

# Impact of Mediation Types on Iranian EFL Learners' Reading Comprehension Strategies<sup>1</sup>

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## Abstract

The sociocultural theory holds the idea that knowledge to be acquired should be mediated. It underscores the presence of mediation as a crucial factor in internalization of abilities. Given this, the present research was an attempt to examine the effect of mediation on learners' reading comprehension strategy in light of 2 approaches of response-based (RB) mediation (Vygotsky) and task-based (TB) mediation (Bruner) to intervention. To this end, the Reading section of the *First Certificate in English* (2010) and 1 cognitive and metacognitive questionnaire (Phakiti, 2003) were administered to 104 Iranian lower-intermediate EFL learners who were selected by convenience sampling. The questionnaire was given to the participants before and after the mediation session. MANOVA results revealed that not only had the learners' monitoring metacognitive strategies changed by interventions, but also the participants in the TB mediation group outperformed those in the RB mediation group.

**Keywords:** Mediation; Reading Comprehension Strategies; Response-Based (RB) Mediation; Task-Based (TB) Mediation

## 1. Introduction

No single theory has truly and completely expounded the nature of reading comprehension strategies (Grabe, 2009). Yet, the importance of reading comprehension strategies in promoting readers' performance on reading comprehension tests has been well recognized in the literature (Kintsch, 1998;

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O'Malley & Chamot, 1990; McGuire & Yewchuk, 1996; Meyers, Lytle, Palladino, Devenpeck, & Green, 1990; Phakiti, 2003; Pritchard, 1990; Yang, 2006). For instance, O'Malley and Chamot (1990) revealed that learning strategies had contributed a great portion to learners' success; however, a concern is raised by scholars on how to incorporate reading comprehension strategies into reading comprehension programs (Alptekin & Ercetin, 2011; Savignon & Sysoyev, 2002). One suggested way of incorporation of reading comprehension strategies is through mediation; therefore, some scholars have investigated the effect of mediation on learners' reading comprehension strategy development (e.g., Birjandi, Estaji, & Deyhim, 2013; Little, 1996; Zoghi & Malmeer, 2013).

To Vygotsky (1986), human beings, unlike other primates, receive the stimulus not just directly but through mediation of artifacts. These artifacts could be symbolic like language or the expanded forms as primary artifacts like signs, secondary artifacts like action, and tertiary artifacts like imagination. Human cognition emerges through engagement with artifacts such as objects, tasks, and the like. This way, human beings internalize the mediating tools and come to self-regulation. As Poehner (2011) explains "physical and symbolic artifacts function as mediating tools, enabling humans to gain control over their mind" (p. 247), thereby regulating their cognitive functioning. This approach in assessment is named as dynamic assessment (DA; Luria, 1961).

The proponents of DA (Balazic, 1997; Bednar & Kletzien, 1990; Poehner & Lantolf, 2005) assert that static assessment cannot fully portrait respondents' capability and capacity, whereas learners' potential can be actualized through mediation although in DA procedure, not all individuals benefit from assistance during assessment. As Poehner and Lantolf (2005) put it, the person's both aided and unaided performance, along with one's capability in benefiting the assistance in completing the task and transferring those mediated performance to other tasks, can provide us with a full picture of individual ability. This implies that measuring individuals through conventional and DA might generate two distinct images of a person's ability one of which may be more constructively valid. Moreover, it is assumed that intervention and mediation of any type within the test might result in similar informativeness of respondents' performance both qualitatively and quantitatively compared with the time respondents are measured statically (Lidz, 1997).

To construct a DA reading test, the test constructor needs to find "distinct cognitive processes which are relevant to specific levels of text comprehension" (Nunn, 2001, p. 81). This makes researchers working in language-related fields use task-related strategies to construct interventions they need to incorporate in dynamic reading comprehension questions (Abbott, Reed, Abbott, & Berninger, 1997;

Balazic, 1997; Bednar & Kletzien, 1990; Birjandi, Estaji, & Deyhim, 2013; Blachowicz, 1999; Brozo, 1990; Guterman, 2002; Hayes, 2011; Kozulin & Garb, 2002; Naeini & Duvall, 2012; Nunn, 2001; Pishghadam & Barabadi, 2012; Poehner & Lantolf, 2013; Spector, 1992). Most studies in this realm have focused on Vygotskian approaches to construct mediation for reading comprehension tasks. However, there is a second view towards mediation based on Bruner's method of scaffolding (Wood, Bruner, & Ross, 1976). Unlike Vygotskian view, Bruner believes that the original task should be broken into the simpler ones. The present study was an attempt to see if the kind of mediation prompts would differently promote the learners' awareness of reading comprehension strategies.

## **2. Literature Review**

### ***2.1 Mediation: Bruner vs. Vygotsky***

The sociocultural theory posits the idea that knowledge cannot be directly acquired; instead, it underscores the central role of mediation for internalization of knowledge or ability. This idea is basically originated from Vygotsky's (1986) philosophy which accentuates the importance of mediation in child cognitive development. Accordingly, cognitive development occurs at two levels of potential or assisted and actual or unassisted performance. At the actual level, the child does the task without any help (i.e., autonomous level), whereas at the potential level, the child needs another person's assistance (i.e., a mediator).

Having said that there is no single conceptualization of mediation, two main different approaches to construct scaffolding tasks exist: The first one is based on learners' responses or response-based (RB) mediation and the second one is based on task features (Bickhard, 2005; Rogoff, 1998; Walqui, 2006) which is called task-based (TB) mediation. Whereas the former has roots in Vygotsky's (1986) notion of learners' zone of proximal development (ZPD), the latter is the result of Bruner's notion of scaffolding (Wood, Bruner, & Ross, 1976) who found that by breaking task into subproblems, kids ranging in age from 3 to 8 can solve the problem more easily and more independently.

Although the purpose of both mediations (RB vs. TB) is to develop independent individual problem solvers, they use two different routes in achieving this aim. In the DA approach, the intervention is constructed upon learners' response, whereas in the Bruner's approach, the problem is broken down into manageable tasks. In other words, DA adapts a more dynamic nature than scaffolding. Rogoff (1998) believes that scaffolding is different from ZPD. He (1990) explains that scaffolding incorporates manageable chunks of subproblems and lets the individuals or examinees discover how these chunks are interrelated. To Goffin and Cole (1984), ZPD embodies several levels of the task at once, whereas

scaffolding focuses on the subproblems of the original task. What seems to be interesting is whether these two methods of mediation would affect learners' reading comprehension cognitive and metacognitive use differently. In the following subsection, reading strategies will be explained briefly.

## ***2.2 Reading Strategies***

To explain reading comprehension strategies, different scholars have proposed several models. For instance, Kintsch (1998) classifies reading processes into two levels: situation model and text-based level. Accordingly, readers initially involve processing linguistic features of the text like propositions, word to text interpretation, lexical decoding, syntactic meaning of the sentence, and textual features while they attempt to construct a coherent network of the text. Text-based reading also involves gradual accumulation of meaning as a result of processing successive sentences and sometimes the generation of inferences that are necessary for discourse coherence. In another study, Alptekin and Ercetin (2011) revealed that in constructing a coherent discourse, the readers attempted to relate new information to previous ones through bridging inference. To achieve this end, the readers used anaphoric interpretation, references, connectives, signaling devices, transitional phrases, and rhetorical predicates.

Elsewhere, Salataci and Akyel (2002) classify reading strategies into three main categories (bottom-up, top-down, and metacognition) and a total of 15 subcategories. To Salataci and Akyel, cognitive strategies are either bottom-up or top-down. Whereas bottom-up strategies involve processing texts through identifying word, syntax, and text meaning, top-down processes call for readers' background knowledge to get the gist of the text, and predict further information. Metacognitive strategies cover a group of assessing and evaluative strategies like planning, monitoring, revising, and assessing the effectiveness of one's functions. Still, there is another classification (McNamara & Magliano, 2009) based on which reading strategies are divided into five categories of "monitoring comprehension, paraphrasing the text, making bridging inferences between the current sentence and prior text, making predictions about the subsequent text, and elaborating the text" (p. 67). They further elaborate that there are various forms of inferences as bridging, predictive, domain-specific knowledge, and domain-general knowledge. They use this classification in coding self-explanations.

Having been explained variously, success in a reading comprehension test and task is believed by scholars to require readers' appropriate use of strategies (Takac, 2008). For instance, Anderson, Bachman, Perkins, and Cohen (1991) found that there was a significant relationship between reading comprehension test and reading comprehension strategies. Elsewhere, Macaro (2001) showed that good and poor reading comprehension performance might be dependent on the use of a

combination of strategies rather than a single strategy. In another study, Cohen (2007) and Grenfell and Macaro (2007) concluded that language users with a higher proficiency level possibly deploy a combination of strategies to answer reading items.

Given the aforementioned points, most scholars agree upon the importance of strategy in developing autonomous learners, saying that most good language learners or proficient language users have shown to be strategic (e.g., Dörnyei & Skehan, 2003; O'Malley & Chamot, 1990). For example, O'Malley and Chamot (1990) suggested teachers incorporate strategy training into their teaching practice. However, what is controversial in the documented literature is whether strategy is trainable or easily changeable (Dörnyei, 2005). Little (1996) strongly emphasizes that strategy instruction needs to be incorporated into the communicative task to promote learners' awareness. To Cook (2001), this might partly be achieved through explicit language training or implicit strategy awareness. Moreover, strategy training is based on the assumption that conscious attention to learning strategies is beneficial. However, Bialystok (1991) expounds the idea that strategies training only leads to students' awareness of strategies.

Recently, researchers (e.g., Birjandi, Estaji, & Deyhim, 2013; Guterman, 2002) have paid attention to the effect of mediation in DA processes on learners' use and awareness of reading comprehension cognitive and metacognitive strategies. The study by Birjandi, Estaji, and Deyhim (2013), for instance, investigated how DA interventions could change learners' metacognitive perception. They found that although intervention had changed the learners' performance on the reading comprehension test, it did not change their use of metacognitive strategies. Whereas these studies have investigated the effect of intervention constructed based on Vygotskian approach, not much research has compared two approaches of TB and RB to mediating the reading comprehension task. The present study purported to examine the differential effect of these two mediational artifacts on EFL learners' reading comprehension cognitive and metacognitive strategy use.

### **3. Purpose of the Study**

Despite the widespread attention to learning strategies (Oxford, 1996; Savignon & Sysoyev, 2002), reading comprehension strategies (Alptekin & Ercetin, 2011; Keshavarz & Assar, 2011), and strategy training (Cohen, 1998; Harris, 2003; Juffer, 1993), not much research has been done to compare the effect of mediation types (Bruner's vs. Vygotsky's perspectives) on learners' use of reading comprehension strategies. Although the effect of mediation in Vygotskian (1986) notion on learners' strategy development has recently been investigated (Blachowicz, 1999; Birjandi, Estaji, & Dyhim, 2013; Zoghi & Malmeeer, 2013), to the best of the present researchers' knowledge, almost no research has compared the

effect of TB and RB mediations on learners' reading comprehension strategy use. Therefore, the present research was intended to fill this gap by comparing the role of two different types of mediation prompts on Iranian EFL learners' use of strategy. In so doing, the following research questions were posed:

1. Do RB and TB mediations significantly affect EFL learners' use of monitoring cognitive strategies?
2. Do RB and TB mediations significantly affect EFL learners' use of comprehension cognitive strategies?
3. Do RB and TB mediations significantly affect EFL learners' use of retrieval cognitive strategies?
4. Do RB and TB mediations significantly affect EFL learners' use of planning metacognitive strategies?

## **4. Method**

### ***4.1 Participants***

One hundred and four female university students majoring in either TEFL or English translation studies participated in this study. They were all Iranian native speakers of Persian, ranging in age from 20 to 24, who were studying at Islamic Azad University (South Tehran Branch). The sampling method was convenience sampling; the participants were all volunteers to ensure response validity of the data (Clausen, 1968). This number was extracted from a pool of 650 students who were all volunteers, but they either did not meet the criteria set for the purpose of this study or declined to answer the questionnaires. The participants were all at lower-intermediate proficiency level and only those whose scores were between 30 and 39 on the Oxford Placement Test (OPT; 2001) were selected. They formed two groups of TB (44 females) and RB (60 females). The TB group included fewer participants because 16 students declined to take the cognitive and metacognitive questionnaire after the mediation session as the posttest.

### ***4.2 Instruments***

Five instruments were employed in this study each of which is briefly explained below.

#### ***4.2.1 Oxford Placement Test (OPT)***

At first, to ensure homogeneity of the participants in the present research, the OPT (2001) with 60 items was administered based on which only those whose scores were between 30 and 39 (lower-intermediate) participated in this study. The test consisted of three sections of reading (in the form of cloze test), grammar, and

vocabulary. The reliability index obtained for the OPT using Kuder-Richardson method (KR21) was 0.9.

#### **4.2.2 Reading Section of First Certificate in English**

The second instrument was the *First Certificate in English Reading Comprehension* (FCERC) test. The FCERC has three parts with the total length of 2,000 words. The test included eight multiple-choice questions measuring learners' RC, seven multiple matching tasks measuring learners' ability to follow text development, and 15 multiple matching questions measuring learners' ability to search for information. The reliability index obtained for the FCERC was acceptable ( $\alpha = 0.68$ ).

#### **4.2.3 Mediated Versions of FCERC Test**

The FCER test was changed into two different mediated forms of TB and RB, as explained earlier based on Bruner's and Vygotsky's principles. Each of these forms is briefly explained below.

##### **4.2.3.1 Task-Based Mediated Version of FCERC**

Using principles of Bruner (Wood, Bruner, & Ross, 1976), the FCERC was changed into a TB mediated version named as FCERC-TB in which the students had to answer the simpler questions constructed for each reading item. It was assumed that the students became autonomous if they answered the simpler problems which were elemental to the main question. To this end, several tasks were constructed for each item of the original FCERC. To the extent possible, the constructed tasks in the TB-FCERC were sensitive to the types of item or task of the original FCERC. For example, the second part of the FCERC was a gapped text, and to complete it, the students had to find the appropriate sentence from jumbled ones listed on the opposite page (see Appendix). Through the TA procedure, the following strategies were found to be efficient:

- Finding the key words in the text
- Finding the keywords in the jumbled sentences
- Guessing the rhetorical function of each gap
- Matching clues and functions

Figure 1 demonstrates the way scaffolded tasks were incorporated into the second part of the original FCERC. As shown in Figure 1, following Bruner's principle, the first three questions (gaps) were scaffolded through (a) provision of rules for cohesive ties (i.e., recruitment stage), (b) underlining the important words in the jumbled sentences (A-H), (c) underlining the important words around three

gaps of 9 to 11, (d) provision of rules for rhetorical functions (i.e., recruitment stage), (e) guessing the appropriate functions for the gaps 9 to 11, (f) answering questions 9 to 11, and (g) the researchers answers to students' questions when required. In the second step, provision of rules was omitted and steps b and c were merged together. The two last questions (14 and 15) were not scaffolded:

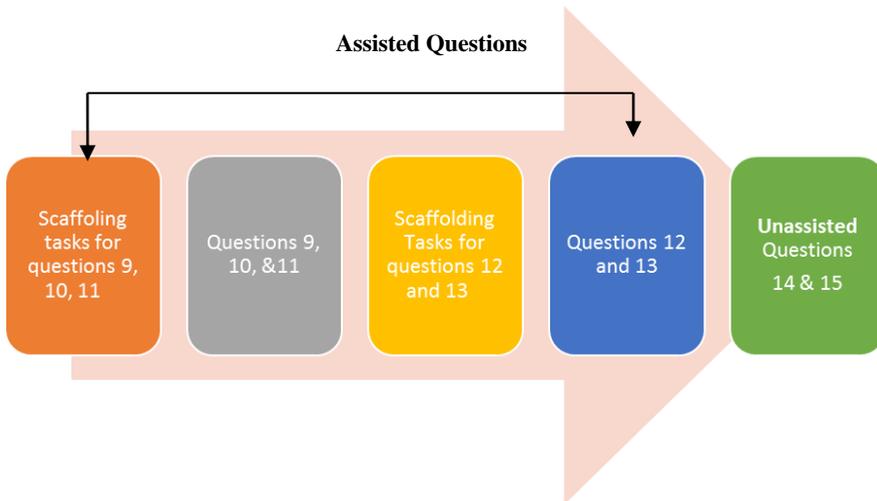


Figure 1. Schematic representation of the second task of the FCER.

The FCERC-TB version took the students 1.5 to 3 hr to complete. The reliability index obtained for the FCERC-TB was acceptable ( $\alpha = 0.59$ ).

#### 4.2.3.2 Response-Based Mediated Version of FCERC

The second RB mediated version of the FCERC named as FCERC-RB was constructed following Vygotsky's (1986) and Campione and Brown's (1985) principles. The FCERC-RB was not different from the original FCERC in content, items, and tasks. However, to maximize the number of hints, the test incorporated more distractors to the original ones. For example, two more distractors were incorporated into the second task of the original FCERC. The FCERC-RB was computerized and four mediation prompts were incorporated into each question. These interventions were provided upon the candidates' failure to answer each question. The followings are the prompts listed for the second task of FCERC-RB:

Task 2: 7 matching questions

- Prompt 1: Motivational
- Prompt 2: The function of the gapped sentence

- Prompt 3: Semantic and cohesive relationships between the gap and the items
- Prompt 4: The content word the candidates should find the answer based on semantically was highlighted

This version of the test took the students 1 to 2 hr to complete. The reliability index obtained for the FCERC-RB was high ( $\alpha = 0.81$ ).

#### ***4.2.5 Cognitive and Metacognitive Reading Strategy Questionnaire***

The last instrument employed was a the Cognitive and Metacognitive Reading Strategy Questionnaire (CMRS-Q) with 27 items (Phakiti, 2003). It measured two types of reading strategies: cognitive and metacognitive. The test was given to the participants twice: before and after the mediated version of the FCERC test to see if the candidates' use of strategy would change over the intervention. The reliability analysis of the questionnaire by computing Cronbach's alpha yielded an alpha of 0.860 on the pretest and 0.880 on the posttest, with item-total correlations ranging from 0.073 to 0.619. An insignificant correlated item (item 2) was omitted. The Cronbach's alpha increased to 0.865 for the pretest and 0.89 for the posttest after omitting this item.

### **4.3 Data Collection Procedure**

The FCERC was changed to the mediated versions through a meticulous procedure conducted before the study. To construct the mediation versions of the FCERC, the original test was given to 34 participants varying in their language proficiency levels to think-aloud (TA) while answering the items of the test. To familiarize the participants with TA, the first session began with a 10-min training while the examiners answered similar reading questions. The results of the TA protocols were analyzed to extract both efficient and inefficient strategies these participants used to answer the items of the FCERC. Two raters coded the strategies using both the data and the checklist constructed based on the literature (Janssen, Braaksma, & Rijlaarsdam, 2006; Macaro & Mutton, 2009; Macaro, 2007; Phakiti, 2003). The interrater reliability for two raters was found to be high enough; Kappa = 0.81,  $p < 0.05$ . Using these strategies, the researchers changed the FCERC into two mediated forms of TB and RB.

In the main stage of the study, 104 participants forming two groups of TB and RB took the FCERC test and the CMRS-Q as the pretest. The participants filled out the CMRS-Q after answering the FCERC test. Then, after 10 days, the participants attended the mediation stage. The mediated form of FCERC-RB was computerized. The program was written in #C within ASP, Net environment. It was run using the university network. To run the program, Chrome version 12.0.742.30

was used and the participants' responses were saved into a data sheet. As explained earlier, four prompts were incorporated into each question. To the extent possible, the prompts were sensitive to the content and purpose of the question type. The prompts were given to the respondents by the computer program upon their every failure in answering the questions. As mediations/prompts were chosen through examination of respondents' TA in the initial phase of this study, it was believed that the hints were graduated in difficulty terms. The hints were initially implicit and progressively moved to the most explicit ones.

The FCERC-TB was a paper-and-pencil test, as explained earlier. The test was constructed following Bruner's principles. The scaffolded tasks and questions were believed to be simpler and leading to the original questions. After the scaffolding questions were constructed, the FCERC-TB was given to four students to check whether the test was operative and practical. They were asked to comment on the content and the number of questions. The result was a more concise version of the FCERC-TB which was later given to four expert raters to rate the task in terms of difficulty; therefore, the generated scale was ordinal. The interrater reliability yielded an alpha of 0.85. As a result, some modifications were made. For example, in task 1, one of the scaffolding tasks for question 4 was "*why does the author mention 'Bloomsbury, British museum, and Bedford square?'*" Three experts believed that the statement was vague; therefore, it was changed to multiple-choice items as below.

- ✓ *The author mentioned "Bloomsbury, British museum, and Bedford square" to .....*
  - a. Give an example to Martin's method*
  - b. Say how much Martin knows*
  - c. Say what Martin explains*

The prefinal version of the TB-FCER was, then, given to 49 participants to take the different parts of the test. The aim was to determine time allotment and question operativeness. The nonfunctioning questions were omitted; as a result, the 16-page version of the test was reduced to 14 pages. Some rules were added to the final version of the FCER-TB. The participants took the CMRS-Q as the posttest immediately after taking either form of the mediated versions of the FCERC.

## **5. Results**

To answer the research questions, the data of the 104 participants who had completed the CMRS-Q on the pretest and posttest were subjected to MANOVA. MANCOVA was not performed because the assumption of homogeneity of regression slope was violated. The level of significance was set at  $p < 0.05$ . All the

assumptions required for MANOVA were met. Table 1 reports the descriptive statistics for the two groups of TB and RB. The data formed normal distribution; the values of skewness and kurtosis were lower than +/- 1.96. It indicates that the data formed normal distribution on the pretest and posttest.

Table 1. *Descriptive Statistics of CMRS-Q by Groups and Stages*

Group		Skewness		Kurtosis			
		Mean	Std. Error	Statistic	Std. Error	Statistic	Std. Error
RB-FCE	PreCom	3.192	0.075	.148	.304	-.536	.599
	PreRetr	3.342	0.091	.082	.304	-.455	.599
	PrePlan	3.432	0.079	.347	.304	-.804	.599
	PreMonit	3.390	0.085	-.383	.304	-.582	.599
	PostCom	3.417	0.076	.059	.306	-.832	.604
	PostRetr	3.292	0.085	-.028	.306	-.630	.604
	PostPlan	3.448	0.088	.238	.306	-.624	.604
	PostMonit	3.417	0.084	-.405	.306	1.145	.604
TB-FCE	PreCom	3.391	0.087	.126	.357	1.196	.702
	PreRetr	3.386	0.106	.252	.357	.189	.702
	PrePlan	3.587	0.092	.387	.357	-.289	.702
	PreMonit	3.610	0.099	.046	.357	.312	.702
	PostCom	3.541	0.089	.166	.333	-.762	.656
	PostRetr	3.545	0.099	.218	.333	-.331	.656
	PostPlan	3.684	0.103	.154	.333	-.499	.656
	PostMonit	3.750	0.098	.020	.333	-.515	.656

Note. \*PreCom = comprehension strategies on the pretest; PostCom = comprehension strategies on the posttest; PrePlan = planning metacognitive strategies on the pretest; PostPlan = planning metacognitive strategy in posttest; PreMonit = monitoring metacognitive strategies on the pretest; PostMonit = monitoring metacognitive strategies on the posttest; PreRetr = retrieval strategies on the pretest; PostRetr = retrieval cognitive strategies on the posttest.

Also, the results of the Levene's test and Box's test indicated that the assumptions of homogeneity of variance and equality of covariance were met. The result of the Levene's test was insignificant for the four components of the CMRS-Q on the pretest (PreCom Levene's  $F(1, 102) = 0.304, p > 0.05$ ; PreRetr Levene's  $F(1, 102) = 1.97, p > 0.05$ ; Preplan Levene's  $F(1, 102) = 0.331, p > 0.05$ ; PreMonit Levene's  $F(1, 102) = 3.67, p > 0.05$ ).

Moreover, the Levene's test was not significant for the four components of the CMRS-Q on the posttest (PostCom Levene's  $F(1, 102) = 0.066, p > 0.05$ ; PostRetr Levene's  $F(1, 102) = 0.005, p > 0.05$ ; PostMeta Levene's  $F(1, 102) = 0.10, p > 0.05$ ; PostMonit Levene's  $F(1, 102) = 0.658, p > 0.05$ ). This means that the data observed the homogeneity of variance assumption. Furthermore, the result of Box's  $M$  revealed to be insignificant for both the pretest ( $p = 0.053, \text{Box's } M = 18.96, F =$

1.813,  $df_1 = 10$ ,  $df_2 = 40376.385$ ) and the posttest ( $p = 0.90$ , Box's  $M = 6.053$ ,  $F = 0.579$ ,  $df_1 = 10$ ,  $df_2 = 40376.385$ ).

The first MANOVA was run on the pretest with four measures of comprehension and retrieval cognitive strategies and monitoring and planning metacognitive strategies as the dependent variables and the group of RB and TB as the independent variables. As Tables 2 shows, there was no main effect difference among the four measures of the CMRS-Q on the pretest; Pillai's Trace  $F(4, 99) = 1.421$ ,  $p > 0.05$ :

Table 2. MANOVA on CMRS-Q by Groups on Pretest

	Value	<i>F</i>	Hypothesis <i>df</i>	Error <i>df</i>	<i>Sig.</i>	Partial Eta Squared
Pillai's trace	.054	1.421 <sup>a</sup>	4.000	99.000	.233	.054
Wilks' lambda	.946	1.421 <sup>a</sup>	4.000	99.000	.233	.054
Hotelling's trace	.057	1.421 <sup>a</sup>	4.000	99.000	.233	.054
Roy's largest root	.057	1.421 <sup>a</sup>	4.000	99.000	.233	.054

Note. Each *F* tests the multivariate effect of group. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

<sup>a</sup>Exact statistic

Table 3. Independent Samples *t* Test on Different Composites of CMRS-Q by Groups on Pretest

		Levene's Test for Equality of Variances		<i>t</i> Test for Equality of Means					
		<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig.</i> (2-tailed)	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
PreCog	Equal variances assumed	.304	.583	-1.733	102	.086	.115	-.426	.029
	Equal variances not assumed			-1.723	90.828	.088	.115	-.428	.030
PreRetr	Equal variances assumed	1.970	.164	-.321	102	.749	.139	-.321	.231

	Equal variances not assumed			- .329	99.881	.742	.136	-.314	.224
PrePlan	Equal variances assumed	.331	.566	-1.278	102	.204	.121	-.395	.085
	Equal variances not assumed			-1.286	94.982	.202	.120	-.393	.084
PreMonit	Equal variances assumed	3.675	.058	-1.698	102	.093	.130	-.479	.037
	Equal variances not assumed			-1.752	100.820	.083	.126	-.471	.029

Note: PreCom = comprehension strategies on the pretest; PrePlan = planning metacognitive strategies on the pretest; PreMonit = monitoring metacognitive the strategies on the pretest; PreRetr = retrieval strategies on the pretest

The second MANOVA was conducted on the four measures obtained on the posttest. Table 4 displays the results of the MANOVA for the measures on the posttest. The results indicated that a statistically significant main effect, disregarding the four individual dependent variables, was not obtained; Pillai's Trace  $F(4, 99) = 1.87, p > 0.05$ :

Table 4. *Multivariate Test on CMRS-Q by Groups on Posttest*

	Value	<i>F</i>	Hypothesis <i>df</i>	Error <i>df</i>	<i>Sig.</i>	Partial Eta Squared
Pillai's trace	.070	1.876 <sup>a</sup>	4.000	99.000	.121	.070
Wilks' lambda	.930	1.876 <sup>a</sup>	4.000	99.000	.121	.070
Hotelling's trace	.076	1.876 <sup>a</sup>	4.000	99.000	.121	.070
Roy's largest root	.076	1.876 <sup>a</sup>	4.000	99.000	.121	.070

Note: Each *F* tests the multivariate effect of group. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

<sup>a</sup>Exact statistic

Table 5. *Independent Samples t Test on Different Composites of CMRS-Q by Groups on Posttest*

		Levene's Test for Equality of Variances		<i>t</i> Test for Equality of Means						
		<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig.</i> (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
PostCom	Equal variances assumed	.066	.797	-1.065	102	.290	-.124	.117	-.356	.107
	Equal variances not assumed			-1.051	88.291	.296	-.124	.118	-.359	.111
PostRetr	Equal variances assumed	.005	.945	-1.946	102	.054	-.254	.130	-.513	.005
	Equal variances not assumed			-1.946	92.907	.055	-.254	.130	-.513	.005
PostPlan	Equal variances assumed	.010	.920	-1.743	102	.084	-.236	.135	-.505	.033
	Equal variances not assumed			-1.749	93.894	.084	-.236	.135	-.504	.032
PostMonit	Equal variances assumed	.658	.419	-2.595	102	.011*	-.333	.128	-.588	-.079
	Equal variances not assumed			-2.684	101.128	.008	-.333	.124	-.580	-.087

*Note.* PostCom = comprehension strategies on the posttest; PostPlan = planning metacognitive strategies on the posttest; PostMonit = monitoring metacognitive strategies on the posttest; PostRetr = retrieval cognitive strategies on the posttest.  
\*critical alpha set at 0.0125

Table 6. Means and Standard Error of Measurement of Dependent Variables Across Groups

Dependent Variable	Group	Mean	Std. Error	Std. Deviation
PostCom	RB-FCE	3.42	.073	.567
	TB-FCE	3.54	.089	.615
PostRetr	RB-FCE	3.29	.085	.658
	TB-FCE	3.55	.099	.657
PostPlan	RB-FCE	3.45	.088	.688
	TB-FCE	3.68	.103	.674
PostMonit	RB-FCE	3.42	.084	.702
	TB-FCE	3.75	.098	.563

Note. PostCom = Comprehension strategies on the posttest; PostPlan = planning metacognitive strategies on the posttest; PostMonit = Monitoring metacognitive strategies on the posttest; PostRetr = Retrieval cognitive strategies on the posttest.

To examine possible significant differences on the individual dependent variables, multiple comparisons were performed using independent samples *t* tests; the alpha level was adjusted to 0.0125 to have Bonferroni correction for multiple comparisons ( $0.05/4 = 0.0125$ ). Tables 5 and 6 summarize the results. The differences between the RB and TB groups were:

- Comprehension strategies:  $t = -1.065, p = 0.29$
- Retrieval strategies:  $t = -1.946, p = 0.054$
- Planning strategies:  $t = -1.74, p = 0.084$
- Monitoring strategies:  $t = -2.595, p = 0.011$

According to the adjusted alpha level, only the results for the monitoring strategies reached the significant level;  $t(102) = -2.595, p < 0.0125$ , indicating that the participants in the TB group ( $M = 3.75, SD = 0.56$ ) outperformed those in the RB group ( $M = 3.42, SD = 0.70$ ). The results showed that that the TB intervention was more efficient in improving the participants' use of monitoring metacognitive strategies.

## 6. Discussion

The present research was an attempt to investigate the effect of different mediation types on the learners' reading comprehension strategy use. The results of the MANOVA indicated that from the four null hypotheses pertinent to questions 1-4, only one null hypothesis was rejected: RB and TB interventions do not significantly change EFL learners' use of monitoring cognitive strategy. The other three null hypotheses were retained. The results of this study indicate that the

learners improved in one of their use of metacognitive strategies; other cognitive and metacognitive strategies did not change.

The outcomes of this study are in agreement with the findings of Birjandi, Estaji, and Deyhim's (2013) study which revealed that the DA interventions could not change learners' metacognitive strategy significantly although they had taught strategies to the learners. They revealed that there was a significant difference between the experimental and control groups on the reading comprehension posttest. However, the students' use of metacognitive awareness did not change from the pretest to the posttest.

Furthermore, the findings of this study are in line with Guterman's (2002) research that investigated the effect of DA on 300 grade 4 learners' metacognitive awareness using written metacognitive awareness guidance. He found that there was no significant difference between the different groups with respect to reading comprehension metacognitive awareness before and after the experiment. Elsewhere, the study done by Phakiti (2003) showed that there was a weak, but positive, correlation between metacognitive strategy and reading performance; however, cognitive strategy was not found to correlate with reading comprehension performance. All these studies support the idea that cognitive and metacognitive strategies may be resistant to change easily. In the present research, mediation was given during the test. In the RB group, the learners received mediation upon their failure to find the correct answer for each item. This means that some of the learners did not receive all the mediational prompts. However, the participants of the TB group had to complete the simpler task before they answered the original question. As explained earlier, the tasks were constructed based on efficient and inefficient strategies elicited during the TA procedure. That is, the TB group learners were exposed to more direct strategy training than those in the RB group.

This implication is partially supported by the literature. Many studies (Blachowicz, 1999; Houtveen & Grift, 2007; Macaro & Erler, 2008) have supported the positive effect of explicit strategy training on learners' use of strategies. For example, Blachowicz (1999), using the DA approach to mediate two cases' reading comprehension performance, found that the students' metacognition had changed to some extent. The tutorial targeted vocabulary through drawing conceptual map, asking reading comprehension questions, and definition to raise the students' metacognition and metalinguistic awareness. Furthermore, the results of the present research are in contrast with the findings of Houtveen and Grift's (2007) study that directly taught metacognitive reading comprehension strategies to 344 10-year-old children through different stages of "an explicit description of the strategy," "modelling of the strategy in action," "collaborative use of the strategy in action," "guided practice," and "independent use of strategy" (pp. 176-177). They found that

the experimental group made use of metacognitive strategies significantly more than the control group. Also, Macaro and Erler (2008), teaching reading comprehension strategies to 62 young learners learning reading comprehension in French, found that strategy instruction improved the learners' reading comprehension ability and changed their strategy use.

The reason for these controversial results might be due to the nature of the intervention in the present research. In this study, the strategies were incorporated into the reading comprehension instruments as intervention with the test. The strategies were used to either break the tasks into subproblems in TB-FCER or construct interventions based for RB-FCER. As explained earlier, the learners in TB-FCER answered the relevant easier questions before they answered the original FCE questions; however, those in RB-FCER were provided with interventions (starting with the most implicit one and ending with the most explicit intervention) upon their failure to answer each item of RB-FCER.

What is common to Blachowicz's (1999), Macaro and Erler's (2008), and Houtveen and Grift's (2007) studies is that, in these studies, the strategies were directly taught for a long period of time, whereas in the DA related studies (Birjandi, Estaji, & Deyhim, 2013; Guterman, 2002) as well as the present research, the strategies were implicitly trained through hints and interventions. Cross (2009) also asserts the difficulty of change in cognitive and metacognitive strategies over a short time span of strategy training.

## **7. Conclusion**

The present study revealed that the learners' use of cognitive and metacognitive strategies did not change considerably except for monitoring metacognitive strategies which significantly differed on the posttest in which the TB group outperformed the RB group. Other cognitive and metacognitive strategies did not change, though. The nature of cognitive and metacognitive strategies is still far from clear. We may conclude that cognitive and metacognitive strategies require more enrichment programs to change. Having said that, the change in the use of monitoring metacognitive strategy was not surprising; previous research on strategies indicated that planning and monitoring metacognitive strategies are more malleable to change through instruction (Birjandi, Estaji, & Deyhim, 2013).

Another possible reason for not finding significant differences might be related to the nature of strategies. Some scholars assign a cluster nature to strategies. They doubt the idea of a single profile strategy in favor of cluster strategy and strategy combination (Macaro, 2001). The concept of cluster strategy as an indicator of competent readers' failure or success in reading comprehension signifies the confounding nature of strategy. To Cohen (2007), the deployment of cluster

strategy indicates expert language users' consciousness, attentiveness, and goal orientation to learning. Moreover, in the present research, the strategies were identified through questionnaires rather than the TA protocol analysis or recalling. Questionnaires, although are commonly used instruments in data collection for such cognitive facets of mind, are not exact. In case strategy has a cluster nature as Macaro (2001) states, more robust techniques are required to investigate its nature in the course of development.

Considering the fact that cognitive strategies had not significantly changed, one might speculate about the possible effect of the intervention on metacognitive strategies. That is, maybe the learners' metacognitive strategies hindered them from showing their potentials and the RB and TB interventions ameliorated the situation.

Another speculation may hinge on the learners' potential development irrespective of their strategic competence. This statement indicates that learning and testing cannot be dichotomously separated. They merge together to show learners' real status of knowledge. As Hamers and Resing (1996) stipulate, "the training phase within the test is considered as a means of offering children an optimal chance of achieving a fair test result" (p. 27). Lidz (1997) believes that intervention which is the essential part of the DA procedure should aim at raising learners' awareness of strategies essential to the task. However, the results of the data collected through the questionnaires for this study did not show that the interventions could make the learners' use of cognitive strategies different.

### References

- Abbott, S. P., Reed, E., Abbott, R. D., & Berninger, V. W. (1997). Year-long balanced reading/writing tutorial: A design experiment used for dynamic assessment. *Learning Disability Quarterly*, 20(3), 249-263.
- Alptekin, C., & Ercetin, G. (2011). Effects of working memory capacity and content familiarity on literal and inferential comprehension in L2 reading. *TESOL Quarterly*, 45(2), 235-266.
- Anderson, N. J., Bachman, L., Perkins, K., Cohen, A. (1991). An exploratory study into the construct validity of a reading comprehension test: Triangulation of data sources. *Language Testing*, 8(1), 41-66.
- Balazic, J. (1997). *Dynamic assessment of reading abilities*. Unpublished master's thesis, Department of Human Development and Applied Psychology Ontario, Toronto.
- Bednar, M. R., & Kletzien, S. B. (1990). *Dynamic assessment procedures: A validation*. Paper presented at the Annual Meeting of the National Reading

Conference, 40th Annual Meeting, Miami, Florida, November 29th to 1st December. ERIC Accession NO. (ED329921).

- Bialystok, E. (1991) Achieving proficiency in a second language: A processing description. In R. Phillipson, E. Kellerman, L. Selinker, M. Sharwood-Smith, & M. Swain (Eds.), *Foreign/second language pedagogy research* (pp. 63-78). Clevedon: Multilingual Matters.
- Bickhard, M. H. (2005). Functional scaffolding and self-scaffolding. *New Ideas in Psychology*, 23(3), 166-173.
- Birjandi, P., Estaji, M., & Deyhim, T. (2013). The impact of dynamic assessment on reading comprehension and metacognitive awareness of reading strategy use in Iranian high school learners. *Iranian Journal of Language Testing*, 3(2), 60-77.
- Blachowicz, C. L. Z. (1999). Vocabulary in dynamic reading assessment: Two case studies. *Reading Psychology*, 20(3), 213-236.
- Brozo, W.G. (1990). Learning how at-risk readers learn best: A case for interactive assessment. *Journal of Reading*, 33(7), 522-527.
- Clausen, A. R. (1968). Response validity: Vote report. *The Public Opinion Quarterly*, 32(4), 588-606.
- Cohen, A. D. (2007). Coming to terms with language learner strategies. In A. D Cohen & E. Macaro (Eds.), *Language learner strategies: Thirty years of research and practice* (pp. 29-46). Oxford: Oxford University Press.
- Cohen, A.D. (1998). Strategies and processes in test taking and SLA. In L. F. Bachman & D. Cohen (Eds.), *Interface between second language acquisition and language testing research* (pp. 90-111). Cambridge: Cambridge University Press.
- Cook, V. (2001) *Second language learning and language teaching* (3<sup>rd</sup> ed.). New York: Arnold.
- Cross, J. (2009). Effects of listening strategy instruction on news videotext comprehension. *Language Teaching Research*, 13(2), 151-176.
- Dörnyei, Z., & Skehan, P. (2003). Individual differences in L2 learning. In C. J. Doughty & M. H. Long (Eds.), *The handbook of second language acquisition* (pp. 589-630). MA: Blackwell Publishing.
- Grenfell, M., & Macaro, E. (2007). Claims and critiques. In A. D Cohen & E. Macaro (Eds.), *Language learner strategies: Thirty years of research and practice* (pp. 9-28). Oxford: Oxford University Press.

- Griffin, P., & Cole, M. (1984). Current activity for the future: The zo-ped. In B. Rogoff & J. V. Wertsch (Eds.), *Children's learning in the zone of proximal development: New directions for child development* (pp. 45-63). San Francisco: Jossey-Bass.
- Guterman, E. (2002). Toward dynamic assessment of reading: Applying metacognitive awareness guidance to reading assessment tasks. *Journal of Research in Reading*, 25(3), 283-298.
- Hamers, J. H. M., & Resing, W. C. M. (1996). Learning potential assessment introduction. In J. H. M. Hamers, K. Sijtsma & A. J. J. M. Ruijsenaars, *Learning Potential Assessment: Theoretical, methodological, and practical issues* (pp. 23-42). Amsterdam: Swets and Zeitlinger.
- Harris, V. (2003) Adapting classroom-based strategy instruction to a distance learning context. *TESL-EJ*,7(2). Retrieved January 10, 2016, from the World Wide Web: <http://www.tesl-ej.org/wordpress/issues/volume7/ej26/ej26a1/>
- Hatch, E. M., & Lazaraton, A. (1991). *The research manual: Design and statistics for applied linguistics*. New York: Newbury House.
- Hayes, D. J. (2011). *Assessing vocabulary in context using graduated prompting*. Unpublished doctoral dissertation, University of Cincinnati, Ohio.
- Houtveen, A. A. M., & van de Grift, W. J. C. M. (2007). Effects of metacognitive strategy instruction and instruction time on reading comprehension, school effectiveness and school improvement. *An International Journal of Research, Policy and Practice*, 18(2), 173-190.
- Juffer, K.A. (1993) The first step in cross-cultural orientation: Defining the problem. In R. M. & R. M. Paige (Eds.), *Education for the Intercultural Experience* (2<sup>nd</sup> ed.; pp. 201-218). Yarmouth: Intercultural Press.
- Keshavarz, M. H., & Assar, M. (2009). Reading comprehension ability and metacognitive awareness of reading strategies among high, mid and low ambiguity tolerance EAP students. *Iranian Journal of Applied Language Studies*, 1(2), 71-108.
- Kintsch, W. (1998). *Comprehension: A paradigm for cognition*. Cambridge: Cambridge University Press.
- Kozulin, A., & Garb, E. (2001). *Dynamic assessment of EFL text comprehension of at-risk students*. Paper presented at the Ninth Conference of the European Association for Research on Learning and Instruction Fribourg, Switzerland.
- Lidz, C. S. (1997). Dynamic assessment: Psychoeducational assessment with cultural sensitivity. *Journal of Social Distress and the Homeless*, 6(2), 95-112.

- Little, D. (1996). Strategic competence considered in relation to strategic control of the language learning process. In H. Holec, D. Little, & R. Richterich (Eds.), *Strategies in language learning and use (modern languages): Studies towards a common European framework of reference for language learning and teaching* (pp. 11-37). Strasbourg: Council of Europe.
- Luria, L. R. (1961). Study of the abnormal child. *American Journal of Orthopsychiatry*, 31(1), 1-16.
- Macaro, E. (2001). Analyzing student teachers' codeswitching in foreign language classroom: theories and decision making. *The Modern Language Journal*, 85, 531-548.
- Macaro, E., & Erler, L. (2008). Raising the achievement of young-beginner readers of French through strategy instruction. *Applied Linguistics*, 29(1), 90-119.
- McGuire, K. L., & Yewchuk, C. (1996). Use of metacognitive reading strategies by gifted learning disabled students: An exploratory study. *Journal for the Education of the Gifted*, 19, 293-314.
- McNamara, D. S., & Magliano, J. P. (2009). Self-explanation and metacognition: The dynamics of reading. In D. J. Hacker, J. Dunlosky, & A. C. Graesser (Eds.), *Handbook of metacognition in education* (pp. 60-82). New York: Routledge.
- Meyers, J., Lytle, S., Palladino, D., Devenpeck, G., & Green, M. (1990). Think-aloud protocol analysis: An investigation of reading comprehension strategies in fourth-and fifth-grade students. *Journal of Psychoeducational Assessment*, 8(2), 112-127.
- Naeni, J., & Duvall, E. (2012). Dynamic assessment and the impact on English language learners' reading comprehension performance. *Language Testing in Asia*, 2(2), 22-41.
- Nunn, B. (2001). *Task-based methodology and sociocultural theory*. Retrieved March 2, 2016, from the World Wide Web: <http://ltsc.ph-karlsruhe.de/Nunn.pdf>
- O'Malley, J. M., & Chamot, A.U. (1990). *Learning strategies in second language acquisition*. Cambridge: Cambridge University Press.
- Oxford, R. L. (1990). *Language learning strategies: What every teacher should know*. MA: Heinle.
- Phakiti, A. (2003). A closer look at the relationship of cognitive and metacognitive strategy use to EFL reading achievement test performance. *Language Testing*, 20(1), 26-56.

- Pishghadam, R., & Barabadi, E. (2012). Constructing and validating computerized dynamic assessment of L2 reading comprehension. *Iranian Journal of Applied Linguistics*, 15(1), 73-95.
- Poehner, M. E. (2011). Validity and interaction in the ZPD: Interpreting learner development through L2 dynamic assessment. *International Journal of Applied Linguistics*, 21 (2), 244-262.
- Poehner, M. E., & Lantolf, J. P. (2005). Dynamic assessment in the language classroom. *Language Teaching Research*, 9(3), 233-265.
- Poehner, M. E., & Lantolf, J. P. (2013). Bringing the ZPD into the equation: Capturing L2 development during computerized dynamic assessment (C-DA). *Language Teaching Research*, 17(3), 1-20.
- Pritchard, R. (1990). The effects of cultural schemata on reading processing strategies. *Reading Research Quarterly*, 25, 273-295.
- Rogoff, B. (1995). Observing sociocultural activity on three planes: participatory appropriation, guided participation, and apprenticeship. In J. V. Wertsch, P. D. R., & A. Alvarez (Eds.), *Sociocultural studies of mind* (pp. 139-164). Cambridge: Cambridge University Press.
- Salataci, R., & Akyel, A. (2002). Possible effects of strategy instruction on L1 and L2 reading. *Reading in a Foreign Language*, 14(1). Retrieved April 2, 2016, from the World Wide Web: <http://nflrc.hawaii.edu/rfl/April2002/salataci/salataci.html>
- Savignon, S. J., & Sysoyev, P. V. (2002). Sociocultural strategies for a dialogue of cultures. *The Modern Language Journal*, 86(4), 508-524.
- Spector, J. E. (1992). Predicting progress in beginning reading: Dynamic assessment of phonemic awareness. *Journal of Educational Psychology*, 84(3), 353-363.
- Takac, V. P. (2008). *Vocabulary learning strategies and foreign language acquisition*. Toronto: Multilingual Matters LTD.
- Takeuchi, O, Griffiths, C., & Coyle, D. (2007). Applying strategies to contexts: The role of individual situational, and group differences. In A. D Cohen & E. Macaro (Eds.), *Language learner strategies: Thirty years of research and practice* (pp. 69-93). Oxford: Oxford University Press.
- Vygotsky, L. (1986). *Thought and language*. Cambridge: The MIT Press.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge: Harvard University Press.

- Walqui, A. (2006). Scaffolding instruction for English language learners: A conceptual framework. *The International Journal of Bilingual Education and Bilingualism*, 9(2), 159-180.
- Wood, D., Bruner, J., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Child Psychiatry*, 17, 89-100.
- Yang, Y.-F. (2006). Reading strategies or comprehension monitoring strategies? *Reading Psychology*, 27(4), 313-343.
- Zoghi, M., & Malmeer, E. (2013). The effect of dynamic assessment on EFL learners' intrinsic motivation. *Journal of Language Teaching and Research*, 4(3), 584-591.

## Appendix

### The Little Chefs

Hilary Rose travels to Dorset, in the south of England, to investigate a cookery course for children.

There must be something in the air in Dorset, because the last place you'd expect to find children during the summer holidays is in the kitchen. Yet in a farmhouse, deep in the English countryside, that's exactly where they are – on a cookery course designed especially for children.

It's all the idea of Anna Wilson, who wants to educate young children about cooking and eating in a healthy way. 'I'm very keen to plant the idea in their heads that food doesn't grow on supermarket shelves,' she explains. 'The course is all about making food fun and enjoyable.' She thinks that eight is the perfect age to start teaching

children to cook, because at that age they are always hungry. 9

These children are certainly all smiles as they arrive at the country farmhouse. Three girls and four boys aged from ten to thirteen make up the group. They are immediately given a tour of what will be 'home' for the next 48 hr.

10 But one thing is quite clear – they all have a genuine interest in food and learning how to cook.

Anna has worked as a chef in all sorts of situations and has even cooked for the crew of a racing yacht, in limited space and difficult weather conditions.

11 'Kids are easy to teach,' she insists, 'because they're naturally curious and if you treat them like adults they listen to you.'

Back in the kitchen, Anna is giving the introductory talk, including advice on keeping hands clean, and being careful around hot ovens. 12

Judging by the eager looks on their young faces as they watch Anna's demonstration, they are just keen to start cooking.

The children learn the simplest way, by watching and then doing it themselves. They gather round as Anna chops an onion for the first evening meal. Then the boys

compete with each other to chop their onions as fast as possible, while the girls work carefully, concentrating on being neat. **13**

When they learn to make bread, the girls knead the dough with their hands competently, while the boys punch it into the board, cheerfully hitting the table with their fists.

The following morning, four boys with dark shadows under their eyes stumble into the kitchen at 8.30 a.m. to learn how to make breakfast (sausages and eggs, and fruit drinks made with yoghurt and honey). We learn later that they didn't stop talking

until 4.30 a.m. **14**  Ignoring this, Anna brightly continues trying to persuade everyone that fruit drinks are just as interesting as sausages and eggs.

Anna has great plans for the courses and is reluctant to lower her standards in any way, even though her students are so young. **15**

'And I like to keep the course fees down,' Anna adds, 'because if the children enjoy it and go on to teach their own children to cook, I feel it's worth it.' If this course doesn't inspire them to cook, nothing will.

1. This is followed by a session on 'knife skills', which will be important later on.
2. She always uses top- quality ingredients, such as the best cuts of meat and the finest cheeses, so there's clearly no profit motive in this operation.
3. As they wander round, they argue light-heartedly about who has had the most experience in the kitchen.
4. In the garden, they learn about the herbs that they will use in their cooking.
5. Their obvious tiredness may explain why one of them goes about the task so carelessly that the ingredients end up on the floor.
6. This is particularly true of young boys, who are happy to do anything that will end in a meal.
7. As a result, she has a very relaxed attitude to cooking, constantly encouraging the children and never talking down to them.
8. This contrast will become something of a theme during the course.