Investigating the metacognitive reading awareness of young learners in a Pakistani school

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Abstract

Reading is considered as a lifelong skill. To achieve this skill, researchers believe that development of metacognitive strategies is one of the requirements, especially for second language readers, as it supports understanding and improves comprehension. This quantitative research aimed at investigating young learners' metacognitive knowledge about reading strategies keeping grade and gender as two major variables. For this purpose, twenty students of grade III and twenty students of grade VI studying in a non-elite English medium school were purposely chosen as participants. The data were gathered using a self-report instrument, Metacomprehension Strategy Index, MSI (Schmitt, 1990). The results of the study supported all the hypotheses as the sixth graders were more aware of metacomprehension strategies than the third graders and the girls had higher metacognitive levels than boys. Besides, a summarising and applying fix-up strategy was the highest reported metacomprehension strategy. However, considering the overall population of the study, the results were alarming as the majority of the students were unaware of the reading strategies used for better comprehension. Hence, it is suggested that school teachers should be aware of their own thinking process and model different reading strategies using think-aloud protocols, which would improve young learners' level of awareness of metacomprehension strategies.

Keywords: Reading Strategies, Metacognition, Metacomprehension Strategy Index, Young Learners

Introduction

My interest to conduct this study was developed when I recently studied a course 'Cognition, Metacognition and Reading in my M. Phil coursework. During that course, somehow I started to be more aware of the fact that metacognitive knowledge developing in me is making my learning more contagious. The term 'metacognition' was coined by Flavell in 1976 (Iwai, 2011), which is used "to refer to knowledge about cognition and regulation of cognition" (Baker & Cerro, 2000, p. 100). According to Costa (1984), metacognition is defined as "our ability to know what we know and what we do not know" (p.57). Therefore, Anderson (2002), while discussing this awareness factor, believes metacognition is the real key to learning. It helps the students to take responsibility for their learning (Bonds, Bonds & Peach, 1992). Also, for

reading, which is considered as a lifelong skill, researchers (Bamford and Day, 1998; Hudson, 1998; Wallace, 2001) believe that development of metacognitive strategies is one of the requirements especially for second language readers as it supports understanding. Besides this, effective metacognitive strategies can improve reading performance (Paris & Jacobs, 1984). According to Paris, Lipson & Wixson, (1983), learning to read means understanding the use of strategies for comprehension.

Israel (2007) classified metacognitive reading strategies into three types: planning (used before-reading), monitoring (used while-reading) and evaluating strategies (used after-reading). According to Block & Israel (2005), predicting, imaging, questioning, making connections, inferring and summarizing are some of the strategies, which, according to research, can improve

reading comprehension. Nevertheless, in Pakistani educational system students do not do any of these as Muhammad (2013) remarked that English language teaching, particularly reading in Pakistan is so unsatisfactory. Teaching reading in Pakistani government and non-elite private schools means reading the text aloud, translating it into local language and providing meanings of difficult words (Shamim, 2008). However, reading this way does not necessarily mean that learners are not metacognitively aware as Abromitis (1994) believes that home environment also influences the development of metacognitive abilities. Thus, children may have knowledge of metacomprehension strategies, which is a basic concept in metacognition. It "refers to a person's ability to judge his/her own learning and/or comprehension" (Dunlosky & Lipko, 2007, p.228). Therefore, this research aimed to discover young learners' metacognitive awareness.

Literature Review

As metacognition was and is still a newly discovered area, it has become the centre of attention. Many researchers, experts and novices are studying this phenomenon in more depth and describing it from different perspectives. There is a dense literature available on the assessment of metacognitive knowledge about reading focusing on both adults and children (Baker & Cerro, 2000). According to Baker & Beall (2009), a range of reading strategies, cognitive and metacognitive, is employed by young children. Also, previous studies confirm that young learners are capable of using reading strategies (Brenna, 1995; Jacobs & Paris, 1987; Martin & Kragler, 2011) and they are metacognitive too (Annevirta & Vaurus, 2001).

Myers & Paris (1978) examined children's metacognitive awareness by testing several hypotheses in a mixed-method study. The data were gathered through open-ended interviews of twenty students of second grade and twenty students of sixth grade. Their age ranges from eight to twelve years. The finding disclosed that rereading the text was the only strategy second graders were aware of but they did not know that it would improve their comprehension. They depended on external sources; like, seeking help from others. On the other hand, sixth graders were aware of the reading strategies and knew when and how to use them. In a similar vein, Knight, Pardon & Waxman (1985) did a comparative study investigating the cognitive reading strategies used by ESL and English monolingual students. To collect the data, fifteen English monolingual students and twenty three Spanish-speaking ESL students studying in grade third and fifth were interviewed. The findings of the study showed that monolingual students used more strategies whereas ESL students used fewer strategies. Also, none of the ESL learners used prediction, imaging, noting details or self-questioning as a reading strategy.

Moreover, Sentim & Maniam (2015) carried out a research following a mixed-method design in Malaysian context. Their aim was to assess the types of cognitive and metacognitive reading strategies used by Malaysian school students. For this purpose, ninety Form four students were asked to fill in a questionnaire and they were also interviewed. The data revealed that inferring, translation and repetition were the more frequently used strategies whereas prediction, summarizing, note-taking and monitoring were the strategies students sometimes used. Further, Kragler, Martin, & Schreier (2015), in their longitudinal study, investigated the use of reading strategies of the young learners progressing from first to third grade. The data collected through interviews and observations showed that in order to direct their learning, those students used a variety of reading strategies such as: predicting through pictures, rereading, skipping words, asking for help etc.

In addition, Jaleel & Premachandran's (2016) quantitative study analysed the metacognitive awareness of secondary school students keeping gender, locality and type of management of school as variables in an Indian context. The data were collected using a questionnaire, which was filled by 180 school students. It displayed no significant difference in the learners' metacognitive awareness based on any of the variables. There are a few more studies investigating young children's metacognitive knowledge in general, which have disclosed that young children aging less than nine years have metacognitive knowledge (Annevirta & Vaurus, 2001, 2006; Marulis, Palinscar, Berhenke & Whitebread, 2016).

In Pakistani context, a few studies have been carried out on adult learners inquiring about their reading habits and their use of strategies; like, Ansari, Panhwar, & Umrani (2016) and Khurram (2017). The only study in the area of metacognition was conducted by Khurram (2018a). It presented the relationship between reading performance and metacognitive awareness and strategy use of undergraduate learners. Her study employed correlational design. The data were collected through SORS (survey of reading strategies) and performance test of thirty two university students. The findings disclosed that there was no positive correlation between the two selected variables. It showed that the learners despite being metacognitively aware could not perform well. Nevertheless, despite the fact that many researchers are exploring this area and sufficient studies have been published too (Annevirta & Vauras, 2001; Myers & Paris, 1978; Sen, 2009), no research has been done in Pakistani setting investigating young learners' use of reading strategies or assessing their metacognition (Khurram, 2018b). The grounds for this study were provided by Khurram (2018b), in her state-of-the-art review, where she talked about the inadequacy of research in the area of reading and metacognition in Pakistan. Nonetheless, the contribution of the current study is only regarding English as a second/foreign language.

Objectives

- To find out the metacomprehension strategy awareness of young learners.
- To find out whether there is any notable difference in the metacomprehension awareness of students based on their grades.

- To find out whether there is any notable difference in the metacomprehension awareness of students based on their gender.

Hypotheses

- Sixth grade's children may know more strategies than third grade's children.
- There will be a notable difference in the metacomprehension strategy awareness of the children of third and sixth grade based on their gender.
- Girls may have a higher level of metacognitive awareness than boys.

Methodology

This quantitative research is a survey-based study that was conducted with the purpose of investigating young learners' knowledge of metacognitive reading strategies. For this study, forty young learners studying in a non-elite English medium private school, located in the south side of Sharah-e-Pakistan, Karachi were chosen through multi-stage sampling. They were first divided according to their gender and then every second student was selected to get the required number of students regardless of their reading ability. Out of this number, twenty students were from grade III and twenty students were from grade VI. The ratio of girls and boys was 10:10 per class. As a prerequisite for the study, the consent was taken from the principal of the school allowing the researcher to collect the required data. Also, the learners were informed about the purpose of the study.

Later, in order to assess the learners' reading strategy knowledge, they were asked to fill in a questionnaire. For this purpose, Metacomprehension Strategy Index, MSI

(Schmitt, 1990) was used. MSI is a twenty five items multiple choice test, which can be easily run without putting "less verbal and less articulate children at disadvantage" (Stahl, 2009, p. 441). It aims to measure children's level of awareness of metacognitive reading strategies. The questionnaire was administered in the school premises. However, the participants had problems in reading, therefore, the researcher sat with them individually and explained each item of the questionnaire so that they could easily fill it. The data collection continued for two weeks as filling up of each questionnaire took an average of fifteen minutes. Later, the data was analysed quantitatively, where descriptive statistics was used to test the hypotheses.

Data Analysis and Interpretation

This section deals with the analysis of the data collected through a self-report instrument, MSI to test the above mentioned hypotheses, where the young learners' knowledge of metacomprehension strategies according to their gender and grade is examined. The score can range from 0-25 – one point for each correct strategy, which means the lower the score, the lower the level of awareness whereas higher MSI score would mean more awareness of metacognitive reading strategies.

Firstly, the data were analysed quantitatively where the percentage values were calculated using Microsoft Office Excel. Further, the items in the questionnaire were classified into six metacognitive strategies: Predicting and Verifying (Question 1, 4, 13, 15, 16, 18, 23), Previewing (Question 2, 3), Purpose Setting (Question 5, 7, 21), Self-questioning (Question 6, 14, 17), Drawing on Background Knowledge (Question 8, 9, 10, 19, 24, 25) and Summarising and Applying Fix-up Strategies (Question 11, 12, 20, 22).

Table 1: Executive Summary of the young learners' level of awareness of metacognitive reading strategies

Metacomprehension Strategies	MSI Score in numbers				Overall percentage
	Grade III		Grade VI		
	Boys n=10	Girls n=10	Boys n=10	Girls n=10	
Predicting and Verifying (out of 70)	08	08	20	46	29.28%
Previewing (out of 20)	01	05	07	12	31.25%
Purpose Setting (out of 30)	02	02	07	11	18.33%
Self-questioning (out of 30)	00	00	08	19	22.50%
Drawing on Background Knowledge (out of 60)	03	03	12	16	14.16%
Summarising & Applying Fix-up Strategies (out of 40)	12	10	14	26	38.75%
TOTAL SCORE	26 10.4%	28 11.2%	68 27.2%	130 52%	252 25.2%

Table 1 reveals that less number of students, i.e. 25.2 percent, one fourth of the total population, are aware of the reading strategies used for better comprehension. Out of the six metacognitive strategies mentioned in MSI,

38.75 percent of the young learners reported that it is a good idea to summarise or apply fix-up strategies whereas 31.25 percent of the participants believed that previewing should be used before reading. Besides,

29.28 percent of the learners stated that it is better to use predicting and verifying as a metacomprehension strategy. Nevertheless, purpose setting, self-questioning and drawing on background knowledge were the less reported strategies.

Results and discussions

Metacognitive strategy awareness of children of third and sixth grades

Afterwards, young learners' level of awareness of metacomprehension strategies was compared on the basis of their grades. Only 11.42 percent of the third graders knew predicting and verifying as a reading strategy while the percentage value of sixth grade's children's awareness of this strategy was 47.14. The children of class three gave importance to counting the pages or preferred to ask someone else to read for them rather than predicting or previewing. Additionally, none of the third graders knew self-questioning as a strategy whereas 45 percent of the sixth graders reported the use

of self-questioning as a better reading strategy. Also, very few third graders were aware of the reading strategies, purpose setting and drawing on background knowledge. Rather, they tended to refer to external sources such as relying on a dictionary or asking others for help and many of them also believed that pronouncing the words correctly and reading aloud are also good strategies. Nonetheless, almost half of the sixth graders considered previewing and summarising or applying fix-up strategies to be the better metacomprehension strategies.

To find out the overall metacognitive awareness of third and sixth graders the mean and the percentage values were calculated so that the first hypothesis can be tested. The gained values are tabulated below in Table 2, which revealed that the children of sixth grade knew more strategies than the children of third grade. With a range from 0-25 points, the mean score of third graders was 2.7 while the sixth graders' mean score was 9.9, exhibiting the difference of 7.2. Besides, the figure 1 visually represents the difference, which is 28.80 percent.

Table 2: Results showing difference between percentage and means of scores of metacognitive awareness of third and sixth graders

	Gender	Mean Score		Percentage Value	
Grade Third	Girls	2.8	2.7	11.20%	10.80%
	Boys	2.6		10.40%	
Grade Sixth	Girls	13	9.9	52%	39.60%
	Boys	6.8		27.20%	

Figure 1: Difference between the metacomprehension strategy awareness of the children of third and sixth grades

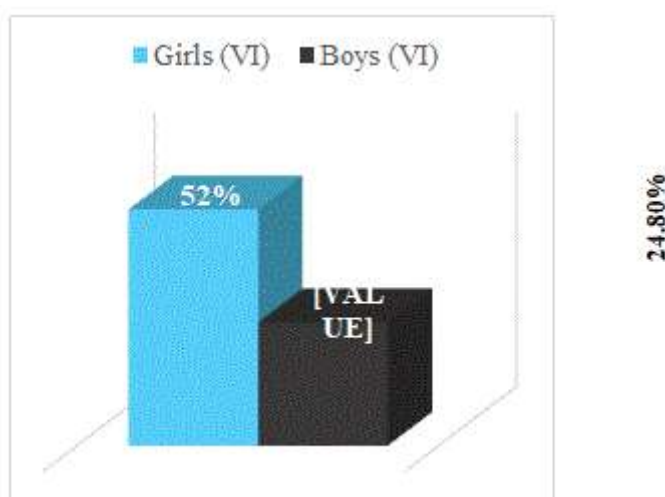*Metacomprehension strategy awareness of third graders based on their gender*

When the data collected from third graders was categorized on the basis of gender, it did not display any notable differences among the metacomprehension strategy awareness of girls and boys. Table 1 discloses that they had the same level of awareness as far as predicting and verifying, purpose setting, self-

questioning, drawing on background knowledge and summarising and applying fix-up strategies were concerned. However, only a few of the girls gave more weightage to previewing. Table 1 also uncovers that there is only 0.8 percent difference in the reading strategy awareness of third graders based on their gender, which is negligible; still the girls had a higher level of awareness than boys.

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Metacomprehension strategy awareness of sixth graders based on their gender

The calculated data in Table 1 also reveals that the metacognitive awareness of sixth graders varies with the gender. The findings of the study reported that the level of metacomprehension strategy awareness of girls was almost double than that of boys of sixth grade. On one hand, 65.71 percent of girls gave preference to predicting and verifying. On the other hand, the majority of the boys thought that it is a good idea to make a list of the words used in the story so that they could look for the meanings of those words in the dictionary. The boys also thought that it is better to reread the story to make sure that they have not skipped any word of the story. Nonetheless, both, the boys and girls, instead of activating prior knowledge, chose to read-aloud stories. That is why; there was a less difference in the score of this strategy. The mean score of metacognitive awareness of boys was 6.8 and that of girls was 13 respectively, disclosing the difference of 6.2. Figure 2 visually represents this difference in terms of percentages that is 24.80 percent. Thus, it is inferred that there is a notable difference in the metacognitive awareness of the girls and boys of sixth grade confirming the second half of the second hypothesis.

Figure 2: Difference between the metacomprehension strategy awareness of girls and boys of sixth grade

Additionally, to test the third hypothesis mean and percentage values were computed. Table 3 illustrates that the girls' mean score was 7.9 whereas the boys' mean score was 4.7, resulting in the difference of 3.2, which in percentage is 12.80. Also, both the analysis of third and sixth graders based on gender show that the young girls have a higher level of metacognitive awareness than young boys. However, this difference is more notable because of the girls of sixth grade.

Table 3: Results representing difference between percentage and means of scores of metacognitive awareness of young children based on their gender

	Grade	Mean Score		Percentage Value	
Girls	Third	2.8	7.9	11.20%	31.60%
	Sixth	13		52%	
Boys	Third	2.6	4.7	10.40%	18.80%
	Sixth	6.8		27.20%	

Discussion and Conclusion

The overall objective of this study was to investigate the young learner's metacognitive knowledge about reading. Considering the whole population of the study, the results showed that the young learners were less aware of metacomprehension strategies. The results revealed that most of the young learners did not know the basic metacomprehension strategies used before, while and after reading. This finding is contrary to previous studies of Brenna (1995), Kragler, Martin, & Schreier (2015) and Martin & Kragler (2011), which confirm young learners' knowledge and capability of using reading strategies. However, this finding supports Shamim's (2008) study, which uncovered that reading in most of the schools of Pakistan means read-aloud and translating the text into L1, where there is no reference to the reading strategies used for comprehension. Despite the fact that very few students knew the correct metacomprehension strategies used for reading, the results validated all the hypotheses set for the study. Firstly, the findings showed that the sixth graders, more than the third graders, were aware of the metacomprehension strategies. Instead the children in third grade reported the use of wrong strategies. It

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proved the first hypothesis as there was a notable difference between their levels of awareness based on the grades. This finding is in line with the literature, which shows that sixth graders are more aware of the reading strategies than the students in lower grades (Myers & Paris, 1978). This finding is also consistent with Jacobs & Paris's (1987) study, which reported the difference in the knowledge of reading strategies of children on the basis of grades.

Secondly, the findings of the study did not disclose any noticeable difference between the metacomprehension strategy awareness of the girls and boys of third grade. Rather, their metacognitive level was more or less the same, revealing that beginning readers, both boys and girls, had controlled understanding of reading. Nevertheless, the results displayed a visible difference in the metacomprehension strategy awareness level of girls and boys studying in sixth grade, which substantiated half of the second hypothesis of this study. The findings also proved the third hypothesis that the girls had a higher level of metacognitive awareness than boys as most of them reported the use of correct metacomprehension strategies. This finding echoes the literature, which demonstrates that girls know more reading strategies than boys (Jacobs & Paris, 1987; Rahimi & Katal, 2012). Thus, the findings of this study corroborate the existing literature and present the difference in the metacomprehension strategy awareness of young learners keeping grade and gender as two major variables. These results might prove to be useful for the teachers in this field.

Recommendations and Limitations

The findings of the study have implications for teachers, researchers and parents. To begin with, teachers should understand that students need to be metacognitively aware as it would improve their reading comprehension. Flavell (1987) also encouraged the development of metacognition in school children. Hence, teachers should model different reading strategies through think-aloud and provide guided practice so that learners can better comprehend when they are at the stage of read-alone and this collaborative working, as Duke and Pearson (2002) say, will help the students and teachers share the responsibility of employing the strategy and improve their learning. Think-aloud introduces learners to metacognition (Dorl, 2007) and helps them use reading strategies effectively (Duke & Pearson, 2002). Furthermore, at early age parents should read frequently to their children as it enhances comprehension and they can model metacognitive strategies too. Therefore, before making the learners metacognitive, there is a need for responsible and metacognitively aware parents and teachers. Thus, the researchers should investigate teachers' knowledge of metacognition as Anderson (2008) states that to promote metacognition we should have metacognitively aware teachers

Nonetheless, there were a few limitations of this study. Firstly, it only focused on a non-elite English medium school and the sample size of the study was small. That is why, findings of this study cannot be generalized for the larger population. Secondly, since MSI is a self-report instrument, there is a possibility that it might not correctly reflect young learners' actual awareness. Moreover, MSI does not affirm that the young learners actually use these reading strategies, nor it shows the usage frequency of the strategies reported by the young learners. Therefore, this study might motivate ESL teachers or researchers to explore young learners' capability of using reading strategies. It is also recommended that there should be an extended questionnaire along with the MSI, which can measure the usage frequency of the metacomprehension strategies focused in MSI. Also, further studies may utilize other tools to investigate young learners' knowledge of metacognition. Besides, it is suggested that additional research is needed to see if metacognitive reading strategies can improve reading comprehension of young learners.

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