

## Metacognitive Awareness of Reading Strategies, Reading Practices and Academic Attainments of University Students

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### Abstract

*This study was conducted to examine the relationship between metacognitive awareness of reading strategies (MARS), and academic attainments (AA) of undergraduate business students. It also investigated the relationship between reading practices (RP) and MARS. There are three different categories of MARS – global, problem solving, and support reading strategies. The Metacognitive Awareness of Reading Strategies Inventory (MARS-I), developed by Mokhtari and Reichard (2002) was used as the instrument for this study where the sample consisted of 571 male and female students of undergraduate business program from private and public universities of Karachi. The results showed Metacognitive Awareness of Reading Strategies significantly predicts academic attainments of university students. The findings suggest that conducting workshops or training sessions for promoting MARS may be helpful to enhance students' concentration towards the reading process that may affect their learning.*

**Keywords:** academic attainments, metacognitive awareness of reading strategies, reading practices, undergraduate students.

## Introduction

Students' reading practices and metacognitive awareness of reading strategies are rising concerns at all levels of education in almost all parts of the world. Students' reading habits are either insufficient or they are not paying attention to what is being read; resulting in their inadequate skills to deduce information from the manuscripts, lack of critical thinking and ability to use contextual clues for understanding of the meaning. Educational institutions give very little attention on developing the reading practices and MARS of their students. Flavell (1976) defined metacognitive awareness as individuals' understanding or knowledge regarding their own mental procedures as well as the related outcomes, thus, MARS deals with readers' own understanding of their reading strategies that they employ during reading. Usually, teachers provide reading comprehensions focusing on measuring the comprehension of a particular manuscript rather than metacognitive strategies for comprehending texts. Graham and Bellert (2004) stressed upon the importance of teachers training their students to help them overcoming students' problems related to reading and understanding. Thus, in order to enhance the students' capability in reading, they should be taught reading strategies at schools (Akkakoson, 2012; Carrell, 1998). Vandergrift (2002) added that MARS are important as the language learning tasks can be overseen, regulated, or directed, and the most significantly, reflection into the learning process is also provided by them.

The aim of this study was to investigate the relationship between undergraduate students' Metacognitive Awareness of Reading Strategies (MARS) and their reading practices for academic purposes (RPA) and their reading practices for non-academic purposes (RPNA). Moreover, it investigated if there was an effect of MARS on undergraduate students' academic attainments; therefore, to investigate the issue, the following questions were raised:

1. Is there a significant relationship between undergraduate students' MARS and their reading practices for academic purposes?
2. Is there a significant relationship between undergraduate students' MARS and their reading practices for non-academic purposes?
3. Does MARS significantly predict undergraduate students' Academic Attainments?

## Hypotheses

*Hypothesis 1:* There is no significant relationship between MARS and undergraduate students' Reading Practices for Academic Purposes.

*Hypothesis 2:* There is no significant relationship between MARS and undergraduate students' Reading Practices for Non-Academic Purposes.

*Hypothesis 3:* MARS does not significantly predict undergraduate students' Academic Attainments.

## Literature Review

There have been many approaches over time to define the term 'reading'. Some believe that reading refers to a basic skill. It means that reading is about decoding each word in the text and automatically being able to interpret its meaning (Schoenbach, Greenleaf, Cziko & Hurwitz, 1999) hence, reading according to this concept is a simple process. Another approach views reading as a process characterized by complexity. This approach argues that voices, memories, knowledge and experiences are reminded to a person through the process of reading. These reminders are from the reader's past experiences, which helps the reader to understand the text with the help of the knowledge he/she holds.

This approach also says that while reading, a reader comes across unfamiliar words and strives to comprehend the meaning of those words within the text. During the process of reading, the reader also relates the text with his/her own opinions and either agrees or disagrees with the presented text. Reading is not about simply decoding the words presented in the text. A reader does not simply depend on words and sentences but also depends on the memories, experiences, knowledge and voices that he is reminded of from the presented text. Decoding successfully is an essential part of reading but for fluent reading one must be able to understand the larger unit of language with ease (Schoenbach, Greenleaf, Cziko & Hurwitz, 1999).

## Reading and Academic Attainment

According to Bashir & Mattoo (2012), academic attainment is the extent of knowledge an individual has inherited from his schooling. Reading habit is a deliberately planned pattern of study which has achieved a significant position in development of a student's understanding toward academic subjects. Students' academic achievements are greatly determined by their reading habits making both academic achievements and reading habits interdependent. Students often differ in the forms of reading habits because they belong to diverse localities as well as environments having various stages of academic attainments. Singh (2011) studied reading habits of higher secondary students, the results showed that genders vary significantly in reading habits as well as academic attainments. On the other hand, Bhan and Gupta (2010) studied the scheduled caste along with non-scheduled caste group of students. The results indicated that gender affects students' reading habits and academic attainments insignificantly.

According to Green (2001), a creative and rational learning requires the habit of individual's own investigation. This self-investigation depends upon self-study with independent thinking and analysis. This act of self-study may also be referred as an individual's own reading practices that entails a habit, thus are called reading habit. More than this, reading habit provides an opportunity for self-learning, self-understanding as well as self-discovery but the most suitable time for having life-long reading habits is an individual's young impressionable age.

Dadzie (2008) defined reading as ones' capability to understand a text. He further explained that reading is not only understanding the meaning of words but also using the knowledge for individual's own learning as well as recognizing the signs or codes and associating them with their appropriate meanings. Palani (2012) added that it is a process of identifying and comprehending the text. He considers reading as a thought processing, assessing, arbitrating, visualizing, rationalizing and solving problems because comprehension skills assist a reader to comprehend words' meanings both in isolation as well as in context. There are different reasons for which people read such as, for information, knowledge, pleasure, relaxation and leisure.

Bashir and Mattoo (2012) explained reading practices as a well-organized system and resolute constant study by pupils for learning and passing at examinations.

Reading habits can therefore significantly predict students' academic performances. Academic attainments should mean the knowledge and understanding of students that they acquire throughout the academic session. Researchers and academicians have been expressing that students' reading practices and their academic achievements are interrelated; thus, students with dissimilar personal characteristics but higher reading habits can perform well in academics. Reading practices support learners in attaining eloquent and desired knowledge (Bashir & Mattoo, 2012).

Palani (2012) opined that reading habit is an essential and important feature for building an educated environment, which shapes people's personalities and enable them to evolve suitable thinking processes to create novel ideas. He further clarified his point of view by stating that the progress in the fields of Mass Media is adversely affecting the interest in reading magazines, books, newspapers and journals etc.

### **Metacognitive Awareness of Reading Strategies**

Flavell (1976) defined metacognitive knowledge as individuals' understanding or knowledge regarding their own mental procedures as well as the related productions. Metacognition confirms that the pupils are able to construct meanings from texts as well as to react on these thought processes and recognize strategies related to reading using their intellectual activities, actions, aims, and experiences. It largely includes awareness or beliefs about the contributing factors and the ways of interaction which influence the progression as well as the cerebral enterprises' results.

Flavell (1979) additionally discussed three forms of metacognitive knowledge: person, task and strategy. Person knowledge contains an individual's beliefs for others as well as his own nature as mental procedures. Task knowledge is deals with readers' information about the objectives, demands, and type of learning tasks and strategy knowledge comprises effective strategies in accomplishing sub goals as well as the objectives in diverse types of cognitive activities (Wenden, 1998). Metacognitive knowledge offers a foundation of awareness related to a learner's s own mental processes while reading. According to Garner (1987), metacognitive experiences are found in three phases of reading: before, while and after. The first phase belongs to an individual's own information, second belongs to strategy information, whereas, the third one belongs to task information.

Skilled and unskilled readers can be differentiated by metacognition in reading. Such readers are distinguished based on their ability to comprehend a text relying on their overall world information and to recognize various ideas given in the manuscripts (Mokhtari & Reichard, 2002). Thus, those who know what they read as well as understand why they read and form strategies to handle the related difficulties and monitor their comprehension of information are called skilled readers. Similarly, those who do not possess all these characteristics to comprehend the meaning of any text are unskilled readers. Such readers concentrate on decoding process instead of producing its meaning. Most significantly, all of metacognition's components support each other to accomplish comprehension and affect a reader's performance.

Mokhtari and Reichard (2002) measured different stages of readers through Metacognitive Awareness of Reading Strategies Inventory (MARS). It was developed to evaluate readers' cognizance as well as the apperceived usage of the reading strategies. Three strategy subscales included global, problem solving, and support reading strategies. MARS comprises 30 items to measure MARS from which 13 items test global reading strategies, 8 items test problem solving reading whereas 9 items test support reading strategies. Its reliability and validity were established for assessing and measuring MARS on the basis of the psychometric data demonstration. It has been used by different researchers to measure the readers' levels of MARS at school, college as well as universities (Fitrisia, Tan & Yousuf, 2015, Veloo, Rani & Hashim, 2015; Wu, Vackle & Van Keer, 2012). A study conducted to look for relationship between pupil's MARS in reading Biology books and their academic attainments in the same subject in Malaysia. The study revealed a weak positive relationship between the both variables (Veloo, Rani & Hashim, 2015). Similarly, Fitrisia, Tan and Yusuf, (2015) aimed to find out relationship between MARS and pupils' performance in reading comprehension in Indonesia. This study also showed a weak positive relationship between the both variables. Wu, Vackle and Van Keer, (2012) strived to seek the validation of a Chinese version of MARS. The study confirmed the higher level of reliability and validity of Chinese version of MARS. Mokhtari, Dimitrov and Reichard (2018) confirmed that the first version of MARS has been translated into several languages, such as Arabic, Chinese, Czech, Persian, French, German, Greek, Indonesian, Japanese, Korean, Polish, Slovenian and Spanish to test MARS. The MARS has been used in many published master's or doctoral dissertations and in refereed journals articles.

## **Methodology**

### **Research Design**

The present study primarily employed a survey design with a quantitative approach. All data collection was completed through a paper-based questionnaire that consisted of close-ended questions.

### **Participants**

For the collection of data, a purposive sampling technique was employed. Only the students, studying from the second year to the fourth year of BBA, were considered for the study. A total of 571 male and female students enrolled in BBA programs of three public and three private sector universities or degree awarding institutes of Karachi participated in the study.

For this study, a structured and established questionnaire MARS designed by Mokhtari and Reichard (2002), was adapted find out for reading strategies of undergraduate business students of public and private universities. MARS consists of 30 items and its validity and reliability has been confirmed in several studies. In addition to MARS, two items were developed to assess participants' reading practices for academic and non-academic purposes. The items focused on the time students spend on reading academic and non-academic texts. Moreover, participants' CGPA of the previous semesters were also asked separately through an item to check the impact of their MARS on academic attainments.

## **Findings**

### **Relationship Between MARS and Reading Practices**

The first two research questions of this study focused on the relationship between students' metacognitive reading strategies and their reading practices (academic and non-academic). A Pearson Product Moment correlation coefficient was computed to see whether the two constructs of interests were significantly related with each other or not. The results suggested to reject the null hypothesis 1: There is no significant relationship between MARS and Reading Practices for Non-Academic Purposes of undergraduate students. Further, the results indicated that

there was a positive correlation between the participants' metacognitive reading strategies and their reading practices for academic purpose;  $r = 0.27$ ,  $n = 571$ ,  $p < 0.001$  (see Table 1). Overall, there was a weak positive correlation between the two variables.

Table 1.

*Correlation between MARS and Reading Practices for Academic Purposes*

	MARS	RPA
Metacognitive Awareness of Reading Strategies (MARS)	1	
Reading Practices for Academic Purposes (RPA)	0.27	1

On the other hand, MARS and Reading Practices for non-academic purpose were not found to be significantly associated with each other;  $r = 0.009$ ,  $n = 571$ ,  $p > .05$  (see Table 2). Thus, we were failed to reject the null hypothesis 2: There is no significant relationship between MARS and Reading Practices for Non-Academic Purposes of undergraduate students.

Table 2

*Correlation between MARS and Reading Practices for Non-Academic Purposes*

	MARS	RPA
Metacognitive Awareness of Reading Strategies (MARS)	1	
Reading Practices for Non-Academic Purposes (RPNA)	-0.009	1

**Effect of MARS on Academic Attainments**

In our third research question, we were interested to see if MARS significantly predict undergraduate students' Academic Attainments. We used simple linear regression to answer this question. The composite variable MARS was entered as the predictor variable whereas academic attainment (CGPA) was entered as the outcome variable. The results of the regression indicated that MARS explains about 35% of the variance ( $R^2=0.35$ ,  $F(1,571) = 120.75$ ,  $p < .05$ ). It was found that MARS significantly predicted undergraduate students' Academic Attainments ( $\beta = .24$ ,  $p < .001$ ). Thus, the null hypothesis 3 was rejected. Please see Table 3 for details.



Table 3.

*Regression Results of MARS and Academic Attainments*

Predictors	Unstandardized Coefficients		Standardized Coefficients	t
	B	Std. Error	Beta	
(Constant)	2.64	0.09		*29.20
Metacognitive Awareness of Reading Strategies (MARS)	0.21	0.04	0.24	*4.55
R <sup>2</sup>	0.35			
Adjusted R <sup>2</sup>	0.33			
F	*120.75			

\*p&lt;.05

### Discussions

The objectives of our study were to seek the relationship between the undergraduate business students' reading practices for academic purposes and their MARS, to find out the relationship between the undergraduate business students' reading practices for non-academic purposes and their MARS and to examine whether there is any effect of the undergraduate business students' MARS and their academic attainments. The results illustrated that there was a weak positive relationship between MARS and Reading Practices for Academic Purposes. As Mokhtari and Reichard (2002) explained that awareness of reading strategies can depend on pupils' abilities to read, their ages and the type of reading material. There is a possibility that they have the awareness of these reading strategies, but they were unable to practice these strategies while they read for academic purposes. Perhaps, they were giving more attention on completion of the tasks instead of understanding or realizing the importance of these reading strategies. In conclusion, they may require to recognize the importance as well as application of those reading strategies for the enhancement of their reading for academic purposes. There is a possibility that the learners would not realize the advantages or the system for applying these strategies, though they are aware of the strategies. Hence, we can say that the learners are aware of the reading strategies but their relationship with their reading practices is very weak, therefore, merely knowing the reading strategies is not sufficient for the pupils, there is a need to successfully apply and monitor these strategies for reading.

Additionally, the result showed that there is no relationship between undergraduate business students' reading practices for non-academic purposes and their MARS. This result indicated that either the students do not realize the importance of reading practices for non-academic purposes or reading for pleasure or even if they read they do not apply the reading strategies while they read for non-academic purposes or for pleasure. Reading is a process of thinking, evaluating, judging, imagining, reasoning and problem solving; therefore, we can conclude that reading, if not being done with these aspects or ways, reading will not bear the desired results (Palani, 2012).

Further, the findings revealed that there is a significant relationship between undergraduate business students' MARS and academic attainments. McLain, Gridley and McIntosh (1991) expressed that good readers, having metacognitive awareness of reading are inclined to apply them and can assist their understanding by using them. Issa, Aliyu, Akangbe and Adedeji, (2012) explained that there is a link between students reading habits and their academic attainments as daily reading activities may significantly affect their studying skills and consequently academic attainment. Hence, we can conclude that more reading with MARS will result in better academic attainments.

### **Conclusion and Recommendations**

To conclude, the result of the study showed that MARS significantly affect students' academic attainments. It has a weak but positive relationship with reading practices for academic purposes whereas, it has no relationship with reading practices for non-academic purposes.

In the Pakistani context, there is a strong need to teach MARS at school level first. The students at the higher level of education have some ideas about MARS but they may not be sure about its application. Therefore, it should be made a part of curriculum at all education levels, to provide students with material for the enhancement of critical thinking skills. Students are found reading mainly for examinations that means reading for non-academic purposes or pleasure is losing its demand. If students are motivated to enhance their reading for non-academic purposes, it will result in better learning and higher academic attainments. Education planners should consider increasing the level of reading practices for academic and non-academic purposes as well as MARS. Educational institutions should come

up with better planning and its rational application to increase reading for both academic and non-academic purposes.

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