy, which extensively deals with text-dependent features of reading process, is quite beneficial to gain an in-depth evaluation of strategies readers use while reading. On the other hand, reading maturity assesses the text-independent aspects of a mature reader in any language to distinguish the interests, attitudes, and skills attained by the readership. This study takes a close look at such variables (reading strategy use, reading maturity, and gender) in line with reading comprehension to find out the relationship between each of these variables and reading comprehension. Furthermore, an investigation of the

interrelationships among these variables is aimed to be conducted to provide a broader perspective of how these variables correlate with each other interchangeably. So, this research intends to provide noticeable findings to shed light on the restrictions and flaws in this regard (primarily the text-independent aspects), with the anticipation to make the findings more useful for both students and instructors.

1.6. Research Questions and Expectations

The aims established in this study include **(1)** identifying the most frequently preferred reading comprehension strategies among the Iranian EFL learners, **(2)** determining the most frequently preferred reading maturity item(s) among the Iranian EFL learners, **(3)** finding whether there are any similarities or differences in strategy use among the readers with different genders **(4)** specifying which variable(s) including reading strategies, reading maturity, or gender is a better predictor of reading comprehension, and **(5)** identifying how reading strategies, reading maturity, and gender are related to one another.

Dealing with factors such as reading strategy or reading maturity will probably bring along the opportunity to put into practice the empirical and theoretical consequences of the study in an instructional setting such as L2 classrooms. These findings may serve some “beyond-the-lines” recommendations for both instructors and learners in the field of reading which is undeniably a very important skill specifically in EFL contexts. As Thomas (2001) contends “practitioners should realize that literacy development is an important part of their goal of helping [L2] students with their intellectual maturity which involves the attention to issues such as reading ability and reading maturity if the designed program increases intellectual maturity” (p. 8).

2. Review of Literature and Empirical Background

2.1. Reading Strategy Use and Reading Comprehension

To investigate how reading strategy use affects the development of Taiwanese EFL learners' reading comprehension, Shang (2010) studied the frequency and differences of four reading strategy uses (cognitive, metacognitive, compensation, and testing strategies) between good and poor readers on their reading outcomes. Considering the frequency of reading strategy use, results indicate that students usually employed integrated reading strategies in English reading

process and students particularly used more testing strategies (e.g., skimming and eliminating techniques) to reach a higher level of reading comprehension performance.

In a study by Zare and Othman (2013), it was attempted to not only find out the rate of recurrence of reading strategy among Malaysian ESL learners but also figure out the possible relationship between reading strategy use and reading comprehension. Based on the results, those language learners who have employed reading strategies more frequently achieved better results in the reading comprehension test.

Naeimi and Yaqubi (2013) conducted a study to investigate the effect of Structure Reviewing Strategy (as a reading strategy) on reading comprehension skill through direct instruction of vocabulary. The results underline the significant difference between the mean score of TDL (teacher-directed learners) and SDR (self-directed learners), and after treatment students in experimental group performed better which proves superiority of SDL over TDL strategies.

Kulaç and Walters (2016) ran a study in Turkey to scrutinize EFL learners' attitudes while reading English texts. Regarding the data driven from pre-treatment, the results indicated that the learners had neutral attitudes towards reading, and students' negative attitudes towards unfamiliar vocabulary exerted a negative influence over their "attitudes towards reading" texts in English. Furthermore, drawing a comparison between the pre- and post-training data, the results shed light on the fact that instructing "contextual inferencing strategies" explicitly had a positive impact on the students with low attitudes.

In quasi-experimental research, Beek et.al (2019) built up a computerized learning environment in seventh-grade history classrooms to scaffold learners' expository text literacy. Participants in the experimental condition were given insights into the cognitive and metacognitive reading technique, while no additional help was provided to the subjects in the control condition. No substantial differences were found in the comparison of post-test comprehension between conditions. However, on the posttest, students in the former condition significantly outperformed students in the latter condition. No differences were found between conditions with respect to "students' self-regulated learning or motivation", but there was a substantial increase in the "students' awareness of problem-solving reading strategies" in the experimental condition.

Fathi and Afzali (2020) examined the effect of second language reading strategy instruction on young Iranian English as a Foreign Language (EFL) learners' reading comprehension. To

accomplish this objective, a sample of 48 Iranian EFL learners, aged 11-13, were selected and randomly assigned to an experimental group (N = 25) and a control group (N = 23). Employing a quasi-experimental design, the study employed an experimental group that underwent a 12-week reading strategy instruction and a control group that were taught with regular method with no strategy instruction but they were measured in terms of reading comprehension before and after the strategy instruction. The findings of the study revealed that the learners in the experimental group outperformed those of control group with regard to reading comprehension after receiving the strategy instruction intervention.

In their study of advanced EFL students who had received eye movement instruction using Rapid Visual Presentation (RSVP) technology, Rahimi and Babaei (2021) investigated the link between reading strategy utilization and reading comprehension as mediated by reading pace. Through the Reading Trainer Application, participants got training for improving their reading speed for a total of twelve weeks. Prior to the research, a model that hypothesized that reading rate would moderate the association between strategy usage and reading comprehension was evaluated, and the results revealed that the model was not statistically significant. After the trial, the model was reevaluated, and the findings supported the idea that eye training for speed reading using RSVP led to a mediating role for reading pace in the link between the usage of strategies and reading comprehension. The findings confirm that reading speed has a role in comprehension of reading passages.

2.2. Gender and Reading Comprehension

Ismail and Fadzil (2010) conducted a study to compare the second language reading comprehension between female and male students when they are given neutral and gender-related texts. Results indicated that the male respondents obtained higher scores than the female group considering the male oriented text of a specific topic (football player), while the results were reverse when they recalled the main ideas and supporting details of a female oriented text with a different topic (make up tips). Finally, dealing with neutral text (with topic of overcoming stress), male respondents obtained higher scores than the female group. Overall, it can be seen that gender does affect learners' topic familiarity and therefore also influences their L2 reading comprehension.

To analyze whether gender and topic-familiarity can be determining factors in the differences among the performances of foreign language learners on reading comprehension

tests, Sotouydehnama and Asadian (2011) attempted to examine the effects of reader's gender and passage content on L2 readers' comprehension among Iranian intermediate learners of English as a foreign language. Considering the results, female participants ($M=10.34$) outperformed males ($M=8.89$) significantly using female-oriented text. On the other hand, there was a significant difference regarding the male-oriented text and males ($M=13.04$) outperformed females ($M=9.63$). For the neutral text, there was no significant difference between males and females.

In a study by Mehrpour, Razmjoo, and Kian (2011), it was attempted to examine whether gender has any effect on learners' reading comprehension and vocabulary knowledge. Sampling involved 60 EFL learners (30 male and 30 female) chosen from among five language teaching institutes in Shiraz. In line with the investigation of breadth and depth of vocabulary knowledge, results of the research shed light on the fact that gender had no significant impact on learners' reading comprehension performance and vocabulary knowledge.

Kasiri (2015) investigated the effect of "familiar Non-lyrical music" and its relationship with gender and reading comprehension. Sixty volunteered EFL learners including males and females took part in two TOFEL reading comprehension tests- no music was deployed in the first condition (pre-test) while background music was utilized in the second condition (post-test), followed by an attitude questionnaire. Applying Mixed-ANOVA as well as Correlation tests, the results revealed negative impact of music on reading comprehension, whereas both genders showed no significant difference in both conditions.

Wei-Wei (2009) explored whether there is a relationship between gender and reading comprehension at secondary level in China. Regarding the study's findings, females seem to be more global and prefer guessing meaning from context while males are more analytic and attend more to words. That is, women utilize more top-down strategies and men more bottom-up strategies while reading a text. What's more, females in the study were better in participating from top to bottom and from bottom to top in their interaction with the reading passages which highly involves the reader in a text and his/her background knowledge simultaneously.

To scrutinize gender differences in both the "specific cognitive components" and the powers of these components to predict reading comprehension, Hannon (2014) attempted to examine them employing measures of adult reading comprehension. The results showed that gender

differences were quantitatively observed in the specific cognitive components selected by measures of adult reading comprehension; however, significant qualitative gender differences were perceived in the “predictive powers” of these specific cognitive components.

2.3. Reading Maturity

“Reading maturity is a state of reading ability typically reached in adult life as a product of overall development, instruction, experience, and years of experience of extensive reading. Its chief features are accurate, high-level comprehension, objective thinking, and the ability to speak back fluently and analytically that which has been read with little or no prompting” (Casale 1982, pp. 4-5).

Harris and Hodges (1985, p. 211) cited this excerpt from Gray and Rogers (1956): "Maturity in reading as one aspect of total development is distinguished by the attainment of those interests, attitudes, and skills which enable young people and adults to participate eagerly, independently, and effectively in all the reading activities essential to a full, rich, and productive life". In the satisfaction of interests and needs through reading, a mature reader will continue to grow in a capacity to interpret broadly and deeply.

When it comes to a general definition of reading, the act of simultaneously "reading the lines", "reading between the lines", "and reading beyond the lines" (Manzo & Manzo, 1993) must be pointed up. Reading the lines primarily discusses text-dependent reading process, focusing on the basic elements of decoding and comprehending, and it has been emphasized by social science research in reading and subsequent classroom instruction and assessment. Comparatively, reading between/beyond the lines, or “text-tethered reasoning” and decision-making has been taken into consideration relatively little in both reading research and instruction. In fact, items relating to reading maturity such as: reading attitudes and interests, reading purposes, reaction to and use of ideas found through reading, kind and quality of reading materials, and transformational reading or the ways reading might foster personal change and whole-person growth all have remained in the dark (Thomas, 2013) or more precisely in the shadow of text-dependent features.

Studies in the field of text-dependent (or previously called bottom-up) reading processes have been extensively conducted, especially for beginning and intermediate readers and neither of them can be trivialized since basic reading skill is essential and it is not a small task to help

whole population acquire it due to being a primary mission of reading education. On the other hand, as Thomas (2013) highlights: “it is not where we should stop when envisioning what it means to become optimally literate”.

In terms of history of research on reading maturity, it is not a new concept to the literacy education. It piqued the curiosity of experts like William S. Gray (Gray, 1951; Gray & Rogers, 1956), Jeanne Chall (Chall, 1983), and Anthony Manzo (Manzo & Casale, 1981, 1983a, 1983b). Yet reading maturity has neither been seen on the popular lists published annually nor is it a focus of reports like the National Assessment of Adult Literacy or the National Assessment of Educational Progress (Thomas, 2013). “Despite the earlier efforts of seminal reading scholars like Gray, Chall, and Manzo, as well as countless others, a focus on reading maturity is not yet included as an indicator of school success or academic achievement” (Thomas, 2013, p. 146). More importantly, it is not part of secondary teacher training; it is not prominent in reading or educational textbooks, it is not a common topic in our journals, it is not in our standards as a unified construct, and it is not often applied to systematic classroom practice. Thomas et al. (2018, p. 729) assertively state that “the reading maturity construct has a history of being valued, at least in principle. However, it is a complex construct, and this makes its measurement challenging”. Therefore, regarding social science, reading maturity, as a practical matter in current school culture, seems fairly ignored systematically.

Reconsidering and expanding upon an investigation carried out by Gray and Rogers, Fox (2012) conducted a qualitative and descriptive study to see how mature and competent reading affects the experiences, habits, perceptions, ideas, attitudes, behaviors, and cross-situational reading performance of adult readers (graduate students in this study) with strong academic backgrounds and active regular experience with demanding, highly specialized reading. Three distinct and more extended exemplary case studies were generated based on reading profiles, which emphasized features of the data that characterized probable reading maturity. Definitions of the underlying concept of reading maturity and reading competence were also constructed. The results showed that “mature reading is an approach to reading characterized by critical openness and a unified view of reading” (p. 310).

Furthermore, Squires (2014) investigated the relationship between reading maturity, reading purpose, and reading interest and reading comprehension. To collect data, the reading maturity survey designed by Thomas (2001) was utilized. Reading comprehension and reading

maturity were revealed to have a positive significant relationship in the study. The level of student reading comprehension improves as this reading aspect rises which is a good measure of reading comprehension or success.

In order to shed light on the reading maturity construct, providing specific characteristics of a maturing reader can help us evaluate and promote growth in this regard. What follows (based on Thomas's categorization) is not a tightly packaged definition like we are accustomed to in our age of sound-bites but is sufficiently detailed for the complexity of the construct (Thomas, 2013). Furthermore, learning about reading maturity strengths and areas that need growth may serve as the catalyst for changing university curriculum in order to influence university students' critical thinking and personal transformation (Theiss, Philbrick, & Jarman, 2009).

3. Methodology

3.1. Participants

In general, survey is the design and method of this study. The participants of the study were 108 Iranian EFL learners (12 males and 96 females). It was attempted to include freshman, sophomore, junior and senior students to embrace EFL learners with different language proficiency levels. All the members were Persian native speakers, learning English as a foreign language at the Departments of Foreign Languages and Linguistics.

3.2. Instruments

In general, four different instruments were used in this study. First, in order to identify the current level of the learners' English proficiency, they took Oxford Quick Placement Test (OPT). The second instrument was a reading comprehension test (based on TOEFL PBT design) in which students were asked to answer comprehension questions following some reading passages. The third one was a reading comprehension strategy use questionnaire (Persian Translation) constructed by Yaali (2002) identifying the EFL learners' preferred strategy towards reading in a foreign language. The last one was Reading Maturity questionnaire (Persian Translation) constructed by Thomas (2001) in order to recognize the total development of subjects in reading.

3.3. Procedures

Data needed for this study was mostly collected in two different sessions. First, the proficiency test and reading strategy questionnaire were administered to the participants in the first session to not only assess their proficiency level but also stimulate their potential awareness of the existing reading comprehension strategies. Subsequently, the researcher administered the reading strategy use questionnaire directly to the participants to determine individuals' reading strategy preferences. In the second session, the reading comprehension test was given to the subjects to find out the relative impact and correlation between dependent variable (reading comprehension) and independent variables and successively the Reading Maturity questionnaire was attentively presented while making sure if participants had no vague point in answering the questionnaire since it seemed a state-of-the-art trend to them.

To investigate the relationship between Reading Maturity, Reading Strategy use, and gender with EFL undergraduates' reading comprehension, SPSS (version 19) was employed to analyze the data. In general, the descriptive statistics were used to demonstrate frequencies, percentages, means and the range of scores. As for the data analysis related to the first and second research question, frequencies and percentages were computed. For the second research question, the crosstab procedure was conducted. For the fourth research question, correlation of analysis along with one-way ANOVA was computed to find the best reading strategy which can influence participants' reading proficiency. Finally, for the fifth research question, multiple regressions were mainly used to determine whether the participants' gender, reading strategy use preferences, and their reading maturity towards reading comprehension could predict their proficiency in reading English texts.

4. Results and Discussions

4.1. Research Question One

What are the most frequently preferred reading strategies among the Iranian EFL learners?

Primarily, a set of strategies which exert the highest effects was selected because there were 41 reading strategies. It can be discerned through figure 4.1 illustrating the percentage of the 41 reading strategies that strategies b6 ("I read the text again when some parts are difficult to understand"), b29 ("I understand the meaning of the text by emphasizing the key words"), b10 ("I look up unfamiliar vocabulary in the dictionary to understand the text"), b3 ("I interpret the

text while reading it”) and b18 (“I appraise the understanding rate of mine”) were among the most applicable ones. To further explain the reported results, it needs to be asserted that the first 4 frequent reading strategies (b6, b29, b10, b3) fall into cognitive strategies while the 5th frequent strategy (b18) is Metacognitive. This is indeed consistent with the findings reported by Shang (2010) maintaining that students generally utilize more cognitive and testing strategies, while endeavoring to employ rehearsal and eliminating techniques to achieve a higher level of reading comprehension performance. In addition, Rokhsari (2012) ran a study to explore the reading strategies employed by Iranian EFL Intermediate readers concluding that successful readers used reading strategies more than less successful ones while they used cognitive and metacognitive strategies more frequently than the less successful ones. Furthermore, in a study by Beek et.al (2019), students in the experimental condition could use hints comprised of cognitive and metacognitive reading strategy instruction, whereas students in the control condition received no additional support. Results revealed that the former outperformed the latter on the posttest. These findings are in line with the reported frequent reading strategies in this study namely the cognitive and then metacognitive ones.

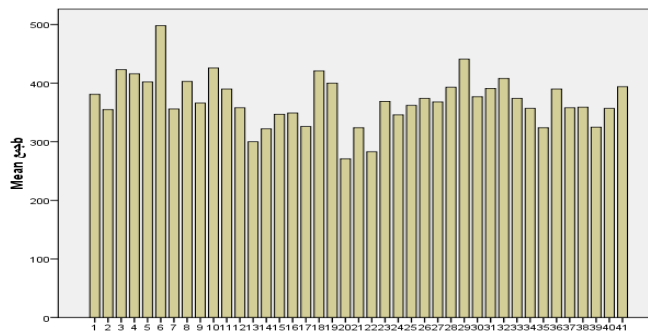


Figure 4.1: The frequency of reading strategies

4.2. Research Question Two

What are the most frequently preferred reading maturity item(s) among the Iranian EFL learners?

The reading maturity survey utilized in this study to elicit the respondents’ answers on their maturity in reading entailed 6 subgroups. Results on the frequency of these items adopted by the learners revealed that the highest reading maturity item among all the subgroups belonged

to g10 with a rate of 12.21%. In subgroup G which dealt with kinds of materials read, g10 went as on “I enjoy reading materials that teach me things I did not know before”. This was followed by f2 with a rate of 11.51%. In this subgroup, (reaction to and use of ideas apprehended), f2 deals with “Reading prompts me with new ideas and insights”. Contrariwise, c6 was chosen as the lowest item by the participants. This item belongs to the reading attitudes and interests and c6 in details is “I read frequently”.

Table 4.1 presents the sum and the percentages associated with these criteria. To end with, the results obtained through the analyses of the reading maturity scale proved the fact that the Iranian EFL learners majorly agreed that they would enjoy reading materials that teach them things they did not know before. This falls in the area of the kinds of materials that in turn goes beyond “easy-reading”. This denotes that a maturing reader likes to read things that inspire thinking, reading materials that contain rich ideas, and foster better understanding which leads to a broad perception of the world. In other words, the findings here suggest that the Iranian EFL learners are intellectually enriched by most of what they read, enjoy reading materials that teach them things that they did not know before.

On the other hand, c6 was determined as the lowest item by the participants. This item belongs to the reading attitudes and interests and c6 in details is “I read frequently”. To further discuss this finding, it is hereby asserted that a maturing reader is one who enjoys reading, has a high interest in reading, and finds reading potentially stimulating or exciting. A maturing reader reads frequently and sees reading as an important part of life. Nonetheless, the Iranian EFL learners participating in this study accentuated that they apparently failed to favor this construct but why this is the case goes beyond the delimitations of the current study implying that further scrutiny needs to be conducted to shed light on the under-researched issue of reading maturity.

Table 4.2: Reading Maturity Frequency

		C			D			E			F			G			H		
		C4	C10	C1	D3	D5	D4	E7	E2	E9	F2	F1	F3	G10	G5	G3	H3	H4	H5
N	Valid	107	108	108	108	108	107	108	108	108	108	108	106	107	106	106	106	107	107
	Missing	1	0	0	0	0	1	0	0	0	0	0	2	1	2	2	2	1	1
Sum		436	427	413	448	431	427	401	392	388	429	407	383	456	408	401	435	418	417
Percentage		11.47	11.23	10.86	11.22	10.79	10.69%	11.01	10.76	10.65	11.51	10.92	10.27	12.21	10.93	10.74	11.11	10.68	10.65

4.3. Research Question Three

Are there any similarities or differences in strategy use among the readers with a different gender?

Keeping in mind the huge number of the criteria related to the most applicable reading strategy, we selected the ones which had the most significant effect and then explored the effect of gender for each of them one by one. The findings, as tabulated in the following tables, reveal the relationship between these strategies and the gender.

Table 4.3: Effect of gender on strategy B3

		gender		Total	
		male	female		
b3	Rarely	Count	1	5	6
		% within gender	8.3%	5.3%	5.6%
	Sometimes	Count	3	26	29
		% within gender	25.0%	27.4%	27.1%
	Usually	Count	4	37	41
		% within gender	33.3%	38.9%	38.3%
Always	Count	4	27	31	
	% within gender	33.3%	28.4%	29.0%	
Total	Count	12	95	107	
	% within gender	100.0%	100.0%	100.0%	

Table 4.4: Effect of gender on strategy B6

		gender		Total	
		male	female		
b6	rarely	Count	0	1	1
		% within gender	0.0%	1.1%	0.9%
	sometimes	Count	0	5	5
		% within gender	0.0%	5.3%	4.7%
	usually	Count	7	21	28
		% within gender	58.3%	22.1%	26.2%
	always	Count	5	68	73
		% within gender	41.7%	71.6%	68.2%
Total	Count	12	95	107	
	% within gender	100.0%	100.0%	100.0%	

Table 4.5: Effect of gender on strategy B10

		gender		Total	
		Male	female		
b10	rarely	Count	0	2	2
		% within gender	0.0%	2.1%	1.9%
	sometimes	Count	1	4	5
		% within gender	8.3%	4.2%	4.7%
	usually	Count	1	28	29
		% within gender	8.3%	29.5%	27.1%
	always	Count	5	24	29
		% within gender	41.7%	25.3%	27.1%
rarely	Count	5	37	42	
	% within gender	41.7%	38.9%	39.3%	
Total	Count	12	95	107	
	% within gender	100.0%	100.0%	100.0%	

Table 4.6: Effect of gender on strategy B18

			gender		Total
			Male	female	
b18	rarely	Count	3	2	5
		% within gender	25.0%	2.1%	4.7%
	sometimes	Count	2	26	28
		% within gender	16.7%	27.4%	26.2%
	usually	Count	4	44	48
		% within gender	33.3%	46.3%	44.9%
always	Count	3	23	26	
	% within gender	25.0%	24.2%	24.3%	
Total	Count	12	95	107	
	% within gender	100.0%	100.0%	100.0%	

Table 4.7: Effect of gender on strategy B29

			gender		Total
			Male	female	
b29	rarely	Count	1	2	3
		% within gender	8.3%	2.1%	2.8%
	sometimes	Count	2	17	19
		% within gender	16.7%	17.9%	17.8%
	usually	Count	8	44	52
		% within gender	66.7%	46.3%	48.6%
always	Count	1	32	33	
	% within gender	8.3%	33.7%	30.8%	
Total	Count	12	95	107	
	% within gender	100.0%	100.0%	100.0%	

To sum up, in terms of similarities or differences in strategy use among male and female readers, this study revealed that the most observable effect of gender was on interpreting the text while reading (B3), followed by reading the text again when some parts are difficult to

understand (B6). In both of these cognitive strategies, females outperformed the male students in using these two strategies. Yet, for looking up unfamiliar vocabulary in the dictionary (B10) and emphasizing the key words (B29) as cognitive strategies, boys reported higher strategy use. At last, for another highly-frequent strategy use appraising their male understanding rate (B18) which was a metacognitive strategy, again female students outshined their counterparts. The gender effect with reference to the reading strategy use has been observed in several studies and various contexts, among which we can refer to Zare and Othman (2013) who pinpointed that there existed a significant difference between male and female language learners in the use of reading strategies in an ESL context while gender difference has been also confirmed by Wei-Wei (2009) in the use of reading strategies in an EFL context. Furthermore, the results in a study by Hannon (2014) revealed that there are few quantitative gender differences in the specific cognitive components that are tapped by measures of adult reading comprehension; however, there are important qualitative gender differences in the predictive powers of these specific cognitive components.

4.4. Research Question Four

Which of the variables, reading strategies, reading maturity, or gender is a better predictor of reading comprehension?

This study was primarily aimed at exploring the relationship between the most applicable reading strategy and reading comprehension. As exhibited in table 4.7, the assumption on the relationship between the most applicable reading strategy and reading comprehension is rejected as the p-value is 0.657 (more than 0.05). In other words, there is no correlation between strategy b6 (I read the text again when some parts are difficult to understand) and reading comprehension.

Although reading strategy use has been confirmed by numerous studies to have a relationship with reading comprehension (Zare and Othman, 2013; Van Keer, 2004; Fathi and Afzali, 2020), the findings here failed to show the existence of such a correlation; the contradictory result found here might be due to a different context (ESL) in which they ran their studies or the difference in the reading strategy use instruments being used in the current study differing from that of theirs. Difference in the participants' cultural and social statuses might have also affected the findings reported here.

Table 4.8: Relationship between the most applicable reading strategy and reading comprehension

		comprehension	b6
comprehension	Pearson Correlation	1	-.043
	Sig. (2-tailed)		.657
	N	108	108
b6	Pearson Correlation	-.043	1
	Sig. (2-tailed)	.657	
	N	108	108

Concerning the relationship between the reading comprehension and reading maturity, it was similarly found that the p-value was bigger than 0.05 for all the reading maturity items except c1 whose p-value according to table 4.14 was .044 and smaller than 0.05. In fact, this implies the fact that there is almost no correlation between reading maturity and reading comprehension whereas investigations conducted by Fox (2012) and Squires (2014) confirmed a positive relationship between reading maturity and reading comprehension. It needs to be averred that the contradictory result on lack of relationship between reading maturity and reading comprehension can be justified as follows: Thomas (2012; 2001) underlines that there should be a correlation between reading maturity and reading comprehension (medium-sized and sometimes high-sized correlations) but indeed in his study the participants were native learners who were also proficient in reading; yet, the participants in the current study were non-native learners who were not competent that much as compared with those mentioned in Thomas's studies (2012; 2001). It needs to be also noted that the learners in Thomas's studies (2012; 2001) were senior undergraduates as well as graduate students while they all identified themselves as A and B students in relation to their grades (proficient learners based on most standards) while the students of the present study ranged from freshman to senior levels (tertiary levels) reporting miscellaneous CGPs.

Table 4.9: Relationship between the most applicable reading maturity items and reading comprehension

		comprehension	sum c	sum d	sum e	sum f	sum g	sum h
comprehension	Pearson Correlation	1	.051	.109	.096	.050	.202	.032
	Sig. (2-tailed)		.614	.268	.326	.615	.143	.752
	N	108	101	106	107	103	101	99
sum c	Pearson Correlation	.051	1	.720**	.590**	.531**	.763**	.451**
	Sig. (2-tailed)	.614		.000	.000	.000	.000	.000
	N	101	101	100	101	97	95	92
sum d	Pearson Correlation	.109	.720**	1	.602**	.627**	.736**	.577**
	Sig. (2-tailed)	.268	.000		.000	.000	.000	.000
	N	106	100	106	106	101	100	97
sum e	Pearson Correlation	.096	.590**	.602**	1	.509**	.554**	.371**
	Sig. (2-tailed)	.326	.000	.000		.000	.000	.000
	N	107	101	106	107	102	101	98
sum f	Pearson Correlation	.050	.531**	.627**	.509**	1	.632**	.494**
	Sig. (2-tailed)	.615	.000	.000	.000		.000	.000
	N	103	97	101	102	103	96	95
sum g	Pearson Correlation	.202	.763**	.736**	.554**	.632**	1	.691**
	Sig. (2-tailed)	.143	.000	.000	.000	.000		.000
	N	101	95	100	101	96	101	93
sum h	Pearson Correlation	.032	.451**	.577**	.371**	.494**	.691**	1
	Sig. (2-tailed)	.752	.000	.000	.000	.000	.000	
	N	99	92	97	98	95	93	99

** . Correlation is significant at the 0.01 level (2-tailed).

On the relationship between the gender and reading comprehension, the results revealed that the p-value was less than 0.05; in other words, it was proved that there was a significant correlation between gender and reading comprehension. In line with this, Ismail and Fadzil (2010) declared that gender influences the learners' topic familiarity; this in turn exerts effects on the learners' reading comprehension.

Table 4.10: Relationship between gender and reading comprehension

		gender	comprehension
gender	Pearson Correlation	1	-.321*
	Sig. (2-tailed)		.001
	N	107	107
comprehension	Pearson Correlation	-.321*	1
	Sig. (2-tailed)	.001	
	N	107	108

*. Correlation is significant at the 0.05 level (2-tailed).

4.5. Research Question Five

How are reading strategies, reading maturity and gender related to one another?

The objective here is to explore the relationship between the most applicable reading strategy, reading maturity, and gender. Because it is recognized that strategy b6 among the reading strategy variables is the most applicable, it can be concluded that there is no significant correlation between the most applicable reading strategy and reading maturity as p-value is larger than 0.05 (table 4.11).

Table 4.11: Relationship between the most applicable reading strategy and reading maturity

		B6	Sum of Cs	Sum of Ds	Sum of Es	Sum of Fs	Sum of Gs	Sum of Hs
b6	Pearson Correlation	1	.139	.132	-.120	.057	.136	.186
	Sig. (2-tailed)		.165	.177	.217	.567	.176	.065
	N	108	101	106	107	103	101	99
Sum of Cs	Pearson Correlation	.139	1	.720**	.590**	.531**	.763**	.451**
	Sig. (2-tailed)	.165		.000	.000	.000	.000	.000
	N	101	101	100	101	97	95	92
Sum of Ds	Pearson Correlation	.132	.720**	1	.602**	.627**	.736**	.577**
	Sig. (2-tailed)	.177	.000		.000	.000	.000	.000
	N	106	100	106	106	101	100	97
Sum of Es	Pearson Correlation	-.120	.590**	.602**	1	.509**	.554**	.371**
	Sig. (2-tailed)	.217	.000	.000		.000	.000	.000
	N	107	101	106	107	102	101	98
Sum of Fs	Pearson Correlation	.057	.531**	.627**	.509**	1	.632**	.494**
	Sig. (2-tailed)	.567	.000	.000	.000		.000	.000
	N	103	97	101	102	103	96	95
Sum of Gs	Pearson Correlation	.136	.763**	.736**	.554**	.632**	1	.691**
	Sig. (2-tailed)	.176	.000	.000	.000	.000		.000
	N	101	95	100	101	96	101	93
Sum of Hs	Pearson Correlation	.186	.451**	.577**	.371**	.494**	.691**	1
	Sig. (2-tailed)	.065	.000	.000	.000	.000	.000	
	N	99	92	97	98	95	93	99

** . Correlation is significant at the 0.01 level (2-tailed).

At this point, the relationship between the reading maturity and gender is examined indicating that there is no relationship between gender and reading maturity subgroups (c-d-e-g) as p-value is larger than 0.05 in the first row or columns of the above table; the exception goes with subgroups f and h. In other words, there is no relationship between gender and the mentioned reading maturity subgroups but gender correlates with subgroups f and h.

Table 4.12: Relationship between gender and reading maturity

		gender	Sum of Cs	Sum of Ds	Sum of Es	Sum of Fs	Sum of Gs	Sum of Hs
gender	Pearson Correlation	1	-.077	-.079	-.108	-.180	-.263**	-.193
	Sig. (2-tailed)		.449	.425	.272	.071	.008	.057
	N	107	100	105	106	102	101	98
Sum of Cs	Pearson Correlation	-.077	1	.720**	.590**	.531**	.763**	.451**
	Sig. (2-tailed)	.449		.000	.000	.000	.000	.000
	N	100	101	100	101	97	95	92
Sum of Ds	Pearson Correlation	-.079	.720**	1	.602**	.627**	.736**	.577**
	Sig. (2-tailed)	.425	.000		.000	.000	.000	.000
	N	105	100	106	106	101	100	97
Sum of Es	Pearson Correlation	-.108	.590**	.602**	1	.509**	.554**	.371**
	Sig. (2-tailed)	.272	.000	.000		.000	.000	.000
	N	106	101	106	107	102	101	98
Sum of Fs	Pearson Correlation	-.180	.531**	.627**	.509**	1	.632**	.494**
	Sig. (2-tailed)	.071	.000	.000	.000		.000	.000
	N	102	97	101	102	103	98	95
Sum of Gs	Pearson Correlation	-.263**	.763**	.736**	.554**	.632**	1	.691**
	Sig. (2-tailed)	.008	.000	.000	.000	.000		.000
	N	101	95	100	101	96	101	93
Sum of Hs	Pearson Correlation	-.193	.451**	.577**	.371**	.494**	.691**	1
	Sig. (2-tailed)	.057	.000	.000	.000	.000	.000	
	N	98	92	97	98	95	93	99

** . Correlation is significant at the 0.01 level (2-tailed).

To end with, exploring the relationship between the most applicable reading strategy and gender indicated that (table 4.13) there is no relationship between them as p-value is larger than 0.05. In other words, there is no relationship between gender and the most applicable reading strategy observed in this study.

Table 4.13: Relationship between the most applicable reading strategy and gender

		Gender	b6	
Spearman's rho	gender	Correlation coefficient	1000	.176
		sig. (2-tailed)		.070
		N	107	107
B6	gender	Correlation coefficient	.176	1000
		sig. (2-tailed)	.070	
		N	107	108

5. CONCLUSION

5.1. Conclusions and Implications

Taking into account the results obtained by addressing the research questions, some concluding remarks can be made. First, the reading strategies which are regarded as the most applicable ones include strategies b6, b29, b10, b3, b18, while strategy b6 ranks the first. Another concluding remark which can be made in this study is that the first four frequent reading strategies (b6, b29, b10, b3) belong to the category of cognitive strategies while the 5th frequent strategy (b18) is Metacognitive. In other words, the most preferred strategies in this study were cognitive.

Second, the most frequently preferred reading maturity item among the Iranian EFL learners included g10 implying that the Iranian EFL learners majorly agreed that they would enjoy reading materials that teach them things they did not know before. This falls in the area of the kinds of materials that in turn goes beyond "easy-reading". In other words, the Iranian EFL learners are intellectually enriched by most of what they read and enjoy reading materials that teach them the things that they did not know before.

Third, this study revealed that the most observable effect of gender was on interpreting the text while reading, followed by reading the text again when some parts are difficult to understand. In both of these cognitive strategies, females outperformed the male students in using these two strategies. Yet, for looking up unfamiliar vocabulary in the dictionary and emphasizing the key words as cognitive strategies, boys reported higher strategy use. At last, for another highly-frequent strategy use appraising their understanding rate which was a metacognitive strategy, again female students outshined their male counterparts.

Next, it was found that there was no correlation between the most applicable reading strategy (b6: I read the text again when some parts are difficult to understand) and reading comprehension. Furthermore, there was no correlation between the reading maturity and reading comprehension. However, it was proved that there was a significant correlation between gender and reading comprehension.

Finally, reading maturity and the most applicable reading strategy (b6) had no significant correlation with reading comprehension as shown by the multiple regression results while gender revealed such a correlation. To be more precise, gender, reading maturity, and the most applicable reading strategy (b6) only covered 25.5% of the variance of reading comprehension.

Following the findings of the study, some pedagogical implications can be proposed here. First of all, findings of this study are of great importance to learners in order to show the importance of reading comprehension preferences. Second, findings of the study seem to be crucially important to instructors so that they can select suitable teaching methods and materials to enhance their learners' achievements. So, teachers should assist their students in discovering their peculiar reading comprehension preferences while they design a course syllabus. Taking the insights of this study into account, teachers will be aware of the crucial importance of their students' individual needs and will give it their best shot to utilize the best possible teaching method in accordance with the needs of their students. Last but not least, findings of the present study can provide valuable information to design appropriate materials for successful teaching. In other words, it is crucially important for test developers and material and curriculum designers to diagnose the way(s) through which individuals prefer to read and consequently comprehend texts. This way they can develop and design the necessary materials in coordination with the needs of the individuals as well.

5.2. Limitations and Suggestions

Although insights of the present study seem to be beneficial in the field of language learning/teaching, it suffers from one major limitation which is related to sampling and participants. The 108 participants of the study were chosen based on convenience sampling; furthermore, they were mostly females. The imbalance between the number of participants in terms of gender may have had an effect on the findings of the study.

Some further investigations could be suggested to obtain more insights into the field of

reading comprehension in Iran. As a general suggestion, it is recommended to conduct the study in a broader scope. In addition, various types of reading strategies and in-depth survey of reading maturity are suggested to be investigated. Furthermore, in terms of reading maturity towards reading comprehension and foreign language proficiency, it is suggested to conduct a similar comparative study among various levels of instruction including not only undergraduates but also graduates.

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