Postgraduate English Students' Reading Comprehension and Content Retention across Major: Links to Metacognitive Strategy Use

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Abstract

Reading comprehension (RC) is of paramount importance for English learners at the postgraduate level who are expected to engage with complex technical texts, critically analyze scholarly articles, conduct extensive research, and effectively share their findings through writing. The purpose of the current ex-post-facto descriptive study was to assess Postgraduate English students' RC in relation to their awareness of metacognitive reading strategies and the content retention (CR) of technical course content across major. To this end a purposive sample of 71 English language teaching (ELT) and literature (EL) students were selected to participate in the study. The research data were gleaned through a standardized RC test, the metacognitive awareness of reading strategies inventory (MARSI), and four process-oriented essay type syllabus-based tests along with two final exams that were administered to both groups. The statistical analyses of the research data indicated significant positive but weak relationship between RC and CR in both groups and significant, positive, and strong relationship between the EL students' RC and MARSs. The findings will be discussed in relation to the factors that can impact retention of postgraduate course content.

بررسی مهارت خواندن و درک مطلب و بیاد سپاری محتوا توسط دانشجویان زبان تحصیلات تکمیلی با توجه به جنسیت: ارتباط با کاربرد راهبردهای فراشناختی

مهارت خواندن و درک مطلب اهمیت بسیاری برای زبان آموزان تحصیلات تکمیلی دارد زیرا انتظار می رود که متون پیچیده تخصصی را خوانده و درک کرد، مقالات علمی رابصورت انتقادی تحلیل قرار دهند وبا انجام پژوهش یافته های خود را به شکلی موثربه اشتراک بگذارند. هدف تحقیق توصیفی حاضربررسی مهارت خواندن و درک مطلب، بیادسپاری محتوای آموزشی تخصصی، و آگاهی از راهبردهای فراشناختی خواندن دانشجویان تحصیلات تکمیلی زبان انکلیسی با توجه به رشته تحصیلی آنها بود. برای دستیابی به این هدف نمونه ایی از 71 دانشجوی رشته آموزش زبان انگلیسی و ادبیات انگلیسی برای شرکت در تحقیق انتخاب شدند. داده های تحقیق با انجام یک آزمون خواندن و درک مطلب استاندار، اجرای پرسشنامه آگاهی از راهبردهای فراشناختی و چهار آزمون کلاسی فرآیند-محور و یک آزمون نهایی با توجه به سرفصل آموزشی هر گروه گردآوری شد. تحلیل آماری داده های تحقیق با استفاده از آزمون همبستگی پیرسون نشانگر رابطه مثبت ولی ضعیف بین آگاهی فراشناختی از راهبردهای خواندن و بیادسپاری محتوای آموزشی در دو گروه بود. تنها مهارت خواندن متون غیر تخصصی دانشجویان ادبیات انگلیسی با آگاهی فراشناختی آنان ارتباط مثبت وبالایی داشت. یافته های تحقیق با توجه به عواملی که می توانند بیادسپاری را تحت تاثیر قرار دهند مورد بحث خواهد گرفت.

کلید واژه ها: بیاد سپاری محتوا، تحصیلات تکمیلی، خواندن و درک مطلب، راهبردهای فراشناختی

Introduction

Rapid developments in second language acquisition (SLA) research since the advent of the new millennium has underlined the multifaceted nature of language learning and underscored the significance of individual characteristics that may greatly impact not only the process of learning but also the final level of attainment in different areas. The most egregious form of instruction is one that vigorously resists the impulse to change owing to the inevitable challenges that are inherent in realigning formal instruction with the principles of the post method pedagogy. The challenge, however, cannot be repudiated and has to be finally accommodated via adapting deep-rooted misconceptions about the very nature of language. One of these misconceptions concerns the essence of reading comprehension (RC) which is a ubiquitous skill for plethora of learners who are either engrossed in or obliged to digest large quantities of written input. RC might be considered as the most pervasive language skills for plethora of learners who are learning English in a foreign language (EFL) context because it provides the fundamental vehicle for exposure to the language, and thereby, it makes the flow of various types of information accessible to the learners. It is one of the primary sources of language input (Krashen, 1985) that can boost lexical and grammatical knowledge implicitly (Waring & Nation, 2004), a enjoyable entertainment activity that allows the reader to expand his knowledge boundaries (Seifoori, 2020).

Research in second language acquisition (SLA) has long established the significance of RC in terms of the contribution it can make to the absorption of input and changing it into intake which can be further produced as output (Ellis, 2015). Likewise, negative correlation between learners poor RC and their overall learning, problem solving skills, academic achievement, and professional career have been reported (Nanda & Azmy, 2020). Among the multiplicity of the prerequisite skills that can help learners comprehend better, experts highlight the role of a set of reading strategies that might be introduced and practiced in order to facilitate various aspects of the comprehension process (Machado, 2010).

Effective RC at higher levels of proficiency and ESP courses entails managing the reading process which is based on the application of a set of strategies that enable the reader to overcome blocks to understanding. Comprehension of the passage for advanced learners is the initial step and is followed by attempts to detect nuances of implied meaning, critically assess the content and relate it to their already existing knowledge based. An evident element in all these stages of the

reading process is some level of focal or peripheral attention to linguistic, organizational, and discourse features of the written text (Schmidt, 1990) that can aid application of managerial strategies and facilitate perception and comprehension of the input.

Basically, reading strategies, such as skimming, scanning, utilizing background knowledge, recognizing text structure, and so forth (Hsu, 2006), can be envisaged as deliberate, or unintentional, activities that are employed to ameliorate misunderstandings and boost comprehension (Bogaert, 2023). Awareness and application of such metacognitive reading strategies are particularly required at postgraduate levels of education since they can assist students go beyond comprehension and approach the passages critically. Experts' interest in strategic reading has led to the introduction of a wide range of different reading strategies (Mokhtari & Reichard, 2008; Mokhtari & Shorey, 2002; Phakiti, 2009; Aghaei & Zhang, 2012). A well-established and extensively research classification is that of Mokhtari and Reichard (2002) which operationalizes the learners' metacognitive awareness of reading strategies in terms of a measurement device which they called metacognitive awareness of reading strategies inventory (MARSI). It comprised three major subsets of global strategies that could help the readers obtain an overall understanding of the text they were reading, 8 problem-solving strategies they could employ to overcome textual intricacies and 9 support strategies that enabled them to promote their comprehension through the use of external reference materials. use of outside reference materials.

Literature Review

Research findings in the field of strategy use provide valuable insights into how these strategies are employed and their impact on learning outcomes. In fact, RSs has been found as an indispensable component promoting the process of deciphering meaning (Aghaei & Zhang, 2012; Amiryousefi et al., 2012; Dehghani et al., 2011; Do & Phan, 202; Jamshidian & Khamijani Farahani, 2010; Munsakorn 2012; Phakiti, 2009; Shang, 2010; Shehzad et al., 2019; Sheorey & Mokhtari, 2001; Urfalidadandi & Dadandi, 2022; Wange, 2016) since, as suggested by McNamara and Allen (2018), comprehension is an intricate and multifaceted skill involving linguistic knowledge, genre-related organizational understanding, and cognitive versatility related to taking advantage of attentional and memory resources. Coordinating and employing all these resources may pose problems that call for the application of various RSs (Mahmoudi, 2014; Seifoori, 2020)

that need to be taught in reading classes in order to develop learners' strategic versatility. Research areas already probed include learners' reading self-efficacy (Fitri & Ginting, 2021). Investigation of EFL learners' strategy use in different subject areas (Habok & Magyar, 2019; Shih & Chang, 2018) and at university (), secondary school (Habok & Magyar, 2019) and adaptively used in various situation (Cromley & Wills, 2016). Gender variation in the use of RSs is controversial and mixed findings have been reported highlighting gender variation among EFL learners (Griva et al., 2009; Goh & Foong, 1997; Phakiti, 2009).

Although literature is replete with exploration of topics related to RC and RSs, the importance of these autonomy-promoting operations legitimates the need for further research particularly in unventured areas like post-graduate studies. One such area is exploration of Iranian postgraduate English students' achievement of technical course content in the light of their RC skill and awareness of metacognitive RSs. Legitimacy of this study is substantiated by the evident weakness of postgraduate students for whom tackling written input proves quite formidable. It is assumed that metacognition is a foundational element in the professional growth of postgraduate English students and underdeveloped metacognitive awareness might be the severe setback for their development.

Hence the aim of the current ex-post-facto study was to address the correlation between RC, CR, and metacognitive awareness of two groups of post-graduate ELT and EL students. This goal is reliant on a common problem that postgraduate students experience in covering English course content. Most of these learners have to digest large body of written input published in the target language focused on technical content mostly unknown to them. They need to accurately comprehend the course content that is normally complex, critically analyse it and apply it in research or communicate it either through academic papers, presentations, or discussions. Prerequisite for such critical comprehension is a well-established linguistic background knowledge that enables them to decode written input as well as a well-developed strategic competence that permit them to self-monitor the way they approach the text (Lewis, 2002). What differentiates levels of dexterity in RC at postgraduate level is this self-regulated performance that is in line with the autonomy that these students are supposed to achieve after they graduate. Based on the research purposes, as stated above, the following research questions were formulated:

1. Is postgraduate ELT students' metacognitive awareness of reading strategies significantly correlated with their RC?
2. Is postgraduate ELT students' metacognitive awareness of reading strategies significantly correlated with their CR?
3. Is postgraduate EL students' metacognitive awareness of reading strategies significantly correlated with their RC?
4. Is postgraduate EL students' metacognitive awareness of reading strategies significantly correlated with their CR?

Since this is a quasi-experimental study in applied linguistics the research questions had to be answered through hypothesis testing and the following null hypotheses were thus formulated:

1. Postgraduate ELT students' metacognitive awareness of reading strategies is not significantly correlated with their RC.
2. Postgraduate ELT students' metacognitive awareness of reading strategies is not significantly correlated with their CR.
3. Postgraduate EL students' metacognitive awareness of reading strategies is not significantly correlated with their RC.
4. Postgraduate EL students' metacognitive awareness of reading strategies is not significantly correlated with their CR.

Method

Participants

A total purposive sample of 71 comprising 39 ELT and 32 EL postgraduate students were selected from among a research population of 130 to participate in this ex-post-facto study. They were studying at Islamic Azad University, Tabriz Branch and were taking the two-credit courses of Principles of Teaching Language Skills and Contemporary Dram. All of the participants were bilinguals and spoke Azeri Turkish as their mother tongue. They had learned Persian at school and universities and from the media and started learning English as a third language mostly at junior and high school level. Some of them had already attended different English courses at various language institutes before starting their university studies. The age range of the participants was between 24 and 40. They attended the classes twice a week for 16 sessions each lasting 90 minutes.

Instruments

The research data were gleaned using the MARSI (Mokhtari & Reichard, 2002) and three tests including a reading comprehension test, a content-based essay type final exam focused on contemporary drama and principles of teaching language skills, and four progress tests.

The RC Test

A RC test was developed after reviewing 10 different paper and pencil TOEFL tests and selecting five passages from among them. Each of the passages was followed by six multiple-choice test items culminating in 30 items the answers to which entailed the use of reading strategies. It was assumed that the test would elicit the participants' reading comprehension skill. The time allotted to this test was 45 minutes and the same administration procedure was applied in both groups of test takers.

The MARSI

The second variable under scrutiny was the participants' metacognitive awareness of reading strategies. In order to tap this variable, the researcher employed the MARSI developed by Mokhtari & Reichard, 2002). The 5-point Likert-type inventory comprises 30-item ranging from 1, showing the absence of metacognitive awareness, to 5 full awareness and application of the strategy under question. Mokhtari and Reichard operationalized MARSI in terms of three subsets of factors tapping one's Global Reading Strategies (GRSs) tapped by 13 items, Problem-Solving Strategies (PSSs) measured by 8 items, and Support Reading Strategies (SRSs) assessed by 9 items. The GRSs are assumed to enable the reader to obtain a global analysis of the written text. The PSSs, as suggested by the title, provide assistance in cases when the passage becomes too intricate to be processed, and SRSs involve the use of supportive materials from outside the text. This scale had been validated with reliability estimates of .86 to .91 and was verified as a valid inventory to tap the extent to which the respondents rom fifth grad to college studies. Thus, the participants were metacognitively aware of reading strategies Hence, the participants in the present study who were postgraduate ELT and EL students could be considered as sharing the characteristics of the target group for whom the device had been developed.

MARSI was administered under uniform conditions. The researcher introduced the inventory and the purpose of the research providing guidelines on how they were to respond. They were notified that there were no right, or wrong answers and the information provided by the participants would be kept confidential. In order to ensure clarity, the instructions were reviewed by the researcher and the questions raised by the participants' concerning the meaning of items were answered throughout the administration. To quantify the participants' responses, total scores were calculated for eat of the three subsets of strategies by adding up the scores for relevant items. The scores could range from 13-65 for GRSs, 8-45 for PSRSs, and 9-45 for SRSs. The total MARSI were also calculated by adding up the subtest scores and could range between 30-150. Higher scores would reflect higher levels of metacognitive awareness.

CR is a relative concept that may differ depending on the nature of the course and level of instruction. In the current study, CR referred to the students' attainment of the course objectives in retaining information that is presented during the course and recall of the information on the final exams. As such, CR is longitudinal in nature and was operationalized in terms of the process-oriented evaluation of the postgraduate participants' performance on four teacher-made syllabus-based progress quizzes comprising essay type questions that were administered every three weeks and an essay type syllabus-based final exam. Based on the university regulations, 30% of the final score (6 out of 20) was devoted to the participants' performance on progress quizzes that was supposed to reflect their learning during the course and 70% was allotted to their score on the final exam (14 out of 20). CR was thus operationalized in terms of the sum of these two sets of scores.

There was not practical way of validating the quizzes nor the final exams. However, attempts were made to ensure that the test domain matched the content domain to ensure content validity. Further, two experienced teachers in ELT and EL with more than 8 years of teaching the same courses were requested to review the quizzes and the tests; their suggestions were applied, and modifications were made to the wording of the questions to promote comprehensibility. Finally, both professors committedly adhered to standardized administration techniques like controlling temperature, noise, and time conditions in the four groups during the exam times. It should be noted that the final exams had to be administered at the end of the semester. CR was operationalized as the sum of the scores the participants would get on the four quizzes and the final exam.

Data Collection Procedure

The study was carried out by administering the RC test and the MARSI during the second and third weeks of the winter semester after it was ensured that all the students had registered for the courses and were attending their normal classes. First the reading comprehension test was administered the second week during the last 30 minutes of the second session to assess the participants' general RC. The participants had already been informed about the purpose of the test and notified that it would have no bearing on their scores. The MARSI was administered during the first 15 minutes of the third session after the purpose of the inventory was clearly stated and the respondents were required to select the options that applied to them.

The four process-oriented essay type quizzes were administered every three weeks in sessions four, eight, eleven, and fourteen. The participants had been informed that their final test score would partially depend on their performance eon these quizzes during the process of learning. The quizzes were scored by the professors and the commentated and rated test papers were returned to the participants after a week. Each quiz included between two and four essay type questions based on the content already covered. They were administered during the last 20 minutes of the session. Finally, the final exam was administered at the end of the semester as scheduled by the university in 90 minutes.

Results

The research questions were answered using Statistical Package for Social Sciences version 20. Before analysing the test scores, however, the normality assumptions were initially checked to identify whether the analyses should be carried out through parametric or nonparametric tests. Having checked the preliminary assumptions, the relationship between ELT and EL participants' MARSs and their RC and CR was answered using Pearson product-moment Correlation. Chapter Four presents the results of the analyses along with the discussion of the findings in relation to the research questions and hypotheses, the evidence from previous research studies as well as the theoretical explanations that can substantiate the findings.

The data analysis began with checking the normality of the research data obtained from the four groups of participants through Kolmogorov-Smirnov (KS) and Shapiro-Wilk (SW) tests as shown in Table 1.

Table 1

Tests of Normality for the Research Samples' RC, CR, and MARSI Scores

	Kolmogorov-Smirnov[a]		
	Statistic	df	Sig.
RC	.109	71	.063
CBR	.129	71	.052
MARSI	.094	71	.194

As indicated in Table 1, the results indicate that the scores obtained from the two groups of participants were normally distributed for both sets of scores, $p \geq .05$. Then, the Descriptive Statistics of the groups' pre-test scores were estimated, as shown in Table 4.11.

Table 2

Descriptive Statistics of the Groups' RC and MARSI

		N	Mean	Std. Deviation	Std. Error	95%Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
C	ELT	39	16.77	3.15	.74	15.20	18.34	12.00	22.00
	EL	32	15.76	1.83	.50	14.66	16.87	13.00	19.00
	Total	71	16.23	2.62	.31	15.61	16.85	10.00	22.00
MARSI CR	ELT	39	96.90	10.20	2.22	92.26	101.54	70.00	109.00
	EL	32	93.53	9.55	2.64	87.76	99.31	82.00	112.00
	Total	71	98.46	8.71	1.03	96.40	100.52	70.00	119.00
	ELT	39	16.37	2.15	.49	15.34	101.54	10.00	19.50
	EL	32	16.26	2.18	.55	15.07	99.31	12.00	19.50
	Total	71	16.27	2.16	.52	15.20	100.52	10.00	119.00

ELT Postgraduates' RC, CR, and MARSs

Null hypotheses one and two dealt with the relationship between ELT postgraduate participants' metacognitive awareness of reading strategies and their general RC, on the one hand, and CR on the other. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity of the research data. Having checked these assumptions, the relationship between ELT participants' perceived use of metacognitive awareness of reading

strategies, as measured by the MARSI, and their RC, as measured by the RC post-test, was investigated using Pearson Product-moment Correlation coefficient. Table 3 presents the results.

Table 3

Pearson Correlation of ELT Groups' MARSI Scores and Their RC

		RC	MARSI2
RC	Pearson Correlation	1	.451**
	Sig. (2-tailed)		.004
	N	39	39
MARSI2	Pearson Correlation	.451**	1
	Sig. (2-tailed)	.004	
	N	39	39

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

There was a moderate, positive correlation between the two variables, r = .45, n= 39, p < .005, with high levels of RC associated with high levels of perceived metacognitive awareness of reading strategies. Hence, the seventh null hypothesis is rejected. In order to find out how much variance ELT participants' MARSI and RC scores shared, the coefficient of determination was calculated and was found to be .20 showing that the participants' MARSs helped to explain about 20 percent of their RC scores.

The relationship between the same participants' perceived use of metacognitive awareness of reading strategies and their CR, as measured by the final post-test, was investigated through another Pearson Product-moment Correlation coefficient, the results are presented in Table 4.

Table 4

Pearson Correlation of ELT Groups' MARSI Scores and Their CR

Correlations

		MARSI2	CR
MARSI2	Pearson Correlation	1	.362*
	Sig. (2-tailed)		.023
	N	39	39
CR	Pearson Correlation	.362*	1
	Sig. (2-tailed)	.023	
	N	39	39

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

There was a moderate, positive correlation between the two variables, r = .36, n= 39, p < .05, with high levels of CR associated with high levels of perceived metacognitive awareness of reading strategies, rejecting the eighth null hypothesis. The coefficient of determination was found to be .13 indicating that 13 percent of the variance observed in ELT participants' CR scores could be explained by their MARSI scores.

The EL Postgraduates

The third and fourth research questions and null hypotheses were related to the relationship between the same research variables among EL postgraduates. Hence, primarily the correlations assumptions of normality, linearity and homoscedasticity were verified. Next, Pearson Product-moment Correlation coefficient was run on the participants'; MARSI and RC scores to answer the third research questions that addressed the relationship between EL postgraduate participants' RC and their perceived metacognitive awareness of reading strategies. It was investigated through as presented in Table 4.21.

Table 5

Pearson Correlation of EL Groups' MARSI Scores and Their RC

Correlations

		RC	MARSI2
RC	Pearson Correlation	1	.898**
	Sig. (2-tailed)		.000
	N	32	32
MARSI2	Pearson Correlation	.898**	1
	Sig. (2-tailed)	.000	
	N	32	32

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

As shown in the Table, a strong, positive correlation was found between the two variables, r = .89, n= 32, p < .005, with high levels of RC associated with high levels of perceived metacognitive awareness of reading strategies, which rejected the second null hypothesis**.** Next, the shared variance in EL participants' MARSI and RC scores was checked through calculation of the coefficient of determination which was found to be .80 indicating the fact that 80 percent of the participants' RC scores could be explained by their awareness of MARSs.

Finally, the last research question addressed the relationship between EL postgraduates' metacognitive awareness and their retention of the course content. This question was answered running another Pearson Product-moment Correlation test, as illustrated in Table 4.22.

Table 6

Pearson Correlation of EL Groups' MARSI Scores and Their CR

		MARSI2	CR
MARSI2	Pearson Correlation	1	.194
	Sig. (2-tailed)		.286
	N	32	32
CR	Pearson Correlation	.194	1
	Sig. (2-tailed)	.286	
	N	32	32

The results display a small, positive relationship between the two variables, r = .19, n= 32, p > .05. Consequently, the given null hypothesis was verified, and the relevant research question was answered positively supporting a moderate and positive relationship between the two variables. This time, the coefficient of determination was found to be = .03 suggesting that merely 3 percent of the EL participants' CR scores could be explained by their MARSI scores.

Discussion and Conclusion

The findings substantiated positive and significant but weak correlations between both groups' MARSI scores and their content retention. As for RC, however, the correlation was found to be positive, significant and strong for EL students but weak for ELT students. The findings from the current study also lend support to those reported by Estacio (2013), Youssefi and Seifoori (2014) and Tavakoli (2014) who explored the overall pattern of metacognitive awareness of reading strategy use and reported positive correlations with RC.

The overall pattern of significant correlation found might be explicated in terms of the Flawell (1979) identification of three fundamental dimensions of metacognitive knowledge as the knowledge about the person, about the task, and about strategy. Knowledge about the person involves beliefs about intra-individual and inter-individual differences (Dornyei, 2005) as well as universals of cognition. Based on such beliefs, the participants seemed to have reached some basic

grasp of the effectiveness of some MRSs, e.g., selective attention to contextual clues, in enhancing their comprehension of what they were reading.

The postgraduate participants in the current study were assumed to have developed reading comprehension strategies and have learned how to apply them in order to grasp written input and cope with the plethora of materials they needed to cover during the course. However, the descriptive statistics indicated averages scores ranging from 93 and 96 out of 150. This is not high amply at postgraduate level where students need to strive to keep pace with the flow of information from the syllabus and the large body of literature available in books and online sources. The reported level of metacognitive awareness was sufficient to help them cope merely with general reading passages.

The content-specific materials, however, were slightly different since apart from concern with language, the participants had to attend to technical meaning as well. While it might seem intuitive that postgraduate students who possess strong strategy awareness would also exhibit high levels of content retention, there are several factors that can contribute to a weak correlation between strategy awareness and content retention in some cases.

First, the weak correlation between both groups' MARSs and CR could be substantiated in terms of the depth of understanding required for CR. Strategy awareness primarily focuses on the cognitive processes involved in reading comprehension, such as monitoring comprehension and applying relevant strategies. However, content retention also depends on the depth of understanding achieved through engagement with the material (Pressley, 2002). Simply being aware of strategies may not guarantee a deep understanding of the content necessary for retention. This is particularly true for postgraduate-level content which is often highly complex and requires advanced critical thinking skills for comprehension and retention (Kintsch, 1998). Even with strong strategy awareness, students may encounter challenges in retaining intricate details or synthesizing abstract concepts inherent in advanced academic texts.

What may fail even strategic readers in comprehending the text, according to Afflerbach et al., (2008, 2015), can be inconsistent use of strategies. For instance, they may be aware of the importance of summarizing but may struggle to effectively summarize complex content, leading to difficulty in retaining key information. This can be closely linked to metacognitive regulation or the ability to monitor and adjust one's cognitive processes during reading which plays a crucial

role in content retention (Efklides, 2011, Schunk & Zimmerman, 2012). Students who struggle with metacognitive regulation may have difficulty effectively implementing strategies in real-time, leading to discrepancies between strategy awareness and content retention. This, of course, as suggested by Baumeister and Vohs (2004), Gross (2015), Pintrich (2000), alludes to some association between self-regulation and strategic awareness. Typically, postgraduate students are supposed to have become at least partially self-regulated in their learning. Self-regulation encompasses a variety of processes and strategies that individuals use to manage their thoughts, emotions, behaviors, and actions in order to achieve goals or adapt to different situations. One type is cognitive regulation which involves regulating one's thoughts and cognitive processes through attention control, focusing attention on relevant information while ignoring distractions, cognitive flexibility, being able to shift between different tasks or perspectives, problem-solving, strategically approaching and solving problems by breaking them down into manageable steps, developing and implementing plans to achieve specific goals. Moreover, self-regulated learners can regulate their emotional responses, employ various techniques to modulate the intensity or duration of emotions like deep breathing, and manage their own stress.

Based on the research findings it can be concluded that postgraduate English students at the Tabriz Branch of Islamic Azad University, and probably in other universities, need metacognitive awareness-raising. This need should be taken into account by designing appropriate preparatory courses, like a two-credit Critical Reading Course, to help them promote their strategic RC before taking obligatory courses. Of course, the content of such courses should be selected with great care to match the levels and needs of the learners. Quite conceivably, the instructors and professors who are selected to teach such courses should have already achieved high levels of proficiency and strategic expertise to be able to create appropriate classroom conditions and procedures for learner development (Schoenfeld, 2015). Although quite an evident principle in many contexts, experience has shown that under some abnormal conditions, the less experienced instructors or professors are selected for preparatory courses, and this may spoil the whole process. The instruction process should also be closely supervised to maintain educational standards and compatibility of the practice with course objectives.

Last, but not least, learners at various levels of English proficiency need to acknowledge the role of strategies in managing their own learning. Under particular circumstances reorienting

instructional practice entails lengthy top-down procedures that make change virtually impossible. This is the case in the Iranian top-down educational system which does not allow direct negotiation between the decision-making authorities and the practicing teachers. The outcome is a farfetched view of reform. Hence, individual learners should take the initiative themselves and try to add a strategic component to their learning if they plan to go far in learning English.

The data regarding the participants' metacognitive awareness of reading strategies was obtained by administering a questionnaire. However, to get a more profound view of the transition in learners' metacognition, interested researchers are suggested to employ qualitative and interactive devices like interviews and think-aloud protocols to obtain a deeper understanding of the learners' metacognitive knowledge. Expanding the scope of the study to include other educational levels and backgrounds from more universities and educational centres can broaden our perspectives on the issues and offer insights on the extent to which RC, CR and MARSs are correlated.

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