The Role of Beliefs and Metacognitive Awareness in the Strategic Reading Behavior of ESL Learners

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Abstract

In the present study, the relationship between ESL advanced students' beliefs, metacognition and their strategic reading performance was examined. The study was divided into two phases. In the first phase of the study, three questionnaires were used to investigate the relationship between metacognitive awareness and learners' beliefs. In the second phase, learners' strategic reading behavior was explored through think-aloud protocol analysis, retrospective questions and interviews. Through correlational analyses conducted with the entire sample, it was clear that significant positive correlations exist between BALLI and BAR (r =.393). The one-way Anova analyses indicated that the belief variables (BALLI and BAR) accounted for a greater portion of total MQ variance (mean square =.141). The result of the second phase of the study indicated that though the metacognitive knowledge was shown to play no significant role in the strategic reading behavior of the subjects, it proved useful in facilitating the reading performance of the readers. In short, the findings of the study suggest an interaction between beliefs, metacognitive knowledge and strategic reading behavior o f learners. This may mean that in reading instruction, a consideration of these variables can lead to better reading performances.

Keywords: beliefs, metacognitive awareness, metacognitive knowledge, reading strategies

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Introduction

Metacognition as a relatively new term from cognitive psychology has been investigated widely in a number of studies that addresses learners' knowledge and use of their own cognitive resources (Garner, 1987).Given the findings of previous research, there appears to be a strong relationship between reading strategies used by readers, metacognitive awareness and reading proficiency (Baker & Brown, 1984; Garner, 1992; Pressly & Afflerbach, 1995).In essence, more successful readers seem to use more strategies than less successful ones and also appear to use them more frequently. Research has also suggested that instruction on using certain strategies benefits poor readers more than proficient ones in their comprehension of the text. In this regard, some researchers contend that it is more effective to help learners become metacognitive about their use of strategies in their own repertoire than to teach them to use different and new strategies (Dole, J. A., Brown, K.J., & Trathen, W. 1996, cited in Israel, 2005). It implies that teachers need to teach students to develop metacognitive awareness to help them develop the knowledge that allows them to understand the nature of the task to be able to take steps to complete it in the best possible way. However, although metacognitive awareness is considered a key to successful learning and effective reading, the factors that might affect the metacognitive knowledge of the learners have not been fully investigated. It is evident through research that different students may have different metacognitive knowledge with different set of metacognitive strategies closely related to their cognitive abilities, but what causes the variation is not clear.

On the other hand, as Aebersold and Field (1997) put it, "readers' engagement in the reading process is based on their past experiences, both in learning how to read and also in the way reading fits into their lives" (p.21). Thus, readers' beliefs about learning in general and reading in a second or foreign language in particular can impact the way they read. This belief is part of the cultural orientation of the learner which is shaped and influenced by the culture, community and the educational career of the learner.

Research in the area of beliefs has recognized the importance of the role learner beliefs play in learning and how they contribute to human development, motivation, and thinking (Weinstein, 1994). However, much of research on beliefs has concerned language learning beliefs and their effects on the learners' use of strategies (Wenden 1998a, 1998b; Oxford, 1990). The stated aim of much of this research has been to enable teachers and learners to use the insights gained from an examination of learners' beliefs to develop an effective set of strategies to improve their language learning. Many of these studies have also focused on the strategies of successful learners with the purpose of equipping less successful learners (e.g. Garner, 1987). But whether beliefs of the learners interact with their metacognitive knowledge to affect their choice of strategies have rarely been investigated. Therefore, this article aims at demonstrating how these variables are crucial in learners' decision to choose one strategy over another to help them successfully comprehend their academic texts.

Research Focus

Based upon the social constructivist model of learning (Williams and Burden, 2002) adopted in this study, learners bring their own individual characteristics,

personalities, attributions and perceptions of themselves to the learning situation. What is clear from cognitive psychology is that learners are actively involved in making sense of the tasks or problems with which they are faced in the process of reading. When confronted with a learning task, learners have a variety of resources at their disposal and make use of them in different ways. Metacognitive strategies and individual learners' beliefs about the task are only two of the resources people have available to them. Therefore, by raising teachers and educators' awareness of the influence of such factors on the reading process of learners, they can understand why and how they can help their learners confront and overcome their reading problems. The following research questions were raised to investigate the problem more comprehensively:

1. Do differences in beliefs about reading relate to differences in metacognitive knowledge about reading?

2. Are there patterns of intra- individual differences in beliefs about reading and metacognitive knowledge?

3. If they exist, do intra-individual differences in beliefs and metacognitive knowledge relate to strategic reading performance?

4. Are there noteworthy differences in the range of reading strategy between advanced level L2 readers with high metacognitive knowledge and those with low metacognitive knowledge?

5. Do L2 readers in general rely on one type of reading strategy, or utilize both types of strategies, reader-driven and text-driven, interactively?

Methodology

Given that the research aim was to explore the relationship between the three key variables in the study, both quantitative and qualitative research were conducted in which different data collection procedures were employed to work out the problems under investigation. The methodology included two phases: Phase one focused on an investigation of the relationship between students' beliefs and their metacognitive knowledge about reading. This relationship was first examined within the entire sample using three questionnaires: MQ (Metacognitive Questionnaire developed by Carrell (1989), BALLI (Beliefs About Language Learning Inventory) by Horwitz (1988) and BAR (Beliefs About Reading) developed by the researcher. Students were then compared to determine whether they displayed different patterns of beliefs and metacognitive knowledge about reading.

In the second phase of the study the entire sample was divided into two groups based on their metacognitive knowledge (high metacognitive knowledge (HM)/low metacognitive knowledge (LM) to determine whether individual differences existed in their reading strategies. To do so, think-aloud reading technique, retrospective questions as well as semi-structured interviews were used to enquire the impact of subjects' beliefs and their metacognitive awareness on their strategic reading performance.

Participants

The participants for the first phase of the study were 200 postgraduate students majoring in English literature and who were selected from Punjab University, DAV College, and Government College in India. Some of the

questionnaires were not filled completely, therefore were removed from the study leaving 178 subjects. The age of the subjects ranged from 20 to 26. The majority (88.8%) was females and the rest (11.2%) were males.

From among the subjects participating in the first phase of the study, 15 subjects were randomly selected. They were divided into two groups of high metacognitive knowledge about reading (HM) and low metacognitive about reading (LM) based on their responses to the metacognitive questionnaire. That is, 8 fell in the high metacognitive category and 7 in the low metacognitive subgroup. Their reading strategy was explored in terms of their abilities to monitor their comprehension, the types of strategies they used and discussed with respect to the texts, and their conceptual understanding of the text and their reading performance. The data for this phase were primarily descriptive and the procedures, materials and methods of analysis were exploratory in nature. In order to make sure that the language proficiency of the participants would not affect the intended results, initially, some thirty-two students were selected from the entire sample, fifteen from the HM group and seventeen from the LM group. Then a test of TOEFL was administered to these students and from among them fifteen were selected with approximately the same language proficiency level so that the choice of reading strategies and their comprehension of the test would be attributed to their metacognitive knowledge and not their language proficiency.

Instrument

Three questionnaires were used for the first phase of the project:

The Metacognitive Questionnaire (MQ) (Carrell, 1989) was used to measure students' metacognitive awareness about their reading strategies. This questionnaire has shown good internal consistency (KR20=.87) (Lonberger, 1988).

The Beliefs About Language Learning Inventory (BALLI) (Horwitz, 1988) was used to explore the subjects' beliefs about learning a second language which can in turn influence their beliefs about reading in that language. A modified version of BALLI was used for the purpose of this study. This modified version of the questionnaire included 18 questions from among 34 which were closely related to the purpose of the investigation.

Beliefs About Reading (BAR) questionnaire was the third one used for the purpose of this study. It was developed by the researcher since there was not any specific questionnaire available in the literature to try to tap beliefs about reading in the certain way intended in this study. In constructing this questionnaire care was taken to follow the steps required in designing and constructing an appropriate one so that it would not prejudge the existence of some beliefs, but would leave the judgment to subjects. It was a 5 point Likert scale with 12 items which was intentionally kept short in order to be consistent with and include those beliefs collected from several sources. The questions were framed clearly so that the respondents could understand what was meant and provide the relevant information. Additionally, to ensure the clarity and comprehensiveness of the BAR, it was pilot-tested with a number of students with appropriate characteristics similar to the intended population. The internal consistency for the BAR came out to be. 67. In

fact, an item analysis revealed that certain questions demonstrated low item-to-scale correlation (.00-.26) and thus were removed. The construct validity of BAR was also satisfactory since it was developed in several stages; items resulted from free-recall protocols of ESL teachers and students. In each case, subjects were asked to identify their own beliefs about reading as well as other peoples' beliefs. As the main concern of this phase of the project was to elicit the beliefs of learners about reading in a second language, it was decided to keep the items in the subjects' own words wherever possible.

For the second phase of the study, three passages from the academic courses of the learners (as well as one outside their syllabus which included some comprehension questions) were selected for study B. They were chosen with various reading abilities in terms of lexical density, structural complexity and explicitness of the text. The passages were controlled for content schemata; all three passages were selected from the academic materials required to be studied during their MA education. In addition, the texts were controlled for formal schemata; one was a problem/ solution type and the others were argumentative type of organization. Length as well as lexical and syntactic complexity was also controlled: each text was between 334 and 599 words in length and one text was more difficult than the others on readability index which takes word and sentence length into account.

One of the issues of concern in this study was to determine whether a group of learners form the same social and cultural background would show similar beliefs and therefore similar tendency in using particular strategies. This was based on a gap in the literature which has tried to document individuality in learner beliefs and

approaches to language learning and have overlooked the probable prevalence of certain common beliefs among typical groups of language learners.

In order to discover similarities or differences in their approach towards the text, subjects' strategic responses were categorized. Their strategies were initially categorized as text-driven or reader-driven which were adopted from Carrell's (1989b) distinctions between local, bottom-up, decoding types of strategies and global, top-down types of reading strategies. However, during the process of data collection some other categories of metacognitive strategy emerged which could not easily be classified into either of these. Therefore, for the categorization process the strategic behavior of the subjects were scrutinized for any sign of certain tendencies in using strategies in a purposeful manner, or whether they brought into play their own thoughts and experiences to comprehend the text, and also the degree of their awareness of the interaction between textual information and their own thoughts and experiences which were among the criteria that Pintrich, Marx, and Boyle (1994) used in their research. Considering these criteria, the participants' responses were divided into four categories of local (text-driven) strategies, inferential Strategies, perspective-taking Strategies, and global (Reader-driven) strategies.

Design and Procedure

The present study used both qualitative and quantitative designs in order to answer and depict each of the research questions asked for the purpose of the study. In doing so, the results of the first phase of the study were analyzed using quantitative methodology while the data related to the second phase were analyzed qualitatively.

In the first phase, three questionnaires were administered to subjects within a single session of approximately 25 to 30 minutes conducted by the researcher within school hours. The questionnaires were conducted in the following order: MQ, BALLI, and the BAR. All the students were informed about the intention of the study and were given proper instruction before beginning the questionnaires.

For the second phase of the study three data collection tools were used: 1. verbal (or think-aloud) protocol analysis; 2.retrospective questioning 3.semi-structured interview.

For the Think-aloud Procedure, all participants were met individually and were informed about what to do and what was expected of them. They were also informed that their verbal report would be recorded to be later transcribed. Each subject was then trained about the procedure; this was done because it is believed that to encourage subjects to report their comprehension processes as much as possible, they need to be trained well (Lin, 2002).

Retrospective Questions involved a series of questions which were designed to measure the type of strategies that the students used in reading the passage. Subjects' responses to the retrospective questions were recorded and transcribed to be analyzed carefully later. A semi-structured interview was used to obtain information about the participants' personal background, their English language learning experiences, and their attitudes towards reading academic texts, their personal opinions about important factors in L2 reading and difficulties of L2 reading.

Results

Phase one: Subjects' Questionnaires

In this section, the results for the first part of the study will be discussed addressing all the research questions asked for the purpose of this study. The answers to each question will be presented first and then discussed.

Question 1: Do differences in beliefs about reading relate to differences in metacognitive knowledge about reading?

To answer the first and the second research questions, correlation analyses were used to examine the entire sample for finding out whether there was any relationship between students' metacognitive knowledge about reading and their beliefs about language learning and reading as well as the possible correlations between the beliefs variables.

Through correlational analyses conducted with the entire sample, it was clear that significant positive correlations existed between BALLI and BAR (r =.393). In addition, negative correlations were found between MQ and BAR (r =-.171) and BALLI (r =- 204). Some significant positive correlations were also found between several items in the three questionnaires.

A one-way Anova was conducted to determine whether the variance on the MQ accounted for the variance in the other two beliefs questionnaires; i.e. whether differences in beliefs of the learners relate to differences in their metacognitive knowledge or not. The one-way ANOVA analyses indicated that the belief variables (BALLI and BAR) accounted for a greater portion of total MQ variance (mean square =.141).

Table 1
One-way ANOVA for the Variance in Two Belief Questionnaires

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	18.128	2	9.064	64.172	.000
Within Groups	65.960	467	.141		
Total	84.088	469			

In order to pinpoint exactly where the differences were in a pair-wise way, the following post hoc test was also used to illustrate exactly how the performance of the learners differ in terms of their responses to the three questionnaires and whether performance in questionnaire one differed from performance in the second one and how different performances were in the three cases. Table 2 illustrates the results.

Table 2
Post Hoc Tests

(I)q. 123	(J) q. 123	Mean Difference	Std.Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	-.4962*	.04392	.000	-.5995	-.3930
	3	-.2474*	.04353	.000	-.3497	-.1450
2	1	.4962*	.04392	.000	.3930	.5995
	3	.2488*	.04083	.000	.1528	.3448
3	1	.2474*	.04353	.000	.1450	.3497
	2	-.2488*	-.04083	.000	-.3448	-.1528

As can be seen from the above table, the greatest difference was found between performance on Questionnaires 2 and 3 (i.e. BALLI and BAR) and 1 and 3 (i.e. MQ and BAR). There was no significant difference between the mean difference of questionnaires 1 and 2 (i.e. MQ and BALLI). That is to say, subjects differed greatly on the basis of their beliefs about language learning and their

reading beliefs and their metacognitive knowledge had no impact on their reading beliefs.

Question 2: Are there patterns of intra- individual differences in beliefs about reading and metacognitive knowledge?

The second question in this part related to the probable existence of the intra-individual differences in the beliefs and the metacognitive knowledge of learners. In order to find out whether there are any patterns of intra-individual differences, a cluster analysis was conducted to divide the samples into two groups based on their metacognitive knowledge about reading. The two groups were then compared to determine whether they differed with regard to their beliefs system. Chi Square was used merely to estimate that some factors other than chance (sampling error) accounted for the apparent differences.

As demonstrated in Table 3, the cluster analysis produced a somewhat smaller group of students with high metacognitive knowledge (HM; n = 54) as compared to the low metacognitive knowledge group LM; n =124). No significant difference was indicated between the groups in terms of the total number in each group in the Chi Square analyses. There was also no significant difference in terms of the percentages of males and females in each group. Additionally, the mean age of the subjects in the two groups were almost equal (HM = 22; LM = 21).

Table3
Demographic Variables and Chi Square Analysis- HM and LM Group

Variables	High Metacog. Knowledge (HM)	Low Metacog. Knowledge (LM)	Chi Square
Subjects in each group	54 (100%)	124 (100%)	3.600
Male	2 (3.7%)	18 (14.3%)	.01
Female	52 (96.3%)	106 (85.4%)	.02

These two groups were then compared to examine whether they differed in terms of their beliefs. Comparing the groups' performance on the different beliefs questionnaires, it was indicated that the HM and LM groups did not differ significantly in terms of their beliefs variables. That is the distinction made on the basis of their metacognitive knowledge did not affect their beliefs about language learning and reading. In other words, the subjects in both groups held similar beliefs about reading and the way a second language is learned. Therefore, it could be concluded that there were no patterns of intra-individual differences between the HM and LM groups differed with regard to their beliefs system.

The results of this study based on subjects' responses to the MQ also revealed that many subjects were not highly aware of the type of strategies they used in reading, but those same readers demonstrated strategic performance in practice. They were quite unaware that they possessed such repertoire of strategies which resulted in their underperformance in comparison to those who appeared to be more aware of their own thought processes. Thus, the primary purpose of metacognitive

awareness must be getting students to understand the interactive nature of reading in the first place and also to know that they play an active role in their reading task in which their perceptions and understanding of reading predetermine the way they approach it.

Phase Two: Subjects' Strategic Reading behavior

Since the purpose of the second phase of the study was to investigate the three last research questions, thus in this part these questions will be presented first which then is followed by the presentation of some qualitative data analysis.

Question 3

Do intra-individual differences in beliefs and metacognitive knowledge, if they exist, relate to strategic reading performance?

First of all, since the results of study A indicated that there were no patterns of intra-individual differences between the subjects in the HM and LM groups, therefore, it is apparent that this distinction cannot predict any strategic reading performance of the readers on the basis of their HM/LM categorization. Thus, the hypothesis that even if there exist some intra-individual differences in beliefs and metacognitive knowledge, they do not relate to strategic reading performance, is supported in this study. That is to say, the strategic reading performance of the subjects acts independently from their metacognitive knowledge.

Question 4

Are there noteworthy differences in the range of reading strategy between advanced level L2 readers with high metacognitive knowledge and those with low metacognitive knowledge?

Results clearly indicated that the two groups demonstrated some similarities in term of the types of strategies they used. In fact, the two groups were similar in the use of text-driven and reader-driven strategies regardless of the percentages of the subjects using them and were different only in the use of perspective-taking strategies which were used only by the subjects in the HM group. Therefore, it was quite clear that differences in the metacognitive knowledge cannot be related to strategic reading behavior of the learners.

Question 5

Do L2 readers in general rely on one type of reading strategy, or utilize both types of strategies, reader-driven and text-driven, interactively?

In order to answer the last research question, a closer look at the strategic reading performance of the readers and its comparison to their responses to the metacognitive questionnaire was felt necessary. To find out whether all the subjects relied on one particular type of strategy or used them interactively, each group of subjects (HM/LM) was divided into subgroups on the basis of their responses to the effective and difficulty items on the MQ questionnaire and then were compared to their reading strategies they used during think-aloud task. In fact, of the seventeen items on the 'effectiveness' of strategies, the eleven items relating to sound-letter, word-meaning, sentence- syntax, and text details were classified as "local" or text-driven items; the remaining six relating to background knowledge, text gist, and textual organization were classified as "global" or reader-driven items. In the same way, of the eight items on the "difficulty" of strategies, the five relating to sound-letter, word-meaning and sentence syntax were classified as "local" items; the

remaining three items relating to background knowledge, text gist and textual organization were classified as "global" items.

Participants' responses to these subgroups of items were averaged and then compared to their on-line measures of their strategic reading behavior. Subjects whose average responses to 'effective' items of the MQ showed that they agree to a greater extent that global rather than local strategies were effective were classified as reader-driven or in Carrell's (1989) term "global strategizers"; otherwise, they were classified as text-driven or "local strategizers'. Similarly, subjects' average responses to 'difficulty' items were considered and those who disagreed to a greater extent that the global strategies as opposed to local strategies caused them difficulty were classified as reader-driven; otherwise, they were classified as text-driven in their approach to the text.

When the subjects' responses were compared to their think-aloud protocols, some discrepancies were found. That is to say, some of the subjects who used more text-driven strategies to comprehend the passages during the think-aloud task, demonstrated a mixed type of strategies in their responses to the metacognitive questionnaire. This can be explained in two ways: a) this might be interpreted with regard to the degree of their metacognitive awareness which indicates that the LM subject groups were not aware of their own thought processes and could not make out the differences between different text processing strategies, and b) this can be explained with reference to the fact that they might be interactive in their reading processes.   However, no discrepancies were found between HM group subjects' responses and their strategic reading performance in the think-aloud task meaning that they were aware of the things going on in their mind. Generally, there seemed to

be more tendency to approach the text in a text- driven manner as the think-aloud protocols of the subjects and their responses to the MQ items indicated.

The Exploration of the Reading Strategies

Out of 178 subjects who completed the questionnaires in the first phase of the study, 15 were randomly selected to investigate their strategic reading patterns in terms of the similarities or differences that they showed. The subjects were divided into two groups according to the degree of their metacognitive awareness as HM (high metacognitive knowledge) and LM (low metacognitive knowledge). Considering the total number of strategies used by each subject, the primary strategies happened to be local (text-driven) in which they made use of decoding, summarizing, word recognition, tracking and asking for help. Fewer global (reader-driven) and perspective-taking strategies were observed across the groups and no inferential strategy was noted. The LM group, for instance, tended to display higher percentage of text-driven strategies (85%), and similarly, the HM group demonstrated greater percentage of text-driven strategies, and fewer reader-driven and perspective-taking strategies (62%, 22% and 12% respectively). However, when the two groups were compared, they differed in the extent to which they employed each of the observed strategies.
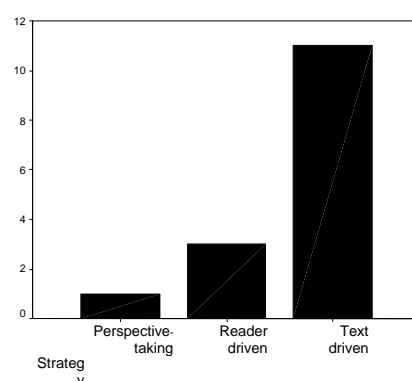
Figure 1. Strategic behavior of the subjects

In other words, even in the text-driven strategies the LM group differed from the HM ones. The subjects from the LM group used summarization to comprehend the passage as shown in the following examples.

"In this text, it is talking about art, basically about teaching English, how some teachers have their own point of view about it and…"

"Ok. Well, this text is talking about the things that can help a student understand a text better."

Some, however, attempted retelling and using direct quotes from the passage to talk about it.

"As the text shows, 'the courtly French romance drew its ideals partly from feudal notions of service… and was combined with more specifically Christian virtues'."

There were also two students in this group who read the passage loudly and when asked why they did so, they said:

"When I read it aloud, I can understand it better"

"Reading aloud usually helps me understand a passage better".

As with the word recognition strategies, the subjects in this group made use of sounding out words and they were particularly concerned about the pronunciation as if it could help make sense of the word.

"Well, I don't know how this word is pronounced and I try to sound out this word".

"Maybe this word is pronounced like this… I'm not sure how to sound it out".

Additionally, the students in this group tended to use more tracking using their pens, pencils and even their fingers to try to comprehend the text. In contrast to the LM group, the subjects in the HM group demonstrated some slight differences in their text-driven approach to reading. For example, they used context cues more often to determine words rather than worrying about how to sound them out. In addition, they made more frequent use of note taking to remember some important points in the passage.

"I prefer to write down this portion in the margin of the text."

The subjects in this group seemed to comment more frequently on their attempts to make sense of the text as they were reading it. For example, consider the following responses from the subjects in the HM group who were trying to comprehend the passage by monitoring their comprehension and comparing the information from different parts of the passage.

"This passage starts with a sentence in old English, Shakespearian English I may say, and I did not understand it at first, but here this sentence helped me make sense of it".

"First of all, these words, 'thou', 'thee', … are familiar to me, it is archaic English, and I know what they mean so it's fine, but I don't understand this part, so I continue

reading and finish the passage ,now some points in the passage help me understand the first sentence".

"This first sentence is talking about an important point, but the idea is not clear to me yet. I think that the following sentence clarifies it a bit and as I follow the other sentences add to the clarification of the meaning. This sentence, for example …"

There were also some statements about the recognition of comprehension as a sign of metacognitive awareness which was found more often in the HM group.

"This portion summarizes some information that I didn't understand at first, so I read it again more carefully and spent more time on making sense of the message it is giving".

"Here, I'm going back, because I didn't get what the sentence said. So I reread the sentence as well as the sentences before and after it to try to work out the meaning."

Therefore, as can be seen, the HM group subjects' think-aloud statements included comments on their attempts to make sense of textual information while more of the statements of the LM group centered on describing the text itself. In other words, it appeared that the subjects in the HM group demonstrated a slightly greater tendency to monitor for meaning and compare part of the text for clarification, whereas, the subjects in the LM group were more willing to summarize the text and pay particular attention to the details. This can emphasize the role of metacognitive awareness in promoting the reading ability of our learners and most probably an answer to those students who despite their great efforts in mastering the linguistic aspects of the language wonder why they fail to read efficiently.

Discussion

The findings of the first section of this research, in fact, support the notion that metacognition includes not only learners' knowledge about reading and reading strategies, but also the beliefs that control the strategies taken as well as the beliefs they have about performing a particular reading task in an educational setting. The beliefs variables also seem to exert a reciprocal influence on one another and at the same time they interact with other cognitive, metacognitive, instructional and probably emotional variables to affect the reading performance.

In general, the results obtained from this study seemed to be consistent with previous research findings. In examining learners' strategic reading performance, Lipson and Wixson (1986) suggested that what they did was not creating all-embracing laws, but rather they tried to gain an understanding of the possible constellations of conditions that may facilitate or inhibit performance. With respect to metacognitive awareness, several studies have advocated metacognitive training with the goal of teaching individuals how to adapt their cognitive ability to promote more effective comprehension (Baker & Brown, 1984; cited in Carrell, 1989).

The second phase of the present study indicated that in general, there were no noteworthy differences in the type of processing strategies between the HM and LM groups; i.e., the subjects in the HM group and those in the LM group who participated in Study B performed almost similarly in terms of strategy use. However, they differed greatly with respect to comprehension monitoring suggesting that the subjects with higher metacognitive knowledge (HM) were able to better monitor their comprehension and orchestrate their use of strategies in a way to facilitate their reading process. In fact, comprehension monitoring was one of the

advantages available more fully to HM group. This was especially apparent when the subjects from this group attempted several different strategies to work out the problematic part through a process of continuously predicting and confirming or rejecting their interpretations based on the new information presented in the text. This finding was in line with the previous research findings which stated that when readers begin a literacy task, they bring to it an existing framework of knowledge to which the new information may be assimilated (Carpenter & Just, 1987). A metacognitive analysis of the task puts the reader in control of the situation; it encourages flexible and adaptive thinking, and if necessary modification of the reading process to fit the known purpose for reading (Tei & Stewart, 1983).

The present research findings also supported Casanave's (1988) argument that comprehension monitoring is important in order to take appropriate strategic actions in the reading process. The HM subjects used their metacognitive knowledge to actively self-monitor their comprehension on words, sentences and paragraphs in an ongoing process of constructing meaning throughout the text. Comprehension monitoring played an important role to link some strategies in an interactive mode to successfully accomplish a reading task. For example, some of the subjects scanned the text first to find the information they wanted to answer the questions, and then later they employed their text-driven or reader- driven strategies when they recognized that they did not understand some important part of the text enough to answer those questions.

Another finding of this research which was consistent with previous studies in the literature was that LM subjects showed a greater tendency to focus on the lexical and structural aspects of the text instead of trying to focus on the organization

of the text and consistencies in meaning (Carrell, 1989). They were also unaware of some poor reading practices such as allowing their mind to wander and forget the meaning of a sentence as soon as it was read. In addition, they also used less self-questioning to monitor their comprehension.

In contrast, HM group were more in control of their reading and tried to match their reading to the structure of the text and were consequently able to recall and retain much of they read. They were also able to acknowledge different purposes for reading, to assess their own knowledge as it related to the task wanted of them, to monitor their own comprehension and to implement corrective strategies when they needed them. Garner (1992) had also found similar results indicating that less skilled readers (the term she used to describe readers with low metacognitive knowledge) would most often detect lexical errors in text before they would find inconsistencies in meaning.

Therefore, the findings suggest that low metacognitive readers (LM) need to be helped in their development of metacognitive abilities and strategy use. It occurs so many times that both HM and LM readers are aware of the same strategies but HM subjects use them more frequently and effectively than the LM subjects. Hansen and Hubbard (1984, cited in Collins,1994) also found that poor readers want to learn strategies that they can apply on their own, and that they can, with practice learn to transfer these strategies to their reading tasks.

Clearly, the findings of this study require replication with a larger sample to validate the results obtained. However, they did suggest that the variability in the subjects' performances was mainly due the type of conceptions that they had about the reading which in turn affected their metacognitive knowledge and their decision

to approach the passages they were engaged in. Differences in the metacognitive knowledge, on the other hand, accounted for the efficiency and rate of reading which were more prominent in the HM group.

Pedagogical Implications

A number of implications for L2/FL reading instruction arise from this research study. First of all, it is important to note that the implications of this study can provide precious information to guide teaching reading. As was evident from the findings of previous research as well as the present one, the direct teaching of specific strategies cannot ensure the transfer of appropriate strategies no matter how well they were taught or how comprehensible they were. What needs to be done is to modify the strategies to become consistent with the learners' personal beliefs and cognitive reservoir. In their "transactional strategies instruction", Pressley and Afflerbach (1995) stressed flexibility in thinking and strategy use so that students can think independently and create meaningful interpretations of the text on the basis of their personal beliefs and cognitive resources.

Another significant implication of this study is related to the individuality of learners and how the individual differences of the students can affect the way they think and learn. Thus, merely teaching several reading strategies in the reading class is not sufficient to lead all the students to successfully use the newly taught strategies. Rather, learners' individual characteristics calls for helping them become autonomous learners so that they can find the best way of reading for meaning themselves. In other words, teaching them to read in a particular way may not provide all the learners with useful strategies to be able to cope with the problems

they face and therefore the best way to help them is to guide them to "read to learn" rather than "learn to read".

Conclusion

The current research study attempted to demonstrate the inter-relatedness of the factors that influence the strategic reading behaviors of learners in terms of beliefs held and the degree of metacognitive knowledge. Hopefully, the purposes for which the study was conducted were achieved in that it highlighted the importance of the beliefs and perceptions that individual learners bring with them to the learning situation and reading tasks as such and the impact these variables can have on their achievement. Furthermore, another purpose of the study centered on indicating the importance of metacognition in helping learners to "learn how to learn" which was achieved successfully. This suggests that the educators and teachers need to address the beliefs of the learners in their instructions and pay particular attention to their individualities in terms of their attitudes, cultural beliefs and metacognitive awareness. In other words, both learners and educators need to become aware of metacognitive strategies through instruction and learners need to be helped to learn how to use their preferred learning strategies which are consistent with their beliefs as well as their objectives and needs.

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