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Are first language reading strategies applicable to second language EAP Reading?

¹ Barzegar Kazem

PhD in TEFL, Department of English Language, School of Medicine, Shahid Sadoughi University of Medical Sciences and Health Services, Yazd, Iran

Corresponding Author: Barzegar Kazem

Abstract

Background and Objectives

EAP reading comprehension is the major component of any academic language course. This descriptive-correlational study provided a brief review of L1 and EAP reading strategies, the degree of overlap between common L1 and EAP reading strategies, and the applicability of L1 reading strategies to EAP reading.

Materials and Methods

Two researcher-made questionnaires and the one-to-one interview technique were used to collect the required data on L1 reading strategies transfer to EAP reading from 60 dental students. Data were analyzed with SPSS19 using descriptive statistics, frequencies, percentages, and correlational coefficients.

Results

The findings showed that the total correlation between L1 and EAP reading strategies, calculated via Pearson Correlation Coefficient, was 0.469 ($P=0.01$) which was statistically significant. The same was true for EAP-L1 reading strategies correlation meaning that students' L1 strategy use is relatively related to EAP strategy use and vice versa, yet EAP strategy use requires explicit strategy training.

Conclusion

University students may benefit from transfer of their mother tongue reading comprehension strategies to understand EAP texts more readily and deeply.

Keywords: L1 Acquisition, L2 Acquisition, Reading Strategies, EAP, Dentistry, Iran

Introduction

The reading skill occupies the third place in the natural order of skills acquisition, i.e., listening, speaking, reading, and writing. Also, needless to say, it is a matter of literacy, i.e., only educated people are concerned with the reading processes, styles, and strategies. Studies carried out previously have expunged upon the L1-L2 reading strategies. The review study by Xin and Ismail (2016) [43] investigated the similarities of strategies in first and second languages and observed the transfer of first language strategies in second language reading with disparities in the degree of transfer and the kind of strategies being transferred.

Grabe & Stoller (2002) [21] believe the reading skill is a complex interactive procedure entailing characteristics of readers, written texts, and tasks. Moreover, Enright *et al.* (2000) [16] remind us that second language reading is different from first language reading in three fundamental dimensions (cited in Maarof & Yaacob, 2011) [32]: (1) L2 readers use their previous experiences in first language reading, (2) their reading steps are apparently cross-linguistic, engaging two or more languages, and (3) they are often instructed on their reading skill before they are given sufficient oral proficiency in the target language. According to Bernhardt (1991) [6], the reader actively contributes to the reading activity, while they extract meaning from clues hidden in written text. Simply put, meaning does not inherently exist in texts; instead, texts have the potentiality for creating meaning (Widdowson, 1984) [42]. Also, studies on L1 reading comprehension by Palinscar & Brown (1984) [35] and Guthrie (1988) [22] reveal that reading skills like cognitive and meta-cognitive skills can be transferred to new reading situations. Some studies on second language acquisition (Irujo, 1986) [23] have demonstrated that linguistic and meta-linguistic parameters may originate from first language and manifest themselves in second language written and oral production, pragmatics, and communicative strategies.

Some scholars as Keung and Ho (2009) [26] have focused on the "component skills approach" put forward by Carr and Levy (1990) [11] to figure out the transference of cognitive skills from L1 to L2 reading. In this approach, reading is rendered as a

complex information-processing system engaging some relevant but separate mental processes. Further, Geva & Siegel (2000) ^[19] explain that transferable skills rely on the similarities and discrepancies between first and second languages to be acquired. There have been much past and present studies on the relation between L1 and L2 reading strategies. Indeed, some scholars have tried to understand whether reading in an individual's first language resembles their second language reading and also whether similar strategies are applied in reading in first and second languages. The study by Maarof and Yaacob (2011) ^[32] indicated that there exists a degree of first language strategy transfer for secondary Malaysian students with various English abilities. They reported the existence of some sorts of strategies shared between both first and second language reading. Moreover, Lin and Yu (2013) explored first and second language reading strategies for EFL (English as a Foreign Language) university students with varying reading abilities in Taiwan and reported in students' similar preference models in three groups of reading strategies.

As Alderson (1984) ^[1] asserts it, some studies have dealt with whether reading in second language is a "strategy or a linguistic issue". Carrell (1991) ^[12] believes that both L1 and L2 reading deals with the use of various strategies that aid readers in comprehending the material read. Bosser (1992) ^[9] asserts that, according to numerous recent studies, both readers' first language reading capacity and second language ability pay a share in second language reading comprehension. Bernhardt & Kamil (1995) ^[7] refer to some hypotheses concerning the processes and relationship of reading in first and second language. Cummins (1983) ^[14] believed in the existence of a shared underlying proficiency in which it may be proposed that a reader who is proficient in the first language should have the ability to read in the second language. Clarke (1980) ^[13] adds to the discussion saying that when readers do not possess proficiency in the target language, this deficiency "short-circuits" proper use of L1 strategy by learners when reading in second language. In the educational setting of I. R. of Iran, English is taught as a foreign language from the first year of secondary school to the end of high school years. Of course, as reported by Barzegar *et al.* (2021), Iranian students, unfortunately, have to learn Basic English, EGP, EAP and ESP courses in linguistically heterogeneous classes resulting in poor pedagogic outcomes. In these classes, as stated by Barzegar and Askari (2015) ^[3], whereas a number of advanced students can apply idiomatic English expressions like natives, freshmen may not be familiar with English ABCs. To solve this problem, Barzegar *et al.* (2020) ^[4] suggested that university students be assigned into Basic English and EGP classes based on their English ability not based on their academic majors. Also, English is taught as a subject matter during the secondary and high schools, and it is required for post-graduate studies such as MA, MSc, and PhD degrees. The students receive pedagogy on different reading skills and strategies. Since the Iranian educational system makes the use of Persian as first language obligatory, students' L1 reading strategies can be an asset to students that study English as a second language. Hence, if Persian reading strategies used in reading Persian texts help the reader figure out the content transmitted, these strategies can be probably used in reading the English texts. Based on the mentioned claims, learners' reading strategies must be elucidated to obtain any similarities or disparities of strategy use during

first and second language reading. This not only evokes their conscious use of strategy, but also aids them in enhancing their understanding of second language texts. Hence, the present researcher tried to answer two questions: 1. Is there any overlap between first and second language reading strategies? and 2. Are first language reading strategies applicable to second language EAP reading?

2. Review of literature

The term "strategy" has been defined variously by SLA researchers. Brown (1994) defines strategies as the particular "attacks" used by learners when they encounter a problem or the comprehension processes applied by readers to make sense of the material read. This process, according to Barnett (1988) ^[2], may entail activities like guessing, scanning, skimming, recognizing cognates and word families, predicting, reading for meaning, making inferences, activating general knowledge, following references, and separating main sentences from supporting sentences. We may add other strategies as word analysis, inferring, cohesion and coherence ties, pronoun references, paraphrasing, highlighting, underlining, note-taking, summarizing, etc.

Maarof & Yaacob (2011) ^[32] summarized the findings of past studies about reading in an L2: (1) Reading strategies aid in comprehending of texts that are read (Mi-Jeong Song, 1998) ^[39]; (2) Strong readers act better at monitoring reading comprehension compared to weak readers (Block, 1986) ^[8], and (3) Some similarities and dissimilarities exist between first and second reading regarding use of strategy (Kong, 2006) ^[31]. So, simply put, learner strategies are the cognitive processes that students use to figure out L2 and L1 input including retrieving and storing new input. A number of researchers have investigated the reading strategies applied in reading L1 and L2 by subjects with different L1s, various age groups, different nationalities, and varying language backgrounds. The study by Geladaria, Grivaa, and Mastrothanasisa (2010) ^[18] aimed at determining the reading strategies applied by foreigner immigrated children that spoke Greek as L2. They reported that more proficient bilingual readers made use of a wider range of 'top-down' and more complex reading strategies compared to less proficient readers. This betrayed their extra dependence on bottom-up decoding strategies while they were rarely aware of the reading process.

Other studies have concentrated on bilingual comprehension. Marinis and Chondrogianni (2011) ^[33] investigated the way sequential bilingual Turkish-English children comprehend English reflexives and pronouns. They also examined whether they model the structures in a way similar to monolingual children, second language adults, or children with Specific Language Impairment (SLI). They found that performance of L2 child speakers in the understanding of reflexives approximately resembled their age-matched controls; yet, they were different from second language adults and children with specific language impairment. Their study confirmed that the acquisition of comprehension of reflexives and pronouns in these children somehow resembled monolingual first language acquisition and not adult second language acquisition or language acquisition of SLI children. Gebauer, Zaunbauer, and Möller (2012) ^[17] explored linguistic transfer of reading fluency and reading comprehension between L1 and L2 in 220 German elementary school students that took part in English "partial

immersion programs". Findings suggested moderate cross-linguistic paths while autoregressive effects were controlled. Additionally, the general dominance of path from second to first language over paths from first to second language indicated immersion-specific relationships which can be attributed to the abundant chances for academic reading in the second language at school. Kim (2012)^[28] examined the relationships of second language variables, that is, Spanish, to second language reading comprehension for first grade Spanish English language learners (N=150). Findings revealed that lexical reading automaticity was significantly correlated to oral and silent reading fluency; however, oral language skill did not show such a relation. This finding was different from a study conducted on English-only children (Kim *et al.*, 2011)^[27]. K  k's (2010)^[30] research tried to identify the impacts of the language curricula developed following the principles of representational systems on the students' reading comprehension and their perspectives on learning English with regard to brain dominance and reading strategies. The subjects of this study were forty students (14 women, 26 men) from a university preparatory class in the second semester of 2008-2009. The study used a randomized pretest-posttest control group design applying a brain dominance inventory, a reading strategies scale, a reading comprehension test, an attitude scale, and a vocabulary test. Statistical mean, SD, percentage, and t-test were used. There was no statistically significant difference between reading comprehension achievements; yet, a significant difference existed between the perspectives of the experimental and the control groups. Further, Keung, and Ho (2009)^[26], in exploring transfer of reading-related cognitive skills between learning to read Chinese as first language and English as second language among Chinese children in Hong Kong, found that first, there were significant relationships between Chinese and English measures in phonological awareness and rapid naming with no correlations in orthographic skills; second, there was significant exclusive engagement of Chinese and English rapid naming skills and English rhyme awareness for predicting Chinese word reading. Additionally, the study by Nambiar (2009)^[34], performed on six proficient, bilingual, Malaysian students in Malay University indicated that the students, as competent bilingual learners, did not face any problem while reading the texts in the first and second languages and that the learners did not apply the same strategies in reading the two texts. This outcome was not consistent with the findings by Sarig's (1987)^[37] and Tang's (1997) researches. Moreover, Kong (2006)^[31] and Nambiar (2009)^[34] surveyed reading strategies applied in reading first and second language texts (Chinese and English) and found more use of strategy among the subjects when reading the second language text in comparison to the first language text. Finally, a significant study by Sarig (1987)^[37] examined the contribution of first language reading strategies and second language proficiency on second language reading (Hebrew & English) and suggested that the participants transferred strategies from first language reading into second language reading; furthermore, the same kinds of reading strategy "accounted for success and failure in both languages to approximately the same degree. Moreover, they revealed that most of the strategies applied in the reading comprehension process pertained particularly to each individual reader, or that each student read in a different

manner and used a varying mixture of strategies. These findings were not consistent with Block's (1986)^[8] results wherein global strategies led to efficient reading comprehension.

3. Methodology

3.1 Participants

Sixty subjects took part in this descriptive-correlational study. Due to practical problems of sampling, the researcher applied nonprobability sample designs (Cohen & Manion, 1994, as cited in Eslami *et al.*, 2010) and convenient sampling method to select the student population for the study. There were 43 female and 17 male students of dentistry who had enrolled for the ESD (English for the Students of Dentistry) I course, and all had passed EGP courses. Most of these learners were pre-intermediate sophomores based on the results of a standardized test of EGP, given by the researcher. Their age ranged between 19 to 25 years noting that EAP courses are offered in the 3rd semester and they were all undergraduates. The sample was drawn from the dental students studying at the Dental School of Yazd Shahid Sadoughi University of Medical Sciences.

3.2 Instruments

The researcher applied three major tools to glean data from the subjects: two questionnaires and the one-to-one interview technique. An English researcher-made 30-item four-point Likert scale inventory was developed based on the research questions to collect the required data. It was a modified version of the questionnaire used by Maarof & Yaacob (2011)^[32] who had adapted it from instruments used in previous studies dealing with reading strategies (Kong, 2006)^[31]. Kong's (2006)^[31] Interview Guide was used, too. The researcher used the Persian language to avoid any kind of misunderstanding of the questionnaire items on the part of the subjects. The English questionnaire was used for collecting data on L2 reading strategies. The questionnaire items were designed on the basis of expert judgments and undergraduate students' feedback obtained in one-to-one interview and the outcomes of a pilot study. First, educational and testing experts and undergraduate students were consulted on the wording, content, and layout of the first draft of the questionnaire. Regarding content, the researcher interviewed 20 dental students regarding their perception of reading strategies. Second, a pilot study was performed by administering the pilot questionnaire to 20 undergraduate students. Results of the pilot study and expert judgment resulted the final version of the tool with 30 items. The final draft of the instrument underwent reviewing and was structured according to the referees' comments and the piloting data. Hence, the final draft of the inventory included thirty questions of a four-point Likert scale ranging from "1=Never true of me" to "4=Always true of me". An open-ended question was added to the end of the tool to give the subjects a chance to betray their views freely regarding the strategies they use in EAP reading. The two questionnaires are given in Appendix I. Cronbach's α reliability coefficient of the L2 English instrument was 0.762 that is quite acceptable. It was reviewed by a panel of professors in Yazd University to figure out whether they were in line with the data planned to be gathered by the inventory.

To collect the required data on L1 reading strategies, the researcher translated the English questionnaire into Persian

and then asked three other experts to backtranslate the Persian questionnaire into English. Further, he triangulated his own translation with those of the other translators to make the Persian questionnaire valid. The reliability of L1 Persian questionnaire was calculated to be 0.698 which is a relatively acceptable coefficient. This was applied to cull the required data on L1 reading strategies that the dental students used in reading EAP texts in Persian.

3.3 Data collection procedures

To compare strategy use by readers in reading the first and second languages, the two questionnaires were administered to the students separately: first for L1 reading strategies and second, for L2 reading strategies. So, the data collection procedure consisted of two phases: In the first stage, they were given the Persian questionnaire and asked to answer the 30 items in it. After a one-week time interval, the second stage of data collection was conducted. This time, the 60 students completed the L2 reading strategies questionnaires and the required data were collected. In this way, the researcher came up with 120 questionnaires. The time interval intended to remove the practice effect of filling the first questionnaire since there was the danger that the same content of the questionnaires might affect the respondents' answers.

The questionnaires were distributed to the subjects by the researcher himself by turning to the target subjects in person. First, the researcher clarified the terminologies orally (e.g., L1 & L2 reading strategies) used in the questionnaire in Persian. When students were completing the instrument, the researcher gave further individual assistance to the students that still had problems regarding the questionnaire items. The researcher was present at all data collection phases. Sixty questionnaires were distributed

in each stage and recollected from all students at the end of their class time.

3.4 Data analysis procedures

Data given by 60 participants on the two questionnaires were analyzed with SPSS19. Given the nature and quality of the gleaned data, both qualitative and quantitative techniques were used to analyze the data using different types of descriptive statistics, i.e. mean, median, range, standard deviation, Pearson correlation coefficient, frequencies, and percentages. A qualitative technique was applied to interpret the data gleaned via the one-to-one interviews. The analysis focused on the similarities and disparities in the strategy use for first and second language reading.

4. Results

To explore the first research question, i.e., "Is there any overlap between L1 and L2 reading strategies?", the total correlation between first and second language reading strategies was calculated via Pearson Correlation Coefficient to be 0.469 ($P=0.01$). This value was statistically significant. The same was true for L2-L1 reading strategies correlation. This means that students' first language strategy use pertains to L2 strategy use and vice versa. Furthermore, to examine the second research question, i.e., "Are first language reading strategies applicable to second language EAP reading?", and to determine the most commonly and the least commonly used L1 and L2 reading strategies, students' response profiles for L1 and L2 reading strategies were presented in two tables.

4.1 L1 Reading strategies

Table 1 provides students' response percentages for L1 reading strategies.

Table 1: Students' response percentages for L1 reading strategies (S=Strategy)

No.	Reading Strategy	1=Never true of me %	2=Sometimes true of me %	3=Usually true of me %	4=Always true of me %
S1	Every time I read EAP texts in my field, I take notes on the main content of the text.	11.7	51.7	31.7	5
S2	When reading text, I underline difficult words and phrases.	11.7	10	38	40
S3	As I read, I look for the content and the main message of the text.	8.3	40	21.7	30
S4	While reading the text, if I come across several new words the meaning of which I do not know, I try to guess their meaning from the text.	5	21.7	45	28.3
S5	I check the meaning of words I do not know in the dictionary.	13.3	36.7	26.7	23.3
S6	I mix and match the meaning of the text with personal experience.	8.3	46.7	31.7	13.3
S7	I translate key words and phrases into Persian.	6.7	33.3	35	25
S8	I try to deduce the meaning of the whole sentence by adding the meaning of each of its words.	6.7	35	43.3	15
S9	To memorize the overall content of the text, I draw maps and diagrams for myself.	38.3	40	16.7	5
S10	As I read the text, I memorize the overall content by creating mental images.	5	33.3	41.7	20
S11	When reading text, I focus on its keywords.	6.7	43.3	41.7	26.7
S12	When reading difficult sections or words in the text, I repeat or re-read them.	25	20	30	63.3
S13	When reading the difficult parts of the text, I try to clear my doubts by asking a question.	3.3	40	35	21.7
S14	I avoid reading the text or understanding its content.	36.7	36.7	5	0
S15	When I read difficult parts of the text, I slow down.	28.3	16.7	35	56.7
S16	When reading the text, I try to guess its general meaning.	5	26.7	41.7	18.3
S17	I try to encourage myself to read the text, even the difficult parts.	33.3	40	35	10
S18	I try to use references to understand the text.	43.3	38.3	21.7	5

S19	I try to pay more attention to the text I read.	43.3	21.7	63.3	21.7
S20	When I read, I try to lower my level of anxiety.	15	33.3	41.7	23.3
S21	I ask and collaborate with my colleagues to understand the text.	15	38.3	36.7	10
S22	As I read, I ask the teacher to correct mistakes, explain, or receive feedback.	16.7	58.3	18.3	6.7
S23	I ask my parents to help me understand the text.	61.7	21.7	11.7	5
S24	At the end, I will summarize what I have read.	16.7	38.3	31.7	13.3
S25	I comment on reading the text by discussing it with my classmates.	23.3	51.7	18.3	6.7
S26	I evaluate my reading by answering the reading comprehension questions given at the end of the text.	20	43.3	33.3	3.3
S27	I stop reading the text and do nothing.	55	36.7	6.7	1.7
S28	I discuss the text with my friends.	20	60	18.3	1.7
S29	I try to understand the meaning of difficult words by breaking them down into prefixes, roots, and suffixes.	35	41.7	20	3.3
S30	I try to deduce the indirect ideas of the author implicitly.	13.3	48.3	23.3	15

As the data reveals it, the following 10 strategies were most commonly used by L1 readers in comprehending the EAP Persian texts: a) When reading difficult sections or words in the text, I repeat or re-read them. b) When I read difficult parts of the text, I slow down. c) When reading the text, I underline difficult words and phrases. d) When reading the text, I try to guess its general meaning. e) When reading the text, I focus on its keywords. f) I try to pay more attention to the text I read. g) While reading the text, if I come across several new words the meaning of which I do not know, I try to guess their meaning from the text. h) When I read, I try to lower my level of anxiety. i) I try to understand the

meaning of difficult words by breaking them down into prefixes, roots, and suffixes. j) When reading the difficult parts of the text, I try to clear my doubts by asking a question. Also, the least commonly used L1 reading strategies were: a) I avoid reading the text or understanding its content. b) I stop reading the text and do nothing. c) To memorize the overall content of the text, I draw maps and diagrams for myself.

4.2 L2 Reading strategies

Students' response profile for L2 strategy use percentages is given in Table 2.

Table 2: Students' response percentages for L2 reading strategies

No.	Reading Strategy	1=Never true of me %	2=Sometimes true of me %	3=Usually true of me %	4=Always true of me %
S1	Every time I read EAP texts in my field, I take notes on the main content of the text.	58.3	23.3	10	8.3
S2	When reading text, I underline difficult words and phrases.	8.3	26.7	31.7	33.3
S3	As I read, I look for the content and the main message of the text.	3.3	25	40	31.7
S4	While reading the text, if I come across several new words the meaning of which I do not know, I try to guess their meaning from the text.	1.7	26.7	40	31.7
S5	I check the meaning of words I do not know in the dictionary.	3.3	25	36.7	35
S6	I mix and match the meaning of the text with personal experience.	15	45	26.7	13.3
S7	I translate key words and phrases into Persian.	5	25	40	30
S8	I try to deduce the meaning of the whole sentence by adding the meaning of each of its words.	13.3	33.3	30	23.3
S9	To memorize the overall content of the text, I draw maps and diagrams for myself.	60	25	13.3	1.7
S10	As I read the text, I memorize the overall content by creating mental images.	10	40	35	15
S11	When reading text, I focus on its keywords.	3.3	43.3	33.3	20
S12	When reading difficult sections or words in the text, I repeat or re-read them.	1.7	20	46.7	31.7
S13	When reading the difficult parts of the text, I try to clear my doubts by asking a question.	15	40	33.4	11.7
S14	I avoid reading the text or understanding its content.	46.7	36.7	11.7	5
S15	When I read difficult parts of the text, I slow down.	3.3	16.7	38.3	41.7
S16	When reading the text, I try to guess its general meaning.	6.7	26.7	41.7	25
S17	I try to encourage myself to read the text, even the difficult parts.	10	40	36.7	13.3
S18	I try to use references to understand the text.	40	38.3	18.3	3.3
S19	I try to pay more attention to the text I read.	5	21.7	48.3	25
S20	When I read, I try to lower my level of anxiety.	5	33.3	45	16.7
S21	I ask and collaborate with my colleagues to understand the text.	6.7	43.3	41.7	8.3
S22	As I read, I ask the teacher to correct mistakes, explain, or receive feedback.	20	46.7	26.7	6.7
S23	I ask my parents to help me understand the text.	68.3	25	5	1.7
S24	At the end, I will summarize what I have read.	46.7	25	18.3	10
S25	I comment on reading the text by discussing it with my classmates.	31.7	38.3	25	5
S26	I evaluate my reading by answering the reading comprehension questions given at the end of the text.	13.3	40	38.3	8.3
S27	I stop reading the text and do nothing.	48.3	40	10	1.7
S28	I discuss the text with my friends.	20	50	25	5
S29	I try to understand the meaning of difficult words by breaking them down into prefixes, roots, and suffixes.	28.3	36.7	23.3	11.7

As demonstrated in Table 2, the most commonly used L2 reading strategies were: a) When I read difficult parts of the text, I slow down. b) I check the meaning of words I do not know in the dictionary. c) When reading difficult sections or words in the text, I repeat or re-read them. d) When reading the text, I try to guess its general meaning. e) While reading the text, if I come across several new words the meaning of which I do not know, I try to guess their meaning from the text. f) I translate key words and phrases into Persian. g) I try to pay more attention to the text I read. Also, the least commonly used strategies included the following: a) I ask my parents to help me understand the text. b) To memorize the overall content of the text, I draw maps and diagrams for myself. c) Every time I read EAP texts in my field, I take notes on the main content of the text. d) I stop reading the text and do nothing.

4.3 Common L1-L2 reading strategies

The following five strategies were common among the L1 and L2 strategy use by dental students: a) When reading the text, I try to guess its general meaning. b) While reading the text, if I come across several new words the meaning of which I do not know, I try to guess their meaning from the text. c) When reading difficult sections or words in the text, I repeat or re-read them. d) When I read difficult parts of the text, I slow down. e) I try to pay more attention to the text I read.

5. Discussion

Previous studies obtained results which are inconsistent with our findings. For example, Maarof & Yaacob (2011) [32] found the following six strategies common among Malaysian L2 readers of English: (1) skimming for finding general content found in the text, (2) slowing down to go on reading on the problematic sections of the text, (3) motivating oneself to keep on reading through problematic portions of the text, (4) giving meticulous attention to the text that is read, (5) collaborating with classmates to comprehend the text, and (6) wanting the teacher to clarify and correct some parts, and give feedback. Three of these six strategies were also used by Iranian dental Students in our study: 1) skimming for general themes that were found in the text, 2) giving meticulous attention to the text that is read, and 3) reducing the speed of reading to go on reading on the problematic sections of the text. They also found ten strategies common among L1 readers of Malaysian: (1) writing notes on the contents of the text, (2) skimming for general themes of the total passage, (3) making mental images while reading, (4) reducing the speed of reading on the problematic sections of the text, (5) motivating oneself to go on reading through problematic portions of the text, (6) applying reference materials to aid in comprehending the text, (7) giving closer attention to the text that is read, (8) collaborating with classmates to comprehend the text, (9) wanting the teacher to clarify and correct some parts and give feedback, and (10) writing a summary of the text after reading. Our findings, however, show that the Iranian students used just three of these strategies in L1 reading: 1) skimming for general contents that were found in the text, 2) reducing the speed of reading on the problematic sections of the text, and 3) giving closer attention to the text that is read. The reason for this might be due to the fact that Maarof and

Yaacob (2011) [32] compared readers' use of strategy in reading two different languages, using an English text entitled "Rafflesia" (a text on the greatest wild flower round the globe) and the same text was translated into Bahasa Malaysia (L1). However, we did not use any specific text for L1 or L2 strategy use, as this can limit students' use of reading strategies to those suitable for that specific text. Rather, we investigated first and second language strategy use in general without reference to any specific EAP text or passage.

Briefly, the students applied more strategies in reading the first language text compared to the second language text. Our results are also in line with the outcomes of the study by Kong wherein the intermediate and advanced learners under study used more strategies during reading the second language text. Nambiar's findings, nonetheless, demonstrated that the proficient bilingual learners employed similar amount of strategies while reading in first and second languages. One possible justification for the students' application of more first language strategies compared to second language strategy use may be attributed to the fact that the learners were oriented with the application of these strategies and were more confident in applying them. The study by Kong and Nambiar reported that one problem with inferring from learners' "think aloud technique" is that they may not have verbalized some strategies they were using during reading. This study also reported an overlap in the kinds of common strategies applied. Put another way, some strategies were generally applied in reading in both first and second languages as follows: (1) skimming for general themes that are found in the text, (2) reducing the speed of reading to go on reading on the problematic sections of the text, (3) motivating oneself to keep on reading through problematic portions of the text, (4) giving close attention to the text that is read, (5) collaborating with classmates to comprehend the text, and (6) wanting the teacher to clarify and correct some parts and give feedback. They further found that common strategies the students used in reading in first language, but not in second language were: (1) writing notes on the general content of the text, (2) making mental images during reading, (3) applying reference materials to aid in comprehending the text, and (4) writing a summary of the text after reading. On the whole, our study demonstrated that first and second language reading strategies used by Iranian students are relatively different. Though the correlation between L1 and L2 reading strategies was rather high, this does not guarantee that they use the same strategies for both languages.

6. Conclusion

Our findings suggested that there are both similar and different common reading strategies used by the ESL learners in L1 and L2 reading. Strategies frequently used in reading the L1 and L2 texts included the following: a) As I read, I look for the content and the main message of the text. b) When reading the text, I try to guess its general meaning. c) When reading difficult sections or words in the text, I repeat or re-read them. d) When I read difficult parts of the text, I slow down. e) I try to pay more attention to the text I read. f) I continue to read problematic sections of the text. g) I try to encourage myself to read the text, even the difficult

parts. h) I ask and collaborate with my colleagues to understand the text. i) As I read, I ask the teacher to correct mistakes, explain, or receive feedback. However, strategies such as “I ask my parents to help me understand the text”, “To memorize the overall content of the text, I draw maps and diagrams for myself.”, “Every time I read EAP texts in my field, I take notes on the main content of the text.”, and “I stop reading the text and do nothing” were not used in reading the second language text. This may be attributable to Iranian students’ L2 proficiency. Nevertheless, the findings of this study pertained only to 60 students of dentistry. Perhaps, a more comprehensive study using more participants can result in better outcomes that can be generalized to ESL/EFL learners reading in L1 and L2.

7. Practical implications of the study

One of the implications of this study is the necessity for strategy training as some students are lacking the knowledge of right use of L2 reading strategies. Past and recent researches as Kern and Koda (1988)^[29], Salataci & Akyel (2002)^[36], Song (1998)^[39], and Karbalaee & Rajyashree (2010)^[24] reveal that language learners can possibly transfer some of the good first language strategies to reading in second language. In the EFL context of Iran, it is advisable to run strategy training programs to vividly assist learners to use these strategies when reading in an L2. Teachers should also consider the strategies used by the students.

8. Suggestions for further research

A future line of research on reading strategies can concentrate on individualism in strategy use in reading in two different languages. Another line of investigation can focus on the effectiveness of explicit strategy training to further shed some light on the multidimensional process of reading in a second or foreign language.

9. Limitations of the study

This study explored just reading strategies with the exclusion of strategies of other skills. Also, only the students of dentistry took part in the study. Finally, the participants belonged to the age range of 19-25 years that may have affected the results as an intervening variable.

10. Ethical issues

Given the nature of this research, no ethical issues were relevant in the study.

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