

The Effects of Attitude & Motivation on the Use of Cognitive & Metacognitive Strategies among Iranian EFL Undergraduate Readers

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Abstract

Studies in reading strategies bring together the assumption that individual characteristics may influence reading performance; different readers may process the same text in different ways, depending on their purposes, motivation, attitudes, interests and background knowledge. The research aims to study the effect of motivation and attitude on the use of cognitive and metacognitive reading strategies among EFL undergraduate students who passed all reading comprehension modules. For this purpose, University of Ahvaz of Iran was chosen as a case study. 72 students have had this feature. Among these students, 51 homogenous students, based on their performance on Michigan Test of English Language Proficiency (2010) were selected to take part in this study to fill two questionnaires and took a reading. After checking the reliability and validity of the instruments, a normality parametric test was used to ensure normality distribution of data using SPSS 20 software. To analyze the data, t-test and Pearson correlation test were performed. The findings of the research pointed to the impact of EFL learners' level of motivation and attitude, on their reading comprehension ability indicating a relatively high direct correlation (0.67). The results also revealed that the highly motivated students were in favor of using cognitive and metacognitive strategies more than less motivated ones. Overall, the finding suggests that learners' individual differences in terms of their motivation and attitude levels should be taken into account in their development of reading comprehension skills and reading strategy use.

Keywords: Attitude, Cognitive strategies, Motivation, Metacognitive strategies, Reading

1. Introduction

Many learners feel that they cannot effectively comprehend what they read. One major reason accounting to this phenomenon is that learners have not mastered and applied effective reading strategies. Successful EFL readers should be able to use the relevant cognitive or metacognitive reading strategies in order to achieve and accomplish their goals. One of the problems which involve both reading printed text and hypertext is that readers are not aware of the cognitive and metacognitive strategies used in comprehending a text (Abdul Rashid, Chew & Kabilan, 2006). Therefore, they are likely to miss out several important points in the text. EFL undergraduate students need to be aware of reading strategies to improve their reading efficiency (Beers, 2003). Research has shown that professional readers make choices as to what to read. When readers encounter comprehension problems, they use strategies to overcome their difficulties. Different learners seem to approach reading tasks in different ways and some of these ways appear to lead to better comprehension. It has been noted that the paths to success are numerous and that some routes seldom lead to success. The hope is that if the strategies of more successful readers can be described and identified, it may be possible to train less successful learners to develop improved reading strategies (Tercanlioglu, 2004).

Research indicates that there is a relationship between learners' motivation level, attitude and their usage of reading strategies, which would affect each other (e.g., Oxford, 1990; Oxford & Nyikos, 1989; Sato, Nakagawa & Yamana, 2008). Motivation provides the primary impetus to EFL learning and then it would make the long lasting and often boring learning process go on. Attaining long-term goals requires both abilities and an adequate amount of

motivation (Dörnyei, 2005). However, “sometimes high motivation and positive attitude can make up for inadequate language aptitude as well as insufficient learning conditions” (Dörnyei, 2005, p. 65). Researchers all agree on the effect of motivation and attitude on language learning (e.g., Dörnyei, 2005; Masgoret & Gardner, 2003). Therefore, it is important for the teachers to be familiar with the aspects of attitude as well as motivation, the way that they can be handled and where and when they could develop those aspects (McDonough, 1989; Colak, 2008). Positive and negative attitude would affect the success and growth of the students as EFL learners. Language teachers often say their students are unsuccessful since they are not motivated and this can be the result of having negative attitude regarding the target language and that would result in discouraging the learners (Colak, 2008).

Reading comprehension is a complex skill that requires readers to combine a variety of reading strategies to interact with the text. As it is argued by Long, Oppy and Seely (1994), if readers are unable to generate inferences that connect explicit information in a text to relevant world knowledge, they feel as though they would not comprehend the text and have difficulty remembering it. All readers need to use their English language knowledge, world knowledge and understanding of print to understand text (Peregoy & Boyle, 2001). However, a small number of studies have been carried out investigating the relationship between motivation, attitude and the use of cognitive and metacognitive strategies in reading comprehension of Iranian EFL learners. The present study attempts to provide data which helps teachers understand more clearly about the effect of learners’ positive or negative attitudes as well as their level of motivation in regard to their choice of selecting cognitive and metacognitive reading strategies. Teachers can use these data to guide their planning and so provide relevant class reading strategies in view of learners’ attitude and motivation in order to help learners improve in the reading comprehension task.

The aim of this study is to find answers to the following research questions as are related to undergraduate Iranian EFL learners, level of motivation and attitude in line with their choice of cognitive and metacognitive reading strategy use.

1. Do attitude and motivation affect the Iranian EFL learners overall comprehension ability?
2. Is there any relationship between the EFL learners’ motivation and attitude levels and their use of cognitive strategies in reading comprehension?
3. Is there any relationship between the EFL learners’ motivation and attitude levels and their use of metacognitive strategies in reading comprehension?

1.1 Motivation & Attitudes

Over several years of study, plethora of research has been carried out internationally to investigate the key factors that affect learning achievements, as well as cognitive, metacognitive and affective strategy use towards learning English as a second or foreign language. Among those factors which would be effective in the learning process, the two important ones were learners’ level of motivation and attitudes. Motivation and attitude are the two key factors that affect EFL learning (Dörnyei, 2005, p. 65). According to Gardner (1985), motivation is “the extent to which an individual works or strives to learn the language because of a desire to do so and the satisfaction experienced in this activity” (p. 10). A motivated learner is the learner who wants to achieve a goal and who is willing to invest time and effort in reaching that goal. On the other hand, attitudes defined as the set of beliefs that learners maintain towards members of the target language group as well as their own culture (Brown, 2007). Attitudes are shaped by the social factors which, in turn, influence learner outcome. Several researchers (Wenden, 1991) consider attitudes as components of motivation in language learning but the question is how they could be measured.

Reading attitudes are learnt characteristics that influence whether students engage in or avoid reading activities and they can be influenced by societal, familial, and school-based factors (Miller, 2003; Willis, 2002). Baker (2003) believed that attitudes are not subject to inheritance because they are internalized predispositions. According to Nourie, and Lenski (1998) “the attitude of classroom teachers toward content area literacy can be one of the most important factors in reading achievement and reading practice of secondary students” (p. 372). Karahan (2007) avers that “positive language attitudes let learner to have positive orientation towards learning English” (p. 84). Those students with more negative attitudes engage less often with texts and generally achieve at levels lower than their age peers (McKenna et al., 1995). As a matter of fact, all the other factors engaged in EFL learning achievement to some extent presuppose motivation and without adequate motivation, even people with the most outstanding abilities cannot achieve long-term goals. High motivation also can make up for significant deficiencies in both individuals language ability and learning conditions (Dörnyei, 1998).

1.2 Cognitive & Metacognitive Strategies

Studies have demonstrated that there are three groups of strategies involved in any academic reading, namely the cognitive, metacognitive, and affective strategies (Alexander & Jetton, 2000). The focus of this study is on the first two strategies (Cognitive & Metacognitive). O'Malley and Chamot (1990) defined cognitive strategies as linking with prior knowledge or experience, making prediction, translating, summarizing, guessing meaning from contexts and applying grammar rules. In relation to Anderson's (1991) three-stage evolution of reading, it is quite clear that the cognitive strategies are relevant to the product and process perspectives of reading. Through metacognitive strategies, a reader allocates significant attention to controlling, monitoring, and evaluating the reading process (Pressley & Harris, 2006). If cognitive reading strategies are the "mental steps" taken in completing the reading task, metacognitive reading strategies are the "monitoring steps" on the cognitive strategies. According to Brown (2007), metacognitive strategies include "checking the outcome of any attempt to solve a problem, planning one's text move, monitoring the effectiveness of any attempted action, testing, revising, and evaluating ones' strategies for learning" (p. 115). Many studies have addressed the positive effects of utilizing metacognitive strategies in the reading process (e.g., Carrell, 1998; Chamot, 2005; Conner, 2006). Carrell (1998) stated that the difference between good and bad strategies is about using the strategies consciously or unconsciously. In order to have effective L2 reading strategy instruction, she suggested the involvement of two important metacognitive factors that can be applied in FL/L2 reading strategy instruction: knowledge of cognition, and regulation of cognition. Various studies have shown that learning can be enhanced if students use metacognitive processes, that is, if they are aware of, monitor and control their own learning (Baird, 1998; Hacker, 1998). In general terms, good learners have been shown to be metacognitively adept and poor ones metacognitively deficient in how they tackle learning tasks in most subjects (Conner, 2006).

To explore learners' attitudes towards language learning, numerous studies have been carried out internationally. In an experiment Hassanpur (1999) administered a background questionnaire and an inventory for learning strategy to 102 Science students studying English as a special course at Shiraz University. Although the strategy mean of students with positive attitude was higher than that of those with negative attitude, the difference was not found significant ($P < 0.05$). She found that integratively-motivated students employ more memory and cognitive strategies than instrumentally-motivated ones. Regarding the four remaining strategies, integratively motivated learners reported to use these strategies more frequently than those with instrumental motivation, but the difference was not significant. Liu (2001) conducted a study on the relationship between reading strategies and reading comprehension achievement. She designed a questionnaire to English major students in a university in China. The research shows that reading strategies adopted by the students were closely related to their reading achievement. High-scoring students used cognitive, metacognitive strategies more frequently than low-scoring students when doing reading comprehension tasks.

Phakiti (2003) utilized a cognitive and metacognitive with retrospective interviews and an EFL achievement test to examine the relationship between Thai learners' cognitive and metacognitive strategy use and the reading test performance. He found that cognitive and metacognitive strategies were both positively correlated with the reading test performance. In his study, Phakiti (2003) also focused on success levels and compared the differences in the strategy use and reading performance among highly successful, moderately successful and unsuccessful learners by means of factorial multivariate analysis of variance (MANOVA) and found significant differences among these learner groups. Many other researchers have also shown that successful learners differ from less successful ones in both the quantity and quality of cognitive and metacognitive strategy use (Oxford, 1989; among others). Caverly (2004) concluded that reading strategy instruction has positive effects on student's metacognitive and cognitive strategic reading performance in developmental courses. Therefore, strategy instruction helped these students be aware of the need for recognizing and applying appropriate and effective strategies when reading. The most significant improvement for the developmental reading students in this study was in metacognitive thinking skills. Takallou (2011) examined the effect of metacognitive awareness on EFL learners reading comprehension among 94 male and female students in Kermanshah, Iran. The collected data from two experimental groups in the reading comprehension test showed that those who received instruction that included 'planning' and 'self-monitoring' had a better performance than the control group. Moreover, data analysis revealed that after giving instruction about metacognitive strategies awareness, the experimental group's performance improved considerably.

Local researchers, Abdul Rashid, Chew and Muhammad Kabilan (2006) conducted a study to investigate the awareness of metacognitive reading strategies used among good Malaysian Chinese EFL readers. They used both qualitative and quantitative methods in carrying out their study. The top 20 students chosen were required to answer Reading Strategies Questionnaires. Then, five of the students were selected for an interview session. Inconsistencies

found between the questionnaire and the interview revealed the lack of confidence among the readers to use metacognitive strategies. Zare-ee (2007) conducted a study with 30 Iranian students to investigate the relationship between the use of cognitive and metacognitive strategies and reading achievement. Based on the results, students with a high level of reading ability used meta-cognitive strategies more than students with a lower level of reading ability. Also, it was reported that there was a significant relationship between cognitive strategies and reading achievement, but no considerable relationship between meta-cognitive strategies and reading achievement.

In a study by Chalak and Kassaian (2010) the attitude of Iranian EFL learners towards English language learning and this target language community was investigated. The results revealed their attitudes towards the English language community to be highly positive. In another study, Solak (2012) explored the role of motivational factors in the academic achievement of Turkish EFL learners. He suggested that most of the motivational factors had a significant difference in the academic achievement of Turkish EFL learners. In a recent study on Iranian students, Khodadady and Khajavy (2013) found that motivation and less self-determined types of external motivation are positively related to students' language anxiety. Further, motivation significantly predicted the English achievement of the EFL learners.

In the domain of both first and second language reading research, recent trends have led to an increasing emphasis on the role of metacognitive awareness of one's cognitive and motivational processes in reading (Alexander, & Jetton, 2000). Indeed, many researchers have agreed that awareness and monitoring of one's comprehension processes are critically important in predicting reading comprehension. Similarly in the L2 research, many researchers have established the role of metacognitive awareness in reading comprehension (Gou, 2008). Therefore, this study is mainly concentrating on the effect of motivation and attitude on the use of cognitive and metacognitive reading strategies among Iranian undergraduate students in the Department of English Language & Literature Faculty of Letters & Humanities in Shahid Chamran University of Ahvaz.

2. Method

2.1 Participants and Procedure

The target population was EFL undergraduate university students (students of English Language Literature and English Language Translation) in the department of English Language at Shahid Chamran University of Ahvaz, Iran (N = 338). Among these students there were 72 (44 females and 28 males) students who had passed all reading comprehension courses. They were native speakers of Persian and some of them were bilingual and spoke Arabic as well. Their age range fell between 19 to 36. At first, the Language Proficiency Test, was distributed in the first session to select a group of homogenous students from the whole population of the participants and to identify the target population, based on the mean score ($\bar{x} \pm SD$). The next phase was to administer the other instruments within a given specific time period. Respondents were expected to complete each questionnaire within the time limitation which was specified separately for each instrument. Since it is tended to detect the effectiveness of the level of motivation and attitude towards the cognitive and metacognitive strategy use of EFL learners while getting involved in L2 reading, based on the result of Attitude Motivation Test Battery, two subgroups were identified: High Motivation, Positive Attitude (HM/PA) group and Low Motivation Negative Attitude (LM/NA) group. After completing attitude motivation questionnaire the learners took part in a reading comprehension test; their performance on this test was analyzed in relation to their levels of motivation and attitude as well as their strategy use, and the final step was to distribute a strategy questionnaire in order to see if students were aware of the cognitive and metacognitive strategies when they were engaged in doing L2 reading tasks.

2.2 Measures

In order to have a reliable and a valid research result, four instruments were used for collecting the data of this study.

One questionnaire was the Michigan Test of English Language Proficiency (2010), included a total number of 120 multiple-choice questions: 40 grammar questions, 20 cloze test items, 40 Vocabulary questions, and 20 reading comprehension questions. Students were given 75 minutes to cover the test. The test is considered appropriate for testing the homogeneity of the students with the reliability scores of 0.71. The Cronbach's Alpha reliability test for testing the internal consistency of the proficiency test conducted with our selected sample shows an acceptable value score of 0.73 which is statistically significant.

The other questionnaire was an English version of Attitude and Motivation Test Battery (AMTB) for Persian speakers adopted from R.C. Gardner (2004) was used in this study. Integrative and instrumental orientation scales of the original 6-point Likert was also used, ranging from 'Strongly Agree' to 'Strongly Disagree'. The adopted questionnaire includes 116 items and is reported to have reliability and validity values of 0.96 (Gardner, 1985).

Because of the time limitation the items with similar topic were omitted, and the final version comprised 96 questions; over all, the given time to the students to go through the questions was 30 minutes. In order to test the internal consistency of AMTB which was used to collect the required data from our selected sample, the Cronbach's Alpha reliability test was done and the results showed a relatively high score of 0.79 which is statistically significance.

A Reading Comprehension Test adopted from the collection of TOEFL Reading Comprehension Tests (1993) was also used as a third measurement instrument in this study. This test was administered to measure the test-takers' ability to comprehend texts using both cognitive and metacognitive strategies. Qian and Schedl (2004) reported that internal reliability of the test was 0.90 for various native language backgrounds. The test included five reading passages followed by 26 multiple-choice items in total. Passage one to four was followed by 5 multiple-choice questions and passage five was followed by 6 multiple-choice questions. The learners' interest and proficiency levels were taken in to account in selecting the passages. The allotted time for doing the test was 45 minutes. The Cronbach's Alpha reliability test of reading comprehension test for our selected sample was 0.76 indicating internal consistency for all items that measures the students' reading comprehension ability.

To find out the view of EFL learners towards the use of reading strategies, according to the level of motivation and attitudes, a Strategy Questionnaire was used. This questionnaire was adopted from the questionnaire developed by Phakiti (2003b), and allows learners to mark strategy use on a 5-point Likert scale: 1 (Never), 2 (Sometimes), 3 (Often), 4 (Usually), and 5 (Always). The length of time needed to complete the questionnaire ranges from approximately 10-15 minutes. The English version of the questionnaire was administered in this study. The estimated reliability of the total test is acceptable (0.88). Strategy questionnaire distributed among our selected sample also showed internal consistency for all items related to students' strategies because the results of the Cronbach's Alpha reliability test were acceptable to have reliability and validity values of 0.77 which is statistically significant.

3. Results

As stated before, the first step in conducting this research was an attempt to homogenize the participants through Michigan Test of English Language Proficiency (2010). Students' scores on proficiency test were calculated out of 120. From 72 participants, 51 homogeneous students whose scores ranged from 45 to 70 were selected to be a part of this study. The students' scores of AMTB test ranged from 245 to 406 with mean of 360 and standard error of 27.92. The students were divided into two subgroups, students with High Motivation and Positive Attitude (HM/PA), and the ones with Low Motivation and Negative Attitude (LM/NA). Among 51 participants, 31 (60.8%) students showed HM/PA and the 20 (39.2%) remaining participants had LM with NA towards learning English as a second/foreign language.

The minimum and maximum scores obtained by participants are 10 and 26 respectively with the mean of 18.49 and the standard error of 3.24. From the selected sample ($N = 51$), 31 person were highly motivated with positive attitude towards learning EFL. The mean score of this group in terms of their reading comprehension performance was about 22 (out of 26). And the remaining 20 participants were less motivated and had negative attitude towards learning EFL. The mean score of this group confirming the obtain results in the reading the reading comprehension test was around 17 (out of 26).

As it has been highlighted before, the focus of this study is on the two basic reading strategies among EFL readers that are known as cognitive and metacognitive reading strategies. Thus the purpose of this test was to find out the view of EFL learners towards the use of cognitive and metacognitive reading strategies Among 51 selected participants, 28 of them (54.9%) used metacognitive strategies, and 23 (45.1%) of the students used cognitive reading strategies while answering the Reading Comprehension Tests. The mean score of participants' performance on strategy use, focusing on cognitive reading strategies, was 3.52 and the maximum score of students' achievement was 4.50, while the minimum score was 2.75. The assessment of the standard deviation was also estimated to be 0.48. The result of the descriptive statistical analysis which focused on the metacognitive reading strategies showed the mean score of 3.60, maximum score of 2.77, minimum score of 4.55, and the standard deviation of 0.38.

To test whether our data is normally distributed, One-Sample Kolmogorov-Smirnov Test was applied. This test is performed in order to identify which statistical method should be used for finding statistical significance of any observed correlation. The results of normality test are shown in Table 1.

Table 1. Descriptive Results of the One-Sample Kolmogorov-Smirnov Test for Normality.

| | | Total Score In AMBT | Total Score In Cognitive | Total Score In Metacognitive | Total Score In Proficiency Test |
|--------------------------------|----------------|---------------------------|--------------------------------|------------------------------------|---------------------------------------|
| N | | 51 | 51 | 51 | 51 |
| Normal Parameters ^a | Mean | 360.4118 | 26.5294 | 74.7255 | 60.8039 |
| | Std. Deviation | 27.92431 | 4.03660 | 10.62088 | 7.02857 |
| Most Extreme Differences | | | | | |
| | Absolute | 0.145 | 0.142 | 0.105 | 0.152 |
| | Positive | 0.112 | 0.142 | 0.081 | 0.102 |
| | Negative | -0.145 | -0.073 | -0.105 | -0.152 |
| Kolmogorov-Smirnov Z | | 1.038 | 1.015 | 0.747 | 1.086 |
| Asymp. Sig. (2-tailed) | | 0.232 | 0.254 | 0.632 | 0.189 |

This Normality Test was done for the related variables including total score in Proficiency Test, Attitude/Motivation Test Battery (AMTB), as well as the total score of Cognitive and Metacognitive Strategy Use in separation. The result shows that all calculated p-values of all tested variables are greater than the significance level of 0.05, given the 95% confidence level. This indicates that the hypothesis of normal distribution for all mentioned variables cannot be rejected.

To come up with an answer for the first research question, the correlation between the scores of AMTB Test and Reading Comprehension Test was calculated. To this end, the Pearson's R Correlation Test which is only for data that is numerical and that is distributed adequately normally would be used, since our data are numerical and normally distributed. The Pearson Test was calculated and the results are shown in Table 2.

Table 2. Inferential Results of the Correlation Test between AMTB & Reading Comprehension Performance.

| | | AMTB | Reading Comprehension TOEFL Test |
|--|---------------------|---------|-------------------------------------|
| AMTB | Pearson Correlation | 1 | |
| | Sig. (2-tailed) | | 0.671** |
| | N | | 0.000 |
| | | 51 | 51 |
| Reading Comprehension TOEFL Test | Pearson Correlation | 0.671** | 1 |
| | Sig. (2-tailed) | 0.000 | |
| | N | | 51 |
| | | 51 | 51 |

** $p < .01$.

There is a statistically significant association between AMTB and Reading Comprehension performance. The Pearson coefficient (0.67) indicates a relatively high direct correlation. Thus in response to the first research question we can say that the level of Attitude and Motivation (AMTB) would affect the Iranian EFL learners overall Reading Comprehension Ability (Reading Comprehension TOEFL Test).

An Independent-Samples T-Test was used to see whether there is a difference between the two mean scores of both subgroups in terms of their performance on the reading comprehension test. The results are presented in Table 3.

Table 3. Independent-Samples T-test on the Mean Scores of Reading Comprehension Test by the Two Subgroups.

| Group Statistics | | | | | |
|-------------------------------|-------------------|----------|-------------|-----------------------|------------------------|
| | <i>AMBT total</i> | <i>N</i> | <i>Mean</i> | <i>Std. Deviation</i> | <i>Std. Error Mean</i> |
| Reading Comprehension Ability | ≥ 360.00 | 31 | 22.1290 | 2.81356 | .50533 |
| | < 360.00 | 20 | 17.1500 | 3.48342 | .77892 |

| Independent Samples Test | | | | | | | | | |
|-------------------------------|---|------|-------|------------------------------|-----------------|-----------------|-----------------------|---|---------|
| | Levene's Test for Equality of Variances | | | t-test for Equality of Means | | | | | |
| | F | Sig. | T | Df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| Reading Comprehension Ability | | | | | | | | Lower | Upper |
| Equal variances assumed | 2.071 | .156 | 2.233 | 49 | .030 | 4.97903 | .88640 | .19774 | 3.76032 |
| Equal variances not assumed | | | 2.131 | 34.490 | .040 | 4.97903 | .92848 | .09313 | 3.86494 |

The significant *t* statistics (equivalent variances; $p < 0.05$), revealed that there is a significant difference between the mean scores of the two subgroups (high motivation with positive attitudes and less motivation with negative attitudes).

To answer the second research question, the relation between participants' scores on AMTB and strategy questionnaire, focusing on cognitive reading strategy was calculated. The finding shows that among total 51 students, 60.8 % of them were highly motivated and had positive attitude towards learning EFL, while 39.2 % were less motivated with negative attitude towards learning EFL. Only 45.1 % of the entire participants (comprising both subgroups) chose to use cognitive reading strategies during the reading comprehension test.

Table 4. Inferential Results of HMPA/LMNA & Cognitive Strategy User Group

| Participant | Cognitive | | | | |
|-------------|-----------|------------|------------|-----------|------------|
| | Total N | HM/PA | Mean Score | LM/NA | Mean Score |
| 51 | 23 | 14 (60.9%) | 3.60 | 9 (39.0%) | 3.43 |

As shown in Table 4, the greater number (60.9%) of the participants who chose to use cognitive strategies in their reading performance were highly motivated and had positive attitude, with the mean score of 3.60. While the smaller number (39.1%) were less motivated participants with negative attitude and the mean score of 3.43. It seems that the highly motivated students tend to lean towards using cognitive strategies slightly more than less motivated students. But the question is that whether the difference between the two groups is statistically significant. To come up with an answer for this question an Independent Samples T-Test calculated (See Table 5).

Table 5. Independent-Samples T-Test on cognitive & metacognitive strategy use by the two subgroups

| | | Group Statistic | | | | | | | |
|---|------|-----------------------------|----------------|-----------------|----------------|-----------------|-----------------------|---|----------|
| AMBT | N | Mean Score | Std. Deviation | Std. Error Mean | | | | | |
| AMBT total | | | | | | | | | |
| 0=Cognitive | 23 | 359.3913 | 30.12057 | 6.28057 | | | | | |
| 1=Metacognitive | 28 | 361.2500 | 26.51712 | 5.01126 | | | | | |
| Independents Samples Test | | | | | | | | | |
| Levene's Test for Equality of Variances | | T-test for Equality of Mean | | | | | | | |
| | F | Sig | T | df | Sig (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence interval of the Difference | |
| | | | | | | | | Lower | Upper |
| AMBT Equal Variances Assumed | .123 | .728 | -234 | 49 | .816 | -1.85870 | 7.93357 | -17.80179 | 14.08440 |
| AMBT Equal Variances Not Assumed | | | -231 | 44.299 | .818 | -1.85870 | 8.03482 | -18.04873 | 14.33134 |

The *t* statistics indicates that the difference between the two subgroups (HMPA/LMNA) is not statistically significant for both cognitive and metacognitive strategy use.

To answer the third research question, the relation between participants' scores on AMTB Test and strategy questionnaire, focusing on metacognitive reading strategy was calculated (see Table 6).

Table 6. Inferential Results of HMPA / LMNA & Metacognitive Strategy Use among the Entire Population.

| | Total participants | High | AMTB Low | Strategy Use Metacognitive |
|--|-------------------------------|------|-----------|----------------------------|
| | AMTB & Strategy Questionnaire | 51 | 31(60.8%) | 20(39.2%) |

Among total 51 students, 60.8 % were highly motivated and had positive attitude towards learning EFL, while 39.2% were less motivated with had negative attitude towards learning EFL. 54.9 % of the participants (comprising both subgroups) chose to use metacognitive reading strategies during the Reading Comprehension Test.

In Tables 7 the result of the metacognitive strategy use among the students with HM/PA and the ones with LM/NA are separately presented.

Table 7. Inferential Results of HMPA/LMPA & Metacognitive Strategy User Group.

| Participant | Metacognitive | | | | |
|-------------|---------------|-----------|------------|-----------|------------|
| | Total N | HM/PA | Mean Score | LM/NA | Mean Score |
| 51 | 28 | 17(60.7%) | 3.66 | 11(39.3%) | 3.5 |

The greater number (60.7%) of the participants who chose to use metacognitive strategies in their reading performance were highly motivated with positive attitude, and the mean score of 3.66. While the smaller number (39.3 %) were less motivated with negative attitude and the mean score of 3.5. Thus the results reveals that the highly motivated students tend to lean towards using metacognitive reading strategies slightly more than less motivated students.

To test if there is a difference between the two groups an Independent-Samples T-test was run. The finding showed that the difference between the two subgroups (HMPA/LMNA) is not statistically significant.

4. Discussion

The purpose of this study was to determine if the level of attitude and motivation of the Iranian EFL learners impact their overall reading comprehension ability and strategy use. In this regard, it was intended to find out whether there exists a statistically significant relation between the use of cognitive and metacognitive reading strategies and the level of attitude and motivation of the Iranian EFL learners. To discuss the results of data analysis presented, the interpretation of the analysis of the collected data in this study will be elaborated on with respect to the theories and frameworks which focused on the relation between the reading performance and EFL learners' motivation and attitude.

The results showed that there is a relatively high positive correlation between level of motivation and attitude, and students' reading comprehension ability. High motivated learners showed significantly higher reading performance. This suggests that EFL learners' level of motivation and attitude does affect their reading comprehension skill and their strategy use. Our finding is in line with the previous evidence showing that readers with a positive attitude and higher motivation toward reading will have higher achievement in reading and comprehension (e.g., Bacon & Finnemann, 1990; Conlon, Zimmer-Gembeck, Creed & Tucker, 2006; Fields, 2011; Kayiran & Karabay, 2012; Taboada, Tonks, Wigfield, & Guthrie, 2009). Motivation is the most important factor that affects the choice of learning strategies (Oxford & Nyikos, 1989). According to Bacon and Finnemann (1990), students' motivations and attitudes play a significant role in the selection of strategies. Students who are not instrumentally motivated may use extra global synthetic strategies, but avoid the use of decoding analytic comprehension strategies (see Bacon & Finnemann, 1990). Reading attitude affects behaviors such as, intention to read and sustaining reading activity, which in turn affect the reading, strategy use, text selection, attention and comprehension (Mathewson, 1994). It has been suggested that there is a positive and significant correlation between reading attitudes and academic achievement (Ghaith & Bouzeineddine, 2003; Sallabas, 2008). Positive attitudes toward reading allow students to enjoy higher levels of academic achievement. Readers with a positive attitude read more, and those who read a lot will be more successful in reading.

The second research question of our study focused on the impact of the EFL learners' level of motivation and attitude and their use of cognitive strategies in reading comprehension. The results showed that, highly motivated students with positive attitude had slightly more tendency to use cognitive reading strategies than the less motivated ones with negative attitude. Our finding is in line with previous evidence showing that there is a positive relationship between the EFL learner's motivation and attitude levels and their use of cognitive strategies in reading comprehension (Anderson, 2003; Guthrie & Wigfield, 2000; Pressley & Harris, 2006). It has been suggested that successful readers have an awareness and control of the cognitive activities they engage in as they read (Baker and Brown, 1984). The benefits of cognitive strategies for reading comprehension have been well established, however, educators need also to consider how reading strategies can be taught and fostered in the light of supporting students' motivation and attitude towards reading. In other words, students need opportunities to use reading strategies in a classroom context where motivation and attitude is equally supported through concrete practices. In accordance with many theories of motivation (Pintrich, 2003), motivation is an energizer which would help students to engage their cognitive processes and strategy use, which in turn leads to growth in comprehension. Learners with higher levels of motivation use a variety of strategies more frequently than those with lower levels of motivation. If students are lacking one or more of critical cognitive or motivational characteristics, they are in danger of being less than optimally motivated and engaged in the learning task (Pintrich, Conley & Kempler, 2003). Therefore, it is important to identify and address students' cognitive motivational needs so that both teaching and learning are more effective (Hidi & Harackiewicz, 2000).

In the third research question, we focused on the impact of the EFL learners' level of motivation and attitude and their use of metacognitive strategies in reading comprehension. The results revealed that the higher the motivation in students, the more metacognitive strategies they use. Our finding is in line with findings of Chamot (2005), Gou (2008), Oxford & Ehrman (1995), Zare-ee (2007), and Wang (2009). According to Zare-ee (2007), students with a high level of reading ability used metacognitive strategies more than students with a lower level of reading ability. They reported a significant relationship between cognitive strategies and reading achievement, but no considerable relationship between metacognitive strategies and reading achievement. Wang (2009) also found a strong correlation between metacognitive awareness and reading comprehension among the learners. In another study by Oxford and Ehrman (1995), the use of metacognitive strategies was positively correlated with high intrinsic motivation. As

MacIntyre and Noels (1996) pointed out, “students who feel more highly motivated will be more likely to expend the effort needed to engage in strategy use” (p. 383). With higher strategy use, learners may perceive a lower level of task difficulty and learn more effectively.

6. Conclusion

Overall, the results of the present study suggest that the level of motivation and attitude could strongly affect the learners overall cognitive and metacognitive strategy use in the process of reading. Findings of this study support the claim that cognitive and metacognitive strategies facilitate students’ reading comprehension. Therefore strategy awareness promotes both performance and understanding of one’s reading comprehension. This study also pointed to the fact that the level of motivation and attitude would affect Iranians overall reading comprehension ability. It has been shown that high motivated group outperformed the other group namely, low motivated one. This suggests that high motivated students could be inspired in the development of L2 learners’ reading comprehension. Meanwhile, focusing on the relationship between the level of motivation/attitude and strategy use revealed that highly motivated students with positive attitude had slightly more desire to use both cognitive and metacognitive reading strategies than the other group with less motivation and negative attitude.

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