

## THE RELATIONSHIP BETWEEN PERCEPTUAL LEARNING STYLES AND METACOGNITIVE READING STRATEGIES AMONG YEMENI EFL Learners

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**Abstract:** This article aims to identify the most predominant perceptual learning styles of Yemeni EFL learners as well as their metacognitive reading strategies. It also seeks to check whether there is any significant relationship between the perceptual learning style preferences and metacognitive strategies use of Yemeni EFL learners in English reading comprehension. To achieve this purpose, students were asked to complete two questionnaires. One questionnaire developed by Reid (1987) was used to identify students' perceptual learning style preferences and the other questionnaire by Mokhtari & Sheroey (2002) was used to identify students' metacognitive reading strategies. The data analysis of the first questionnaire revealed that Yemeni EFL readers' major learning style preferences were kinesthetic, group as well as tactile learning styles. The analysis of the second questionnaire revealed that global reading strategies were favored the most, then problem-solving and support respectively. In addition, a significant relationship was found between the perceptual learning styles of Yemeni EFL learners and their overall metacognitive reading strategies.

**Keywords:** perceptual learning styles, visual, auditory, kinesthetic, group, individual, metacognitive reading strategies, global strategies, problem-solving strategies, support strategies

**Introduction:** Learning a foreign language (FL) can be studied from different perspectives such as biological, cognitive, social, psychological and communicative perspectives. In each of these areas, there are large varieties of factors which may affect the process of foreign language learning. Learning styles and strategies are among these factors which need to be examined. Reading as one of the important educational goals in FL teaching is the focus in the present study. The idea that learners be aware of their learning styles which might enhances their success in reading by using the appropriate strategies (Chamot & Kupper, 1989) leads the study to find the relationship between EFL learners' metacognitive reading strategies and their learning style preferences. The results might raise EFL learners' awareness of their learning styles and the ways by which they can improve their metacognitive strategies in reading and overcome their weaknesses in using these strategies. In addition, teachers can be aware of the students learning style preferences which can facilitate for them the whole teaching process particularly improving their reading comprehension. Thus, the present study may shed more light on the relationship between perceptual learning styles and metacognitive reading strategies.

### Aims of the study:

1. Exploring the major, minor and negligible perceptual learning styles used by Yemeni EFL learners.
2. Exploring the metacognitive reading strategies used by Yemeni EFL learners.
3. Investigating if there is any relationship between perceptual learning styles and metacognitive reading strategies among Yemeni EFL learners.

**Significance of the study:** The present study focuses on perceptual learning styles in correlation with metacognitive reading strategies which need to be investigated extensively in the Arab world particularly in Yemen. Though so many studies have been tackled regarding the two concepts, the relationship between learning styles and reading strategies has been given less attention and none in Yemen. The reading practices and reading abilities of the Yemeni students are still limited even at the tertiary level and have not developed fully with regard to reading in English (Azman, Bhooth & Ismail, 2013). This study is one of the few studies which will help English instructors and designers to focus on learners' learning styles as well as the preferred strategies they use in reading comprehension in order to improve their reading skills which accordingly will influence their academic progress. It will hopefully benefit the learners themselves as well as supply teachers with information about the students' strengths, weaknesses, strategies in reading-tasks, solving problems based on their learning styles preferences which will accordingly improve English learning among the EFL students.

### Research Questions:

1. What are the major, minor and negligible perceptual learning styles of EFL Yemeni students?
2. What are the most metacognitive reading strategies used by Yemeni EFL learners in their reading processes?
3. Is there any relationship between perceptual learning style preferences and metacognitive reading strategies among Yemeni EFL learners?

**Literature Review:** Learning styles and strategies have a crucial role in foreign language acquisition

(Oxford,1990). Regardless of the method which the teachers use to instruct or teach a foreign language, serious consideration should be taken to the fact that each individual has his/her way of learning. In other words, it is meant to say that people learn in various ways, by seeing, hearing, analyzing, visualizing, thinking, memorizing, reasoning etc. Thus, each individual in the process of learning has his/her own unique characteristics or use one or more sense(s) to understand, organize or retain information, which are known as learning styles (Dunn & Bruke, 2006). On the other hand, strategies are plans or techniques which are consciously used by learners to achieve a specific purpose or solve a problem or task. Strategies play a significant role in assisting learners in developing language competence. During the past few years, numbers of studies demonstrated the importance of learning strategies in language learning. Rubin (1975) has defined strategies as some techniques or devices used by the learners in order to acquire knowledge. In the case of the relationship between learning style and strategy, many researchers in their studies have reported that a learner's style preference generally has a wide influence on his strategy use (Carrell, 1989). Brown (2007) have pointed out that those learning strategies do not operate by themselves, but rather are directly linked to learners' innate learning style and other personality-related factors. If the learning strategies do not match with learners' learning styles, learners cannot have a good performance on language learning. The relationship between learning styles and strategies in various EFL skills still has to be analyzed (Hsieh and Dwyer,2009). They encourage investigation into ways of strengthening online, rereading strategy effects on students' learning comprehension. The study emphasizes that students with different learning styles also need further consideration. It suggests that interviews and questionnaires are ways to examine students' other learning styles as well as their reading habits which by knowing them it will be much helpful in facilitating student achievement and their reading comprehension. On the other hand, Gurses & Bouvet (2015), using Kolb learning styles inventory, have found a small negative correlation between perceived use of reading strategies and reading comprehension among all participants, yet not significant. They, therefore, have called for large scales to investigate such a relationship, while the results in Zohreh's (2016) study shows that visual and auditory learning styles among other types of learning styles have a significant correlation with metacognitive reading strategies. In brief, an ample of research have found that investigating the relationship between learning styles and language learning strategies learning styles can be a key factor for teachers and syllabus designers

to take into account when designing and delivering lessons, and activities in the foreign language classes.

#### **Methodology:**

**Participants:** The participants in this study consisted of 134 students from the English department, level two in Sana'a University, Sana'a, Republic of Yemen. Those second-year students were the sample of this study whose ages ranged from 19 to 23 years. All participants have received about 6 years of English instruction at school and one more year at university. Two questionnaires were distributed after giving them full instruction on how to respond to the items of the each questionnaire.

**Instruments:** Two instruments were used for eliciting data for the purpose of this investigation. A survey on perceptual learning style preferences was employed to elicit data regarding EFL learners' learning styles. Another questionnaire on metacognitive reading strategy was used to discover EFL learners' strategy use. A semi-interview was held with 50 students of the sample to elicit reasons and strategies which the students use while doing reading-tasks.

#### **1. Perceptual learning style preferences Survey:**

This survey was constructed to determine students' perceptual learning style preferences. It was developed by Reid (1987). It was used to identify participants' major, minor or negligible perceptual learning style preferences. The participants were required to respond to the question in 20 minutes. The allocated time was determined according to the results obtained from the pilot study. It contains 30 items ranging between 6 subscales as following:

**a- Auditory Learners (5 items):** for these learners, information is most easily processed through hearing it. A strongly auditory learner might read aloud when they reach a particularly difficult part of a written text, and will usually enjoy studying with another person or in a group.

**b- Visual Learners (5 items):** These learners learn best when using pictures, graphs, concept maps, grids, matrices and other visual representations of the information to be learned.

**c- Tactile Learners (5 items):** Tactile learning suggests learning with one's hands through manipulation or resources, such as writing, drawing, building a model, or conducting a lab experiment.

**d- Kinaesthetic Learners (5 items):** Kinesthetic learning implies total physical involvement with a learning environment such as taking a field trip, dramatizing, pantomiming, or interviewing.

**e- Group Learners (5 items):** A group learner is the one who "learns more effectively through working with others".

**f- Individual Learners (5 items):** An individual learner is someone who "learns more effectively through working alone"

**2. Survey of Reading Strategies:** The Survey of Reading Strategies (SORS) was originally developed as a tool for measuring adolescent and adult non-native English speakers' metacognitive awareness and perceived use of reading strategies while reading academic or school-related materials (Mokhtari & Sheorey, 2002). Its use was found to be suitable in the context of the present study to elicit data on Yemeni participants' perceptions of their reading strategy behavior. The SORS comprises 30 items involving a 5-point Likert scale ranging from 1 (I never or almost never do this) to 5 (I always or almost always do this). The SORS consists of three individual subscales:

**a- Global reading strategies (13 items):** it refers to 'intentional carefully planned techniques by which learners monitor or manage their reading'(p.4).

**b- Problem-solving strategies (8 items):** are related to 'actions and procedures that the readers use while working directly with the text' (p.4).

**c- Support strategies (9 items):** are a set of mechanisms 'intended to aid the reader in comprehending the text such as using a dictionary taking notes, underlying, or highlighting textual information' (p.4).

Both questionnaires were given to students in English as well as Arabic translation of each statement to avoid any language problem, if any.

**Data Analysis & Discussion:** To analyze data, SPSS statistical program for windows was used. Descriptive statistics, means and standard deviation were utilized to analyze the overall frequency use of perceptual learning style preferences (visual, auditory, kinesthetic, tactile, group and individual) as well as each strategy subscale (global, problem-solving strategies and support). The correlation analysis was used to examine the relationship between perceptual learning styles and reading strategies among the Yemeni EFL learners.

**Question 1: What are the major, minor and negligible learning styles of Yemeni EFL students?**

**Table 1: Mean score Analysis of Yemeni EFL Students Perceptual Learning Style Preferences**

Type of learning style	Mean	S.D
Auditory	30.90	7.87
Visual	29.46	7.27
Kinesthetic	<b>34.88</b>	7.08
Tactile	31.66	8.11
Group	31.85	6.68
Individual	27.09	6.51

Table I shows the result of students' preferences of perceptual learning styles. Based on the statistical descriptive analysis for each learning style, it is shown that the most favored/major learning style for students is kinesthetic (34.88%) following by group learning style (31.85) and tactile learning style (31.66). Then, secondary/minor learning style preference for students are auditory and visual learning styles (30.90), (29.46%) respectively. The least preferred learning style/negligible was individual learning style (27.09%) as shown in the figure below.



*Fig. 1 Diagrammatic representation of descriptive statistics regarding the mean score and standard deviation of learning style preferences among Yemeni EFL students*

**Questions 2: What are the most metacognitive reading strategies do Yemeni EFL learners use in their reading processes?**

**Table 2: Mean score Analysis of Yemeni EFL Students' Metacognitive Reading Strategies**

	M	S.D
Global	3.11	0.78
Problem-solving	2.95	0.82
Support	2.12	0.44

Table 2 reveals that the overall mean scores of the three types of reading strategies reported by Yemeni EFL learners. As it can be seen, all the mean scores of the three subscales of reading strategies fell between 3.11 and 0.78 on a scale ranged from 2.4 or lower to 3.5 or higher. The table shown above explains that the global reading strategies are used more frequently than problem solving and support strategies (3.11). The participants mostly preferred global reading strategies

in which they have carefully planned techniques by which learners monitor their reading (as illustrated in figure 2). However, Al-Sohbani (2013) reported in his study on a sample of 100 Yemeni EFL learners that the learners preferred mostly problem solving strategies while Balfakeh (2009) indicated that Yemeni students in secondary schools have serious deficiencies in discourse-based reading skills such as recognizing text organization and identifying cohesive devices.

*Fig. 2 Diagrammatic representation of descriptive statistics regarding the overall reading strategies used of Yemeni EFL students.*

**Question 3: Is there any relationship between perceptual learning style preferences and metacognitive reading strategies among Yemeni EFL learners?**

**Table 3: Correlation Statistical Analysis of Yemeni EFL Students' perceptual learning styles and reading strategies use**

Perceptual Learning Styles		Reading Strategies Use				
		Global	Problem-solving	Support	Overall	
Visual	Pearson Correlation	.552**0	.269**0	0.049		
	Sig. (2-tailed)	.0000	0.002	0.576		
Auditory	Pearson Correlation	.636**0	.391**0	0.095		
	Sig. (2-tailed)	.0000	.0000	0.276		
Kinesthetic	Pearson Correlation	.471**0	.405**0	.181*0		
	Sig. (2-tailed)	0.000	.0000	0.037		
Tactile	Pearson Correlation	.555**	.392**	0.121		
	Sig. (2-tailed)	.0000	.0000	0.163		
Group	Pearson Correlation	.731**	.506**0	.339**0		
	Sig. (2-tailed)	.0000	.0000	.0000		
Individual	Pearson Correlation	-0.186*	-0.003	-0.101		
	Sig. (2-tailed)	0.032	0.969	0.247		
Overall	Pearson Correlation					.438**0
	Sig. (2-tailed)					.0000

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

It is evident from above correlation matrix table No. 3 that there is a statistically significant relationship between perceptual learning styles and reading strategies as the value of Pearson correlation is equal to (0.438) with p-value of 0 at 0.01 significance level. Similarly, a significant correlation has been recorded among various individual parameters namely visual, auditory, kinesthetic, tactile and group learning styles and global, problem-solving reading strategies. However, there have been observed insignificant relationships between visual, auditory, tactile and support reading strategies. On the other hand, there is a statistically significant relationship between kinesthetic learning style and support reading strategies as Pearson correlation value is (0.181), ( $p=0.037$ ) at the 0.05 level. Likewise, a statistically significant relationship between group learning style and support reading strategies has been noticed as the value of Pearson coefficient is equal to (0.339) with p-value equal to (0.000) at the 0.01 level. However, a statistically significant negative correlation has been observed between individual learning style and global reading strategies (-0.186), ( $p\text{-value}=0.032$ ) while no correlation has been found with problem-solving and support reading strategies. The analysis indicates that there are significant correlations between perceptual learning styles and metacognitive reading strategies. This conclusion is in line with many scholars' statements. Oxford (1990) stated that "students' strategies are linked to their learning styles"; while Rossi-Le (1995) also commented that "a learner's learning style preference influences the types of reading strategies that he or she will apply in acquiring a second

language". On the other hand, Alharbi (2015) found out that there is no noticeable variation in the effectiveness for comprehension between silent or oral reading. He explained that EFL learners need to feel free to apply the reading mode they favor in reading tasks with more attention that should be paid to the low visual learners whereas Oxford (1990) emphasized that learners tend to select those strategies which reflect their learning styles. Thus, such a match makes learners to have an active, purposeful and conscious learning. In contrast, if there is no match between styles and strategies, students may feel anxious, less confident and have poor performance in the process of learning

**Conclusion:** The results of this study investigate the most preferred perceptual learning styles of the Yemeni EFL learners which are kinesthetic, group and tactile. It also reveals the most used metacognitive reading strategies are global reading strategies. The findings, on the one hand, indicate that there is a significant relationship between the perceptual learning style preferences of the Yemeni EFL students and their use of metacognitive reading strategies. It is found that the kinesthetic, group and tactile learning styles are the most preferred ones to students which have the strongest correlation with global and problem-solving strategies of reading. On the other hand, the findings may also give more insight regarding the importance of some of learning styles and strategies in FL reading. The inputs from this study can be used to make teachers aware of EFL students' learning styles and reading strategies and accordingly train them to both assess and improve the quality of learning among Yemeni EFL learners.

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