

Language Learning Style Preferences: A Theoretical and Empirical Study

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Abstract - Learners' learning style has been one of the most important factors SLA researchers have focused on. However, Learners' learning styles have been ignored and have been considered as an insignificant component in the learning process. This paper aims at describing learning styles models, in particular Reid's Perceptual Learning Style Preference Questionnaire (PLSPQ) and review the past studies conducted on learning style. Furthermore, the paper discusses some pedagogical implications which show how learning styles are important. Finally, it concludes and examines the gaps which exist in the literature for further study.

Keywords – Learning Style; Learning Style Models; ESL/EFL Learning Style Preferences

1. Introduction

In the last five decades, the topic of learning styles has been of considerable interest in the administrative and organizational science, as well as the academic community. Since its inception, several hundred articles, chapters, and books have been written on the subject of learning style (Reid 1987/1995; Dunn & Dunn 1972; Kolb 1984; Fleming 2001). Each researcher begins his or her work by indicating the conceptual dilemma and methodological problem surrounding this concept and almost all indicate that little agreement exists about what learning styles mean or how to adequately measure it. According to Benati and VanPatten (2010), learning styles have been studied from different perspective. For instance, some researchers have tried to find ways to measure and evaluate them, others have looked into their classifications and meanings, and some of them have attempted to find the correlation between learning styles with several factors such as gender, age, achievement, and culture. Therefore, learning style is an important issue in learning.

2. Learning Style

According to Gordon (1998), learning styles have effects on educational process and how students perform. Dunn and Griggs (1998) defined learning style as the attitude, favorites, and conducts that learners utilize in their learning. Moreover, according to them, the learning method might have a lot or a bit of differences. For instance, do you remember the name of a person if you see it written down? If you prefer to learn it by seeing the written name you are a

visual learner. If on the other hand, you prefer to learn it by listening you are an auditory one (Slavin, 2000).

Acquiring and processing of information by learners occurs in various ways. Their learning styles may be influenced by their previous learning experiences, genetic make-up, and culture. Some learners are more comfortable with data and facts, while others prefer mathematical models and theories. According to Felder (1996), some learners are visual and prefer to learn by charts, whereas others like to learn by spoken explanations, and are called auditory learners. In addition, some students like to learn in group, while others prefer to learn individually.

Even the learning styles of a family are different. The learning style of parents are completely different, children often get the learning style of one of them but not the others. In addition, genetic and experience can help learners develop their own learning styles. Developmental elements of learning styles are conformity or nonconformity, motivation, and a need for more and less structure. Learning style preferences change over the time. Although, after a period, individual develops a strong style preferences that help the learner to learn easily when taught with styles which complement those style preferences.

Reid (1987:89) defines “perceptual learning styles” as the changes “among learners in using one or more senses to understand, organize, and retain experience”. In this paper, the terms “perceptual leaning style” and “learning style” will be used interchangeably. Some researchers (Reinert 1970; Dunn 1983/1984; Garger & Guild 1984) have shown that learners have four main perceptual learning channels:

1. Auditory learning: Listening to a person.
2. Visual learning: Studying diagrams and pictures
3. Tactile learning: “hands-on learning, e.g. building models” (Reid 1987:89).
4. Kinesthetic learning: experiential learning, which is the physical participation in a learning situation.

3. Reid’s Learning Style Model

According to Reid (1995: viii), learning styles are “individual natural, habitual, and preferred way(s) of absorbing, processing, and retaining new information and skills” She also showed that all learners have individual characters regarding to learning processes. For example, some learners may respond to hands-on activities, others may favor visual presentations. It is clear that people learn differently and these differences in learning about ESL/EFL settings. In Reid (1987) study, six learning styles referred to the Perceptual Learning Style preference.

According to her, Perceptual learning style preference refers to the perceptual channels through which students like to learn. These are divided into auditory (listening to lectures and tapes), visual (reading and studying diagram), kinesthetic (physical activity and movement), tactile (hands-on, doing lab experiments), group (studying with others or in group), and individual learning (studying alone).

4. Dunn & Dunn Learning Styles Model

Dunn (1990:353) defined learning style as “the way in which individuals begin to concentrate on, process, internalize and retain new and difficult information”. According to Dunn and Dunn’s (1978/1992), a person’s learning style could be determined based on 21 elements organized into five stimuli groups which were environmental, emotional, sociological, physical, and psychological stimuli groups. Those stimuli groups affect learner’s learning.

There are different characteristics for learners which can be matched to the four elements that are called environmental stimuli group namely sound, light, temperature and design when the learners are trying to learn. For example, some learners prefer to learn in a quiet environment, while some learners like to learn while listening to the music simultaneously. Teachers could regulate the environmental elements based on the learners’ preferences and provided a learning environment in which the learners feel most comfortable.

The emotional stimuli group included motivation, persistence, responsibility, and structure elements, which are developed from their experiences. Learners had different motivational levels and could be differently motivated. For instance, teachers could exactly tell what

they expected of highly motivated learners to learn and what the available resources were. To teach learners who were less motivated, teachers could give them short assignments.

Sociological stimuli group consists peers, self, pairs, and teams. Some learners preferred to learn in a team, whereas some liked to learn by themselves. Therefore, Dunn and Dunn suggested that learners should be given the right to select the ways to complete their assignments.

Perception, intake, time, and mobility were the elements of the physical stimuli group. For example, learners learned by different styles such as auditory, visual, tactile, and kinesthetic styles. The suggestion was that teachers could identify learners’ perceptions, and develop instruction, which would help learners to learn based on their preferred learning styles.

Finally, psychological stimuli group included analytic vs. global, right vs. left-brain, and reflective vs. impulsive elements. For example, global learners preferred to see the overall picture before they learned, whereas analytic learners could learn step by step without seeing the overall picture.

5. VARK Learning Styles Model

Neil Fleming (2001) proposed the VARK model. Fleming (2001:1) defined learning style as “an individual’s characteristics and preferred ways of gathering, organizing, and thinking about information. VARK is in the category of instructional preferences because it deals with perceptual modes.” VARK means Visual (V), Aural (A), Read/Write(R), and Kinesthetic (K).

According to Fleming (2001), Visual learners like to learn by maps, charts, graphs, diagrams, pictures, highlighters, and different colors. Aural learners prefer to learn by discussing the topics with their teachers and other students, explain new ideas to others, and use a tape recorder. Read/write learners like to learn by essays, textbooks, definitions, readings, and taking notes. Kinesthetic learners prefer to learn by field trips, doing things to understand them, laboratories, and hand-on approaches. Multimodal preference for an individual is considered more than one learning style preference.

6. Perceptual Learning Style Preference Questionnaire (PLSPQ)

Perceptual learning style preference questionnaire in Reid (1987) study was the pioneer for perceiving the perceptual learning style preferences of ESL/EFL learners at the university level. Learning style preferences include the Visual, Auditory, Tactile, Kinesthetic, Group, and Individual learning styles. As the name suggests, visual learning style refers to the learning by seeing. Auditory

learning style refers to the learning through listening to someone. Tactile learners like to learn through hands-on experiences (building models and working with vocabulary puzzles). Kinesthetic learners prefer to learn by physical activity and movement. Individual learners prefer to study alone. Group learners like to work and study in group.

Reid (1987) investigated perceptual learning style preferences among non native speakers of English who studied in the U.S. She created a survey in 1984 called the Perceptual Learning Style Preference questionnaire (PLSPQ) which was constructed to identify preferences for auditory, kinesthetic, visual, tactile, group, and individual learning styles. According to Reid (1987:91) before her PLSP questionnaire, "there has been no published research that describes the perceptual learning style preferences of Non- Native English speakers (NNSs)"

Perceptual learning style preference questionnaire (PLSPQ) was done in 98 different countries. The learners studied in 29 different fields and had 52 different language backgrounds. A total of 1,388 learners answered the questionnaire: 154 were native speakers of English and 1,234 were non-native speakers of English. They were encouraged to answer the questionnaire as it applied to their study of English as a foreign language experience. Their answers showed that learning style may change as students progress in their studies (in general, graduate students had different styles than undergraduate) and that these styles are directly related to gender, major field of study, class, native language, and the amount of time spent on learning English. Questionnaire answers showed, for example, those Spanish speakers chose group style as their minor or negative learning style. It is important to note, all these Spanish speakers were not all come from the same country. In addition, all other learners regardless of the language they spoke, age, or major field of study, had a negative attitude towards group learning style.

7. Review of Previous Studies on Learning Styles

As an interesting area for learning research, learning styles have attracted a huge number of researchers who have examined them from different angles. These studies on learning styles in general and in the ESL and EFL learners' learning styles in particular have emerged from a concern for identification and description of the features of effective language learners. Researchers' attempts or efforts to provide better understanding of effective language learning and learners have identified various learning styles reported by students or observed by researchers in different learning contexts. They have investigated learning styles in terms of their patterns or classes and sub-classes, learners' preferred or most frequently used patterns in learning diverse language skills, etc. Such attempts or efforts seem to be of significance since they have contributed greatly to our understanding of learning. Therefore, this section

provides a detailed review of many previous studies which have been conducted on learning styles in general including ESL and EFL learners' learning styles in different contexts.

A study by Reid (1987) examining 90 students' preferred types of learning styles who were joining a Chinese university in the USA revealed that the participants preferred kinesthetic and tactile learning styles while they did not prefer group learning style. Following Reid's study, Melton (1990) carried out a study involving 331 students joining five schools in The People's Republic of China (PRC). Findings showed that multiple learning styles including kinesthetic, tactile, and individual learning styles were the students' preferred learning styles. In a survey distributed to 147 adult L2 immigrants in the US, Rossi-Le (1995) obtained results which were consistent with Reid's (1987) findings in the sense that the participants showed preference of kinesthetic and tactile learning styles as their major learning styles. Another study by Sharifah Azizah and Wan Zalina (1995) among the Malay students in a Malaysian tertiary institution displayed similar findings to the previous findings since individual learning style and kinesthetic and tactile learning styles were preferred by the students, and added to these, other styles such as visual and auditory styles were the participants' preferences and group learning styles were found their least preferred learning styles.

Stebbins (1993) conducted a study employing the Perceptual learning style preference questionnaire (PLSPQ) among 660 ESL students who were enrolled in eight university-affiliated intensive English programs and were coming from 63 countries. They were majoring in 92 fields of study, and had 43 language backgrounds. It was interesting that the results of Stebbins' study were in parallel with Reid's (1987) findings in the sense that the ESL students participating in this study strongly preferred kinesthetic and tactile learning styles more than native English speakers and group learning was the least preferred learning style by most native speakers of English and ESL students.

Furthermore, two other studies by Jones (1997) and Chu et al. (1997) which were conducted among 81 students of Chinese university and 318 Singaporean university students respectively obtained similar results to the above mentioned studies as in both studies, the participating students reported their preference of kinesthetic and tactile learning styles. However, results concerning their dispreferred styles differ since in the first study, the students did not prefer individual learning styles whereas in the second study, it was found out that other learning styles were disfavored by the participants.

Similar findings indicating that kinesthetic, tactile, and group styles were perceived as the major learning style preferences for ESL learners were obtained by Rosniah Mustaffa (2005) in her study carried out among Bachelor of Arts students in English language studies at Universiti Kebangsaan Malaysia during eight months (two semesters).

The study also revealed additional results concerning the participants' visual, auditory, and incongruent styles as their minor learning styles. Other consistent results were those discussed by Riazi and Mansoorian (2008) who surveyed the preferred learning styles of (N=300) Iranian EFL students who were studying English at EFL institutes in different cities in Iran as it was found that the auditory, visual, tactile, and kinesthetic learning styles were preferred by students as the major styles and they chose the individual and group learning styles as their minor styles.

In line with these most commonly discussed findings about learners' preferred learning styles as revealed in other studies, Alsafi (2010) investigated this area among 90 Saudi Second-year medical students at King Abdul-Aziz University, and revealed that in general, Kinesthetic, Auditory, and Tactile learning styles were preferred by the participants while they disfavored using visual, group, and individual learning styles. In confirming part of the above results about the most preferred learning styles for learners in diverse contexts, Hyland's Japanese learners favored Auditory and Tactile styles, and disfavored Visual and Group styles (1993). Hyland also reports that senior students favored kinesthetic style. Moreover, Trinidad (2008) administered VARK Learning Preference Test (Fleming 2001) to 298 students from Southern Illinois University Carbondale and Ranken Technical College, and it was revealed that the highest number of the participants (227) estimated almost around (76.6%) preferred kinesthetic learning style. In applying Reid's Learning Style Preference questionnaire as the main instrument for data collection, Ong et al. (2006) determined the learning style preferences of Cohort 3 students of the B. Ed. (TESL) Foundation course at Institut Perguruan Bahasa-Antarabangsa (IPBA). Based on the findings, kinesthetic learning was their major learning style. This means most of the students like to be active in the classroom. Auditory learning was the least preferred learning style. On the other hand, none of the subjects were verbal learners.

In contrast to the previously reviewed findings of previous studies on ESL and EFL learning style preferences, a few studies investigating the same research area in different contexts showed that some of the same previously reported preferred learning styles as previously discussed were selected as learners' negative learning styles in such studies. For instance, Mulalic et al. (2009a) studied 160 students at the Department of Language and Communication in University Tenaga Nasional. The findings showed that those students preferred kinesthetic, individual and tactile learning styles as their negative preferences, and auditory, visual, and group learning styles were their minor preferred. In the same way, the findings obtained by Hariharan and Ismail (2003) from surveying secondary school students in Kedah of Malaysia displayed revealed that the students did not have any major learning style. However, they selected kinesthetic and group as their minor learning styles and chose tactile, visual, auditory, and individual learning as their negative learning styles. A few

studies also have revealed results which go beyond these findings as neither did the learners reveal major learning styles nor did they report minor learning styles as their preferences. One of these studies is the one by AdiAfzal Ahmad (2011) which aimed at identifying the learning style preferences of 252 low level students at a local tertiary institution. His findings showed that the students did not have any major or even minor learning style preference. All six learning styles were negative learning style preferences and among six learning styles, individual learning was the least preferred learning style.

Other studies on learning styles came out with different results showing that learners' preferred learning styles are those which differ from the types of learning styles which have been reported in the above studies. For example, Akgün (2002) investigated the learning styles of 350 randomly selected English learners in their optional courses, and 47% of the learners were women and 53% of them were men. The study also involved almost 47 teachers. By employing an instrument developed by Willing (1988), the results indicated that the most preferred learning styles of learners were concrete, communicative, authority-oriented, and analytical learning styles. The same learning styles were among teachers. However, two other studies obtained findings which limited learners' preferred learning styles to those styles supporting auditory and visual learning or only visual learning or even learner-centered learning and teacher-centered. Landry (2001) investigated 101 full-time sworn law enforcement officers based on VARK learning style preference test. The results showed that the all students preferred VARK (Visual, Aural, Read/Write, and Kinesthetic) as their most preferences and the second preferences of them was Read/Write that had an overall affect on the strength of the Multimodal preference. The study by Kara (2009) which aimed at examining learning styles among (N=100) second year learners studying in ELT Department in Anadolu University found out that the students liked visual and auditory styles.

In addition, Arslan (2003) aimed to evaluate learning style preferences of the students in engineering departments at Middle East Technical University (METU). Results were analyzed according to Felder and Silverman's (1988). In her study, 400 students were randomly selected among senior engineering students. Results of the study revealed that engineering students were more active learners and heavily sensing learners rather than intuitive. After deep consideration she found that the most learning style preferences of the all engineering students were visual learning. NuridaEsmail and NorzainiAzman (2010) identified the learning styles of adult learners in non formal education programs at selected Malaysian community colleges. A survey of 959 adult learners from 14 community colleges was carried out to determine their learning styles using a modified version of Conti's Principles of Adult learning scales. Results showed that the

adult learners preferred behaviors of learner-centered and teacher-centered styles.

All previous studies previously presented almost focus on learning styles by exploring, identifying and examining them among learners who were not categorized into groups, but as learners who usually constituted one group in each study coming from. However, another body of previous research on learning styles has concentrated on this interesting area where each study tended to categorize the participating learners into two or more than two groups (based on their levels, majors or fields of study, etc) for the purpose of finding out the similarities and differences between such groups of learners in terms of their preferred learning styles. Such studies on learning styles have established themselves as comparative studies. Cody (1983) evaluated the learning style preferences of 240 students in grades five through (N=12) students who were categorized in groups based on their IQ. This study was based on Dunn and Dunn model. The results showed that the normal students had a strong need for a structure (studying in a quiet and warm environment, knowing exactly what was required and late in the day). They were the least motivated group, and preferred to learn kinesthetically. Talented students needed less structure. They preferred to learn early in the morning and in a moderate temperature. They demonstrated a right-brain processing style. Most of the talented students liked to study with music, in the evening, and in a cool temperature. Also, they were more motivated and preferred to learn visually. In another study by Tai (1999a), 209 traditional and nontraditional EFL students in junior colleges from five randomly selected schools in Taiwan were selected for comparing their learning styles according to Reid. The results showed that the most preferred learning style was auditory and group learning styles, while visual and individual learning styles were as their least preferred learning styles. Traditional students showed that they strongly agreed with visual and individual learning styles than nontraditional students.

Other comparative studies examined learning styles among students majoring different fields. For instance, Cythan (2008) studied on Preferred Learning Styles of (N=20) students of Sciences and Art classes. The researcher utilized the Perceptual learning style preference (PLSPQ) as an instrument to collect the data. The findings of this study showed that the minor learning styles for art students were more variable compared to the science students. However, those students did not prefer to study alone as proven by the data collected. Shakarami and Mordziha (2009) investigated 30 graduate students from Industrial Management Engineering (IME) and Political Science (PS) at University Putra Malaysia (UPM). The results showed that PS students preferred tactile, auditory, group and kinesthetic learning as their major learning styles, while visual, tactile, group, kinesthetic, and individual were the major learning styles of IME students. Visual and individual learning were the minor learning styles of PS students, whereas the minor learning style of IME students was auditory learning.

Moreover, Shouhong Zhang (2002) surveyed (N=528) students in both multimedia and traditional classrooms during spring semester 2002. This study used VARK learning style preference test. The results showed that 50% of the students agreed with visual learning style and 30% of them agreed with read/write learning style. A few students agreed with kinesthetic and aural styles. The proportion of students with a visual learning style or a read/write learning style was evenly divided between students in multimedia classrooms and traditional classrooms.

An exception to the evidence of the existing major differences in learning styles among learners divided into groups according to their different majors or fields of study as reported by the above studies is the study by Syafawani Halim (2009) which investigated the learning style preferences of 80 first year students from the Faculty of Arts and Sciences (both field of study) in Universiti Kebangsaan Malaysia according to Reid. This is because it was revealed that there was no clear difference between both fields of study, but there was a small difference in major and minor preferences of group learning style. Students from the Faculty of Arts liked to learn in groups, while students from the Faculty of Science preferred group style as their minor learning style preferences.

While most of the previously presented and discussed studies on learning styles focused on categorizing learners into groups based on their college majors, a few studies examining learning styles concentrated on another criterion of group categorization of the participating learners. For instance, the study conducted by Park (2000) investigating the perceptual learning style preferences (PLSP) of Southeast Asian students such as Cambodian, Hmong, Lao and Vietnamese in comparison with the white students is a good typical example of such comparative studies. She studied 738 students and employed Reid (1987) questionnaire. The Park study reported a significant difference in the PLSP of Southeast Asian and White's students. The study also showed that Southeast Asian students preferred Visual, auditory, kinesthetic, and tactile as their major and minor perceptual learning style preference as well as group learning. The strong preference for group learning style supports the notion that Asian students are more collaborative in their learning (Ramburuth & McCormick, 2001).

8. Review of Previous Studies on the Relationship between Gender and Learning Styles

Another important domain in which previous studies on learning styles have significantly and greatly contributed to and assisted in increasing our understanding and enhancing our knowledge of the importance of exploring and identifying learners' learning styles was the correlative body of research which has focused the attention on investigating learning styles in relation or in correlation

with gender differences among learners. Such studies, though, have been conducted to achieve the same aim; they have obtained different results, thus, coming up with different conclusions. Some provided evidence of the existing significant differences in learning styles according to their gender factor, and as reported by other studies, such learning style did not differ significantly between males and females. However, a few studies reported that gender did not lead to any differences in using learning styles or both males and females were found to be using or applying almost similar learning styles. Thus, this section of the literature review is concerned with presenting and discussing the most important findings obtained by a number of previous studies aiming at assessing the impact of gender on learners' preferred learning styles in different learning contexts.

Almost most of these studies examining learning styles between males and females have revealed the existence of significant differences in learning styles employed or utilized by the two different groups in different learning contexts. Dorsey and Pierson (1984) used Kolb's Learning Style Inventory and found a major difference between male and female students learning style preferences. They studied 513 nontraditional students in Southwest Texas State University in the fall of 1982 and understood that the dominant learning ability for males was abstract conceptualization (AC) and for females was active experimentation (AE). Pettigrew and Zakrajesk (1984) indicated that male students preferred hands-on learning tasks, whereas female students preferred a well-organized presentation of course material. Yong and McIntyre (1992) used the Learning Style Inventory (LSI) based on Dunn and Dunn's model to determine whether gender effect on the learning style of learning disabled and gifted students in grades 10-12. There were 53 learning disabled students (28 males and 25 females) and 64 gifted students (29 males and 35 females). The results revealed that gender differences were found in preferences for mobility and afternoon learning. In addition, Dunn (1993) found that gender influence on learning styles preferences of Mexican and Anglo-American children in elementary schools. The result revealed that Anglo-American and Mexican male students didn't like auditory learning style. They preferred to learn by tactile learning style, while female students didn't prefer this style. Other two studies by Philbin and Meier (1995) and Matthews and Hamby (1995) revealed that there were significant differences in learning styles between male and female students (Philbin and Meier 1995), and that male learner's preferred traditional analytical learning, while female learners preferred nontraditional learning (concrete experience Matthews and Hamby (1995). The same two latter researchers also concluded that male students preferred abstract and active experimentation, while females preferred to generate ideas.

In examining the gender impact on learning styles among 209 traditional and nontraditional EFL students in junior colleges from five randomly selected schools in

Taiwan, Tai (1999a) found out that male and female traditional EFL junior college students differ in their preferred learning styles; besides the auditory style, female students preferred the kinesthetic style, while male students preferred group learning style. Generally, female nontraditional EFL junior college students preferred all learning styles more than male students. Dunn et al. (2001) declared that learning styles of students will be different according to their gender. Summarizing their findings, Honigsfeld and Dunn (2006:3) stated, "globally speaking, in almost every study, the following results were revealed: Adult males and females had significantly different learning styles from each other. For example, female students in every nation were more auditory, motivated, persistent and responsible (conforming) than their male counterparts". Similarly, Wehrwein (2007) also studied the learning styles of physiology students (N=86) according to VARK. It showed 87.5% of male students are multimodal, whereas only 45.8% of female students preferred multimodal. Alumran (2008) investigated 877 college students at a Bahraini university for finding the relation between gender and learning style preference. His sample included 265 (30.2%) males and 610 (69.6%) females. Alumran (2008:303) stated that "there were significant differences in learning styles according to gender. Males were more intuitive learners, whereas females were more sensing learners". Alsafi (2010) studied 90 Saudi Second-year medical students at King Abdul-Aziz University and used Reid. The results revealed that male students preferred kinesthetic and auditory learning styles, while female students preferred visual, auditory, tactile, kinesthetic, and group learning styles but no individual. Male students preferred visual, tactile, group and individual learning style as their minor learning styles preferences.

The second largest group of such studies examining learning styles between males and females have revealed that the differences in learning styles employed or utilized by males and females in different learning contexts were not significant, but they were little or minor differences. According to Reid (1987), male students preferred tactile and visual learning styles more than females. Isemonger and Sheppard (2003) following Reid (1987) and they have used a translate version of PLSPQ for 710 Korean students at the Pusan University of Foreign Studies. Following Reid's study, Melton in 1990 investigated 331 students' learning style preferences at five schools in The People's Republic of China (PRC). one of the learning style variables was the students' gender in this research. The results revealed that female students were much more auditory than male students. Also, male students preferred tactile (related to "hands on" activities, touching, drawing) and kinesthetic (doing activities, role playing) learning styles more than female students. In the research of learning style preferences of Korean American, American, Anglo-American, and Mexican students in secondary school, Park (1997b) found that among these groups, female students strongly agreed with kinesthetic learning style more than male students.

Similar to these are the results by Thomas Young Tachie (2010) obtained from 1334 Junior High Schools students in Ghana since it was found out that the female students preferred auditory learning style more than the male students, while the male students liked visual learning style more than the female students. Furthermore, testing relationship between perceptual learning styles and some factors that one of them was gender, Isemonger and Sheppard (2003) revealed that female Korean students prefer group work and kinesthetic learning styles more than male students. Another study addressing the correlation between gender and learning style is the study by Riazi and Mansorian (2008) in which the data was collected by using Reid's questionnaire (PLSPQ, 1987). The sample consisted of 300 students that studying English at EFL institute. The results showed that male and female students had minor preferences towards individual and group learning styles and major preferences for auditory, visual, kinesthetic, and tactile learning styles. Male students were interested in group learning style, while female students represented less preference for these two learning styles specially the group work. According to the results by PungWunChiew et al (2009) from Form 4 Arts male and female students, auditory, group, and kinesthetic learning styles were selected by female students whereas no major learning styles were preferred by males. Partly as opposed to Park (1997b), Mulalic et al. (2009a), adopting Reid's PLSPQ among (N=160) students in Department of Language and Communication at University Tenaga Nasional, showed that male students preferred kinesthetic and auditory learning styles more than female students.

Carrying out his study among 693 college students (50.5% were male and 45.5% were female), Keri (2002) showed that male and female students do learn differently. Female students were more relational learners, while male students were more independents learners. Employing Canfield's Learning Style Inventory (Canfield & Cafferty, 1988:433), "most of the male students preferred to learn by applied learning style (i.e., using everyday-life experiences as a basis for learning), whereas most of the female students liked abstract (i.e., where copious reading assignments are required, learning materials are organized, and teachers' demonstrate knowledge)". Keri (2002:437) concluded, "The common interest in terms of learning preferences between males and females is social; that is males and females (both) prefer to work with people, and associate with others on learning tasks" Reese and Dunn (2007) surveyed 1500 students in a private metropolitan university and used the Dunn and Dunn Learning Style Model. The findings revealed that the students had statistical differences in Sound, Light, Temperature, Motivation, and Responsibility elements. The female students preferred bright, light, warm temperature, formal seating, motivation, and learning alone or with peers. They stated that male students were more visual and needed more structure, mobility, and liked to study in afternoon and also they

stated that female students, in general were auditory and kinesthetic.

A few studies supported the evidence of the existence of such minor or little differences in learning styles between males and females. Dobson (2009) studied the learning style preferences of 1,037 undergraduate physiology students by using VARK test. The results displayed that male and female students were different in their learning style preferences. Females preferred Visual (46%), followed by Aural (27%), Read/write (23%, and Kinesthetic (4%), whereas, males preferred Visual at a higher rate (49%), followed by Read/write (29%), Aural (17%), and Kinesthetic (5%). In addition, Breckler and others (2009) used VARK and found in their California study of physiology students (N=218) that there was very little difference between male and female learning styles. Generally, Visual (50.5%), Auditory (48.6%), Read/Write (64.7%, and Kinesthetic (69.3%) learning styles were as their preferred learning styles.

The last category of such studies represents these few or limited studies on learning styles in terms of gender impact which have proved there were no differences in learning styles between males and females or both groups employed almost equal or similar types of learning styles. The first study standing out most obviously is the study by Baxter Magolda (1992:217) which was carried out among 101 freshman (51 female and 50 male) students at a large mid-western state university by using the Kolb Learning Style Inventory (LSI) found that "the percentage of men and women preferring each style was nearly equal and chi-square analysis revealed no significant differences in learning style by gender". In addition, Abdul Halim (2006) investigated (N=40) second year students of SMP Muhammadiyah and Batu. Based on the findings of the research, there were three learning styles for females including group, individual, and tactile and group, kinesthetic, and individual learning styles for males. Bidabadi and Yamat (2010) investigated 90 Iranian English as foreign language (EFL) Freshman University students. They found that there was no significant difference between male and female students' learning style preferences. The last study is the same study by PungWunChiew et al (2009) which revealed that the least preferred learning style of both males and females was individual learning. Honigsfeld and Dunn (2003) considered the effect of gender on learning styles of 1,637 countries such as Bermuda, Brunei, Hungary, Sweden, and New Zealand. They decided to explore whether there were important main effects for gender and nationality, whether there were important interactions between gender and nationality, and whether there were important country-specific differences in learning styles by gender. The participants attended Grades 7 through 13, depending on the local school system in their country or residence. In every nation except Brunei, they sampled from typical middle-class schools.

In Brunei, there are different types of schools that design by government. The numbers of high and low socioeconomic schools were the same. In Bermuda, one private and three government schools were selected. In Hungary, New Zealand, and Sweden, public schools were included. The researchers used the English or appropriate foreign language (Hungarian, Malay, and Swedish) versions of the Learning Style Inventory (LSI) for grades 5-12 identified the learning style preferences of participants in the following subscales: Sound, Light, Temperature, Design, Self-Motivation, Persistence, Responsibility, Structure, Alone/Peers; Authority Figures, Several Ways, Auditory, Visual, Tactual, Kinesthetic, Intake (the need for food or drink); and Morning Versus Evening, Late Morning, Afternoon, Mobility, Parent Motivation, and Teacher Motivation. To study whether there would be main effects for gender differences, main effects for country differences, and interaction effects for gender by country. According to the MANOVA results, there were significant effects on gender.

The results of the compared female and male students showed that male students preferred more peer interaction rather than learning alone and more kinesthetic activities, while female students on average needed higher temperatures and more self-motivated, parent motivated, and teacher motivated; more persistent; and more responsible or confronting. When adolescents' learning styles were compared by country, significant and more substantial differences emerged for all learning style variables except for auditory learning style.

As a follow-up to the main effect and interaction procedures, the researchers conducted tests of simple main effects for country and gender to identify the differences within the levels of the other variable. Post hoc tests confirmed that there were larger country differences between the two genders than there were gender differences among the five countries. The results revealed that male Bermuda students were tactual, kinesthetic, and peer oriented, whereas female Bermuda students were self-motivated, teacher motivate, and persistent. Male Brunei students liked to have more energy in the late morning, whereas female Brunei students preferred to be more parents motivated and auditory, more variety, and felt more energetic in the afternoon.

Male Hungarian students preferred background sound, whereas female Hungarian students liked to be more self-motivated, teacher motivated, persistent, responsible, and authority-figure oriented. Male New Zealand students preferred kinesthetic experiences, whereas female New Zealand students liked brighter illumination, warmer temperatures, more responsible, and enjoyed learning through a variety of ways more than their male counterparts.

Finally, male Swedish students preferred kinesthetic learning style, whereas female Swedish students liked to be

more self-motivated and responsible. Generally, male students preferred kinesthetic and peer oriented more than female students and female students liked to be self motivated, persistent, comfortable and needed warmer temperatures, parent, and teacher motivation.

9. Pedagogical Implications

Different researchers have attempted to investigate learning style in their own context and the factors that might promote students' learning. What can be concluded from the literature is that the researchers working in this area have reached a consensus on the importance of learning styles and the key role it can play in fostering one's ability. Every learning style raises the success rate of each student especially when it matches with individual need. There are growing proofs in literature demonstrating that learning styles are one of the components of language learning procedures (e.g., Cohen 2003; Ehrman & Leaver 2003; Ehrman, Leaver & Oxford 2003; Oxford 1999; Oxford, Ehrman & Lavine 1991).

The more that teachers know about their students' style preferences, the more effectively they can orient their L2 instruction, as well as the strategy teaching that can be interwoven into language instruction, matched to those style preferences. Some learners might need instruction presented more visually, while others might require more auditory, kinesthetic, or tactile types of instruction. Without adequate knowledge about their individual students' style preferences, teachers cannot systematically provide the needed instructional variety.

In order to understand the importance in determining students' learning styles, and also to accommodate for different learning styles in the classrooms, students should complete a learning style instrument early in their course. This would enable students to understand their own learning style as well as those of their classmates. Teachers should be aware that students learn differently, which should make them aware that they have to approach teaching from different perspectives.

If learning styles theory applied in the schools and universities curriculum can significantly improve student's academic achievement as have been shown in the review of literature about learning styles. In today's competitive learning environment it is vital that more holistic approach be employed to enhance student's learning and as a result improves student's academic achievement.

10. Conclusion and Areas for Further Research

In conclusion, teachers should take into consideration the differences in learning styles among students and enhance students' learning strategies for their successful learning. When teachers are aware of the importance of

learning styles, they can provide a good map to their students. Moreover, it is important to enable students to be self-aware of both style and strategies. According to Stebbine (1995), students who know their learning style preferences are able to build their self-confidence that can reinforce their willingness to be risk-takers.

The results of the research have shown that differences do exist in learning styles among the students from different gender and such differences should be taken into account when teaching foreign languages. Students have particular learning style preferences and these preferences may be different between male and female students. Some studies provided evidence of the existing significant differences in learning styles according to their gender factor. However, a few studies reported that gender did not lead to any differences in using learning styles or both males and females were found to be using or applying almost similar learning styles. Although there are many factors that influence learning styles, the role of gender is important for many researchers.

Despite the plethora of studies conducted on learning styles, there are still some problems that need to be tackled and some gaps can be seen in the literature which gives avenue for further research in the area. One important point that is worth discussing is that in most of the research reviewed in the past studies, the researchers have employed the Reid's PLSQ. Too much reliance on one single instrument and the overuse of this rather old instrument can be a cause for concern among those working in this area of research.

As well as students, teachers play a critical role in the teaching/learning process. The researcher recommended further investigation into teaching and learning styles. There is also a lack of research on high school students' language learning styles. Further research related to their classroom learning styles should be done in order to improve the quality of high school education. Furthermore, additional variables could also be investigated, while most of the previously presented and discussed studies on learning styles focused on categorizing learners into groups based on their college majors, a few studies examining learning styles concentrated on another criterion of group categorization of the participating learners. Finally, there are some research studies that showed both group and individual learning styles are minor learning styles. This may reveal that students have unsure approaches towards the mentioned learning styles. Finding students' preferences towards both individual and group learning styles can be done in further studies.

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