

Chapter Two Literature Review

In this chapter, various learning style research is classified first, which includes cognitive learning styles, perceptual learning styles, sociological learning styles and affective learning styles. Then come the issues on learning style research, consisting learning style and language achievement, learning style and culture, learning style and gender, and learning style and learning/teaching activities.

Classification of Learning Styles

Around 1890s, components of learning style have been investigated in the research literature (Keefe, 1987). The study of learning style was originated from the research of cognitive styles in early experimental psychology (Chen, 1999). Over the past seventy years, educational theorists and researchers investigated the concept of cognitive style; the focus of their research included how the mind actually functions, how it processes information or is affected by each individual's perceptions. In view of their obvious value in the application of education, more research has been done to explore the effect of different learner characteristics on learning; thus the term 'learning styles' emerged around the 1970s as a result (Guo, 1987). Since then, numerous dimensions of learning styles have been proposed as being relevant to language learning, marking out different preferred responses to language learning problems or different ways of thinking (McDonough, S., 2002). For example, Messick et al. (1976) listed more than 20 dimensions of cognitive style, including Witkin's (1971) Field-dependent/Field-independent construct, Kagan's (1963, cited in Kirby, 1979) "reflection-impulsivity" dimension, and sensory modality preferences. Various groups of researchers have worked with pieces of this complex cognitive profile; each group has its own taxonomy and terminology, though some appear to overlap.

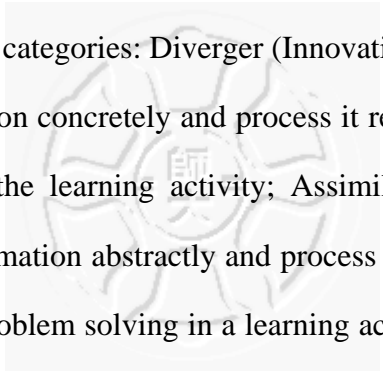
According to Keefe (1987), learning style is the broader term and includes three dimensions: (1) cognitive styles, which deal with information processing habits; (2) affective styles, which are concerned with motivational processes; (3) physiological styles, which encompasses human body variables. In Dunn, Dunn and Price's (1975) Learning Style Inventory (LSI), they identify a wide range of environmental, emotional, sociological, and physical learning style preferences. Reid (1995), like Keefe (1987), also divided learning style research into three major categories: cognitive learning styles, personality learning styles, and sensory learning styles.

Cognitive learning styles include field independent/dependent learning styles, analytic/global learning styles, reflective/impulsive learning styles, and Kolb's experiential model. Field-dependent (FD)/ Field-independent (FI) was at one time the most promising learning style construct. It was determined psychometrically by using Witkin's (1971) Group Embedded Figures Test (GEFT), which includes a visual test involving finding specified shapes in a more complex figure. When confronted with items in the GEFT test, FD individuals have difficulty seeing a simple figure in an item embedded in a complex pattern. In contrast, FI individuals are able to overcome the influence of the embedded design to identify the simple figure. According to Witkin et al., (1971), individuals with a FD mode of perception are unable to perceive elements (or themselves) as separate from their background or environment. They are also considered global learners; that is, they learn holistically (perceiving the forest) rather than discretely (perceiving the trees). In contrast, FI individuals also called analytic learners; they perceive the field (and themselves) as separate from the surrounding environment. Pask (1976) found that the serialist/holist cognitive style was also a measure of a bipolar information processing strategy that describes the way that learners select and represent information. Based on stylistic parallels, field-dependents be related to holists because they learn by concentrating first on building

broad descriptions, whereas field-independents are related to serialists because they concentrate more narrowly on details and procedures before conceptualizing an overall picture (Jonassen, & Grabowski, 1993).

Impulsivity-Reflectivity was originally introduced by Kagan and co-workers (Kagan, Moss, and Sigel, 1963, cited in Kirby, 1979). They concentrated on analytic styles of thinking and problem solving, which led to the identification of a “reflection-impulsivity” dimension, which is measured by the Matching Familiar Figures Test (MFFT). This style dimension derived from earlier work investigating conceptual tempo that measured the rate at which an individual makes decisions under conditions of uncertainty. Learners fell into two distinct categories: the first were those who reached a decision quickly after a brief review of options and were labeled ‘cognitively impulsive’; the second were those who would deliberate before making a response, carefully consider all options and were labeled ‘cognitively reflective’. Ewing (1977) refers to two styles that are closely related to the reflectivity/impulsivity dimension: systematic and intuitive styles. An intuitive style implies an approach in which a person makes a number of different gambles on the basis of “hunches,” with possibly several successive gambles before a solution is achieved. Systematic thinkers tend to weigh all the considerations in a problem, work out all the loopholes, and then, after extensive reflection, venture a solution.

Kolb’s experiential learning theory and learning-style typology also provides a framework for the teaching and learning process. His learning style construct consists of two dimensions: perceiving and processing. The first describes concrete and abstract thinking while the second an active or reflective information-processing activity. These dimensions are integrated to form a model describing four types of learning styles evaluated by the Learning Style Inventory (LSI). The LSI is a twelve-sentence self-description questionnaire (Kolb, 1976); the results of the LSI put the



learners into one of the four categories: Diverger (Innovative Learners)—learners who typically perceive information concretely and process it reflectively, and who need to be personally engaged in the learning activity; Assimilator (Analytic Learners)—learners who perceive information abstractly and process it actively, and who need to be involved in pragmatic problem solving in a learning activity; Converger (Common Sense Learners)—learners who perceive information abstractly and process it reflectively, and who need to follow detailed, sequential steps in thinking in a learning activity; or Accommodator (Dynamic Learners)—learners who perceive information concretely and process it actively, and who need to be involved in risk-taking, making changes experimentation and flexibility in a learning activity. Gregorc (1979) also investigated how learners make sense of the world through their perception and ordering of incoming information by exploring the bi-dimensional patterns of learning preferences. He has done extensive work with his categories of learning—concrete sequential, abstract sequential, abstract random, and concrete random—which serve as indicators of a learner’s mediation abilities and capacities.

Personality learning styles reflect more in the way of feeling and interpersonal relationships, including tolerance of ambiguity styles and Myers-Briggs temperament styles (Tso, 2002). According to Ely (1989), ambiguity tolerance is acceptance of confusing situations and lack of clear lines of demarcation. The style of ambiguity tolerance concerns the degree to which the learners are cognitively willing to tolerate ideas and propositions that run counter to your own belief system or structure of knowledge (Brown, 2000). Students who can tolerate moderate levels of ambiguity are more likely to persist in language learning than students who cannot (Chapelle, 1983). The Myers-Briggs Type Indicator (MBTI) (Myers, 1987) is often used as a personality learning styles measure. From self-report, the MBTI attempts to identify individual’s basic preferences in terms of their habitual use of perception and

judgment. It explores four dimensions of learning style: introversion-extroversion (attitudes), sensing-intuition (processes of perception), thinking feeling (processes of judgment), and judge perceiving (style of dealing with the outside world) (Carrell et al., 1996). Several of these dimensions appear to significantly influence how students choose to learn languages, according to recent research (Ehrman & Oxford, 1989).

Sensory learning styles consist of environmental learning styles, perceptual learning styles and sociological styles (Reid, 1995). Environmental learning styles refer to the environmental factors with which learners can learn more effectively, such as sound, light, temperature, classroom arrangement, time, food, and mobility (Dunn, Dunn, and Price, 1975). The present study explored EFL learners' perceptual learning styles, sociological learning styles, and affective learning style, which will be reviewed in the following sections.

Learning Style Research

In this section, research on perceptual learning style in second/foreign language education was reviewed first. Then, come studies concerning sociological learning styles, that is, research regarding students' group/individual learning preferences. Finally, the researcher reviewed the affective dimension of learning style—motivation research in second/foreign language education.

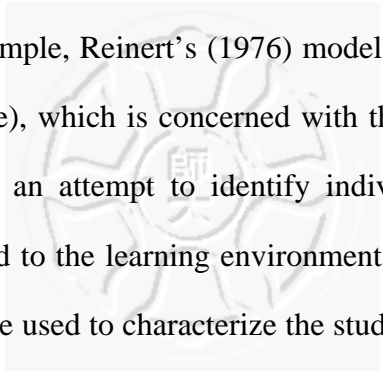
Perceptual Learning Style Research

During the 1970s, research has begun to identify the more external, applied modes of learning styles (Reid, 1987). One of the most obvious aspects of learning styles is the perceptual learning style (Kroonenberg, 1995). This dimension of learning style is salient in the formal classroom setting and is an important factor for classroom instruction (Brown, 2000). Keefe (1987) describes perceptual modality preferences as

the learner tendency to use different sensory modes to understand experience and the perceptual response as both cognitive and affective for the preferred response is a biased initial reaction to information; that is, we prefer to get our information in ways that are pleasing to us.

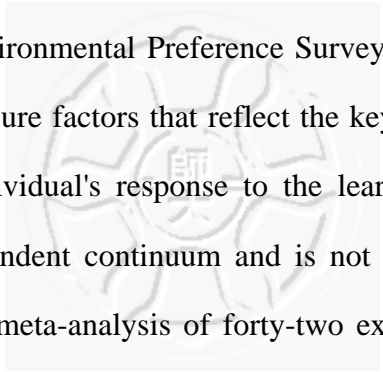
Perceptual learning style refers to the physical, perceptual learning channels with which the student is the most comfortable (Scarcella & Oxford, 1992), and it describes the variations among learners in using one or more senses to understand, organize and retain new information and skills (Reid, 1995). The sensory channels through which each individual best absorb and retain new information and skills have also become known as modality strengths (Kinsella, 1995). According to Kinsella (1995), students varied considerably with respect to their modality strengths. A modality strength might occur in a single channel. But most students beyond early elementary age could learn through several sensory channels. As students grew older, those with mixed modality strengths had decidedly better chance of success than did those with single modality strength in terms of academic achievement. This may be because they could process information in accordance with whatever way it is presented (Ko, 2002).

The main choices of perceptual preferences in language learning are visual (reading and viewing), auditory (hearing and speaking), and kinesthetic and tactile (doing). For most learners, the perceptual preference seems to evolve from psychomotor (kinesthetic/tactile) to visual and aural as the learner matures. A dominant preference usually forms early in life, and does not change radically (Keefe, 1987). Research that identifies and measures perceptual learning styles relies mainly on interview techniques or self-reporting questionnaires by which students select their preferred learning styles (Keefe, 1987; Reid, 1987; O'Brien, 1989). At first, researchers focused on exploring the relationship between native speakers' learning



styles and learning. For example, Reinert's (1976) model ELSIE (Edmonds Learning Style Identification Exercise), which is concerned with the ways students internalize individual words, reflected an attempt to identify individuals' natural "perceptual modality" as they responded to the learning environment. The ELSE is composed of 50 one-word items which are used to characterize the student's reaction on four modal categories: Visualization—the creation of a mental picture of something or activity; Written word—a mental image of the word spelled out; Listening—meaning direct from sound, and Activity—an emotional or physical feeling about the word (Keefe, 1987). The purpose of this assessment is to provide the teacher with information that will be used to work to the student's strengths or preferred mode of responding to learning stimuli. Reinert's work influenced both the development of the Dunn et al. (1989) model, as well as the work of Keefe (1987), in developing the NASSP Learning Style Profile.

The NASSP Learning Style Profile (LSP) is a comprehensive learning style assessment instrument for the diagnosis of student cognitive styles, perceptual responses, study and instructional preferences. The Profile was developed by the NASSP research department (Keefe & Monk, 1986) in conjunction with a national task force of learning style experts. The Learning Style Profile (LSP) contains 23 scales representing four higher order factors: cognitive styles, perceptual responses, study and instructional responses (the physiological and affective elements). The Learning Style Inventory (LSI) developed by Dunn and Dunn (1979) is a popular learning style survey instrument, which is a self-reporting questionnaire that enables US public school students to identify 23 elements of learning style, including a wide range of environmental, emotional, sociological, psychological, and physical/sensory learning preferences. There are several versions of this instrument aimed at the primary and secondary age-range. A third version, developed for use with adults, is



called the Productivity Environmental Preference Survey (PEPS). Each version uses self-report methods to measure factors that reflect the key variables identified by the authors as forming an individual's response to the learning task. Each preference factor represents an independent continuum and is not necessarily related to other factors. Dunn and Dunn's meta-analysis of forty-two experiments between 1980 to 1990 by thirteen different higher education institutes reveals that students whose learning styles were addressed by the host institutions could be expected to achieve 75 percent of a standard deviation higher than students whose were not (Dunn, 1995). Dunn's (1984) research with US school children has demonstrated that students learn differently through four basic perceptual learning preferences: some children learn by listening (auditory learners), some learn by seeing (visual learners); other children learn through touching (tactile learners), and still others learn through whole-body involvement (kinesthetic learners).

In a postsecondary study, Farr (1971), who asked students to identify their learning style preferences through self-reporting questionnaires, reported that their preferred learning styles paralleled their actual learning strengths. In another postsecondary study, Domino (1979) found that college students taught in preferred learning styles scored higher on tests, fact knowledge, attitude, and efficiency than those taught in instructional styles different from their preferred styles. Carbo (1983), investigating the perceptual styles of readers, found that good readers prefer to learn through their visual and auditory senses, while poor readers have stronger preference for tactile and kinesthetic, learning. Carbo further suggested that it was better to teach underachievers tactually and experientially first and then to emphasize and reinforce their knowledge auditorially (Ko, 2002).

On the other hand, Oxford and Anderson (1995) noted that visual, auditory, and hands-on styles were also significant learning style modalities for second language or

foreign language learners. Among the most popular learning style assessment instruments that are normed in the ESL/EFL field are Reid's (1987) Perceptual Learning Style Preference Questionnaire, O'Brien's The Learning Channel Preference Checklist, Oxford's (1993) Style Analysis Survey, and Kinsella's (1994) Perceptual Learning Preferences Survey. The Learning Channel Preference Checklist (O'Brien, 1989) containing 36 statements which students rate on a five-point scale examines three sensory learning style preferences: visual, auditory, and haptic which includes kinesthetic and tactile learning style preferences. The Style Analysis Survey (Oxford, 1993) including 110 statements which students also rate on a five-point scale assesses an individual's general approach to learning and working. The style survey is grouped into five activity types: how I use my physical senses to study or work; how I deal with other people; how I handle possibilities; how I approach tasks; and how I deal with ideas. Kinsella's (1994) Perceptual Learning Preferences Survey explores students' perceptual learning preferences: visual, auditory, tactile, and kinesthetic learning preferences by using a 32-item self-reporting questionnaire which students rate on a three-point scale. Reid (1984) developed the Perceptual Learning Style Preference Questionnaire (PLSPQ) so as to identify basic physical and social learning style preferences: visual, auditory, kinesthetic, tactile, group, and individual. She investigated 1388 ESL college students' perceptual learning styles, most of whom were strongly kinesthetic and tactile learners (Reid, 1987).

Reid's research was replicated on large-scale studies by Stebbin (1995), Rossi-Le (1995), and Park (1997, 2000). Stebbin examined 660 ESL college students and found kinesthetic and tactile learning styles were strongly preferred. Similar results were found in Rossi-Le's and Park's findings. Rossi-Le (1995) studied the perceptual learning styles of 147 adult immigrants in ESL programs in two community colleges and found that the majority of the students expressed a major learning style preference

for the tactile/kinesthetic mode and group learning. This suggests that adult immigrant L2 learners prefer a style of learning that will involve them in the totality of language learning experience and in collaborative work. In Park's (1997b, 2000) studies, the results also showed that all ethnic groups (high school level) revealed major preferences for kinesthetic learning.

Torpong Goodson (1993; cited in Reid, 1998) surveyed 227 East Asian students studying English at the University of Tennessee. In general, the students preferred visual and kinesthetic styles of learning. To be even more specific, the Mainland Chinese and Taiwanese students preferred visual learning. The Japanese students preferred kinesthetic learning, and the Korean students preferred tactile and visual learning. Moreover, Goodson found, most of the East Asian students indicated that they would not choose group learning. In a study of more than 500 ESL students in Australia, Ken Willing (1988) found that Arabic students preferred auditory and visual perceptual styles and they learned best when they were performing activities that allowed them to be interactive and extroverted.

The ESL studies mentioned above have all taken place in English speaking countries, where students are studying English as a second language in an immersion situation. Reid (1995) pointed out that research in the EFL context may show different results because many EFL classroom are relatively homogeneous in terms of first language and culture and the students may not have been exposed to the learning styles and culture of U.S. classrooms. In Egypt, Reid (1998) surveyed more than 100 EFL teachers-in-training in 1992. A great majority of the Egyptian students also strongly preferred kinesthetic and tactile learning styles. In contrast, auditory learning was primarily a minor learning style for the EFL Egyptian students, which is different from the results in Reid's (1987) earlier study where the ESL Arabic students strongly preferred auditory learning. Reid's PLSPQ was also adopted by Vicioso (in Reid,

1998) in Spain, Gedeon & Takacs (1992) in Hungary, and Korotkikh (1998) in Russia to explore the learning style preferences of EFL learners in different countries. The results of the research in Spain, Hungary, and Russia revealed that all three groups of learners chose kinesthetic and tactile as major learning styles, none of the student groups selected auditory learning as a strong major learning style, and that all groups demonstrated preferences for multiple learning styles. In a departure from Reid's (1987) study, Vicioso found there was a nearly equal preference for group and individual major learning styles in her research. Another difference found by Gedeon & Takacs (1992; cited in Reid, 1998) is that there was a substantial number of students in their study chose group learning as a learning style. In addition, large numbers of the students in Korotkikh's (1998) research chose minor, not major, learning style modes.

To sum up, the above EFL research on perceptual learning styles showed that EFL learners' perceptual learning style preferences might differ from that of ESL learners due to different English-learning opportunities and environment.

Research on Perceptual Learning Styles in Taiwan

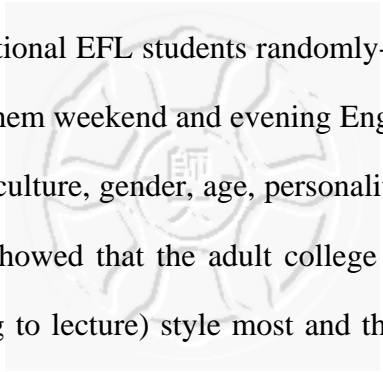
Recognizing that students' learning styles play an important role in their target language learning, more and more researchers have studied Taiwanese learners' learning styles in English learning. However, research concerning Taiwanese EFL students' learning style preference revealed inconsistent results.

Some researchers found that their students did not show any particularly strong preferences for any of the learning styles. For example, Lin and Shen (1996) explored Taiwanese junior college students' learning styles using Reid's PLSPQ. They discovered that the subjects did not express strong preferences for any of the learning styles. Likewise, Cheng (1997) found that the 140 Taiwanese military college

students in the research did not show any particular preference for their perceptual learning, and neither did the students in Tso's (2002) study. Tso (2002) investigated 346 Taiwanese senior high school EFL students' perceptual learning style preference by using Reid's (1987) PLSPQ and found that the subjects did not express very strong preferences in any learning style. However, compared with other learning styles, auditory learning style was preferred most, but individual learning style the least.

Unlike the above research, Chang (1998) adopted the Style Analysis Survey to examine the relationship between 95 Taiwanese college English-major freshmen's learning styles and their EFL proficiency measured by TOEFL and discovered that more than half of the participants displayed a visual preference. Similar to Chang's study, Chen's (1999) study, using the Learning Channel Preference Checklist on 187 junior high school Taiwanese students, showed that about 57% of the participants also had a major visual preference, and so did the participants in Chen's (2001) study. Chen (2001) investigating Taiwanese students in accounting classes found that most of the participants also preferred the visual learning style.

Different results are found in Cheng's (2001) and Tseng's (2001) studies. Cheng (2001) explored the preferred learning styles of students in the seven programs at the Chung-Hua Institute of Medical Technology in Taiwan; it also assessed the preferred learning styles of students based on gender and determined the differences in preferred teaching and learning styles between the teachers and the students. Results of the study revealed that most students perceived auditory style as their most preferred learning styles and considered individual styles as their least preferred learning styles; the individual leaning and teaching styles are the least preferred style for both students and teachers; and that teachers prefer students to demonstrate their learning through kinesthetic and group styles to a greater degree than students want to use those styles. Tseng (2001) using Reid's PLSPQ identified the preferred learning



styles of three 333 nontraditional EFL students randomly-selected in three Taiwanese universities which offered them weekend and evening English learning programs. The study assessed variables of culture, gender, age, personality, and motivation. Findings emerging from this study showed that the adult college level students in this study preferred auditory (listening to lecture) style most and they preferred group-learning style second. This finding is contrary to earlier similar studies done by Reid (1987) in which adult college level students preferred kinesthetic (activity) learning style first, auditory learning style second, and visual styles (reading) were the least preferred styles.

In a departure from earlier studies, Ko (2002) investigated the perceptual learning style preferences of 161 junior high school students from five second-year classes in Tainan City by using Kinsella's (1993) the Perceptual Learning Preference Survey. The result of her study showed that the subjects preferred kinesthetic/tactile, visual/nonverbal, and auditory styles to visual/verbal style; and the multiple and the visual/nonverbal style preference subjects performed better in English achievement. Chen (2004) using Dunn's (1984) Learning Style Inventory surveyed the learning styles of 170 senior-high female EFL learners in Taipei County and found that the subjects preferred kinesthetic and tactile learning the most. The result also shows that the students preferred visual learning modes second to the least, and the auditory learning the least, which contradicts Tso's (2002) finding that students preferred auditory learning the most.

In a word, the studies of the perceptual learning styles of Taiwan EFL students showed diverse results in different learning style categories and also within different levels (college, senior high, and junior high). The findings of Ko's (2002) and Chen's (2004) studies are similar to Reid's (1987), Rossi-Li's (1995), and Stebbin's (1995) that most EFL learners expressed a major preference for kinesthetic and tactile

learning modes. Findings of the other studies, however, revealed quite different results. In addition, among all the studies in Taiwan, there are only two of them concerning the perceptual learning styles of junior high school students, but the results of the research are also diverse. Therefore, there is urgent need to further investigate junior high school students' perceptual learning style preferences in order to improve their learning.

Group/Individual Learning Preferences

Research has shown that besides perceptual learning styles, students' preferences for learning alone or in groups may affect their second/foreign language learning (Dunn and Dunn, 1975; Reid, 1987; Kinsella, 1995; Price, 1980; Chen, 2004). Dunn and Dunn (1975) claimed that sociological factors may affect student' learning and therefore included them in their Learning Style Inventory. Kinsella's (1993) Classroom work-style Survey including 24 statements which students mark agree or disagree examines the ways students prefer to complete classroom assignments: independent work style and collaborative work style. The Classroom Work Style Survey has been designed to provide teachers of linguistically and culturally diverse classes an instrument for eliciting and responding to their students' varied work-style preferences. Reid (1984) also contains group/individual learning as learning styles preferences that different students may possess in her PLSPQ.

Price (1980) found that many students in grade 3-8 learned better in small, well-organized groups than either alone or with the teacher. However, students from grades 9-12 learned better alone. Reid (1987) found that the ESL students in USA showed a minor or a negative preference for group learning. However, in the studies of learning styles of Taiwanese EFL learners, Cheng (2001) found that most of the college-level students considered individual styles as their least preferred learning styles. Likewise,

findings of Tseng's (2001) study showed that the adult college level students in the study preferred group-learning style to individual learning styles and so did the senior high students in Tso's (2002) study. Results of Chen's (2004) study also showed that most subjects preferred a style of learning in collaborative work. Park's (1997) study found that the high achievers had major preferences for individual learning while the low achievers preferred group learning. Similarly, Tso's (2002) revealed that the low achievers preferred group learning styles the most.

In sum, the above research showed that learners' preferences for learning alone or in groups may be related to their English learning and proficiency level. Since there is little research in this area in Taiwan, the researcher will explore the relationship between Taiwanese junior high students' sociological learning styles and their English learning in the present study.

Motivation

The affective dimension of learning styles—motivation—is regarded as one of the components of students' learning styles that may affect their way of learning (Keefe, 1987; Dunn, Dunn and Price's, 1975). In the past decades, motivation has been considered as one of the key factors influencing the process of language learning (Gardner, 1985; Brown, 1994; Cook, 2001). For instance, Scarcella and Oxford (1992) claimed that motivation is extremely important for second language learning because it determines the extent of learners' active, personal involvement in their second language learning process. Motivation is usually defined as “an inner drive, impulse, emotion, or desire that moves one to a particular action” (Brown, 1994); it is a goal-directed strength, which gets students to decide or comply with others' decision to learn a language, to engage in learning activities, to tolerate the inevitable frustrations, and to persevere in the face of impatience or boredom (McDonough, 2002). In the

formal educational settings, students are motivated or not by the school itself, their teachers, and the subjects they study (Keefe, 1987).

Extensive research has shown that motivation and attitudes may affect second language learners' language achievement. Dornyei (1994) stated that motivation is one of the main determinants of second/foreign language learning achievement, and findings of Gardner's (1985) studies revealed that students with positive motivation and attitudes are more likely to succeed in second language learning. Besides, in Hansen's (1981) research, the results also showed that the more positive the attitudes of the students, the more they achieved in English. Although the results of several studies verify the importance of aptitude and intelligence, Gardner and Lambert (1972) emphasized that "motivational factors can override the aptitude effect" (Dornyei, 1998). Moreover, Tremblay & Gardner (1995) also found that high motivation could compensate considerable deficiencies both in one's language aptitude and learning conditions and that the motivational behavior was a significant determinant of achievement. Besides, in Milgram & Price's (1993) study, the results showed that students gifted in foreign language were more highly motivated than their non-gifted counterparts.

Compared with the research on motivation and language achievement, less research has been done on students' motivation and attitudes in the actual learning situation although it would be reasonable to assume that students' motivation and attitudes may considerably affect their personal involvement in the learning/teaching activities in the classroom. According to Willis (1996), the motivation to learn, the motivation to process the exposure students receive, and the motivation to use the target language as often as possible are necessary requirements for students to learn a second/foreign language. Brown (1994) emphasized that motivation is probably the most frequently used term for explaining the success or failure of nearly any complex task. Kamada

(1987) also confirmed “motivation is the basic essential element to trigger the activity” (p. 1). Jacques (2001) found that in the actual learning environment, learners’ motivation continuously interacts with the environment, controlling and directing the progress of the learning/teaching activities.

Due to the importance of motivation in the real language classroom, some researchers have investigated second/foreign language learning motivation and pointed out that students’ motivation indeed had some effect on their preferences for learning /teaching activities. That is, students may prefer different types of language learning/teaching activities depending on their motivation. As Nunan (1989) and Melton (1990) have commented, teachers often discover that some activities just don’t seem to “hit the mark” with some language students (Jacques, 2001). Schmidt et al. (1996) reported that students who scored high on the affect dimension of motivation welcomed communicative classes while those low on that dimension tended to reject the communicative classroom.

Furthermore, research also reveals that ESL/EFL teachers also have their own motivation and perspective while adopting teaching/learning activities, based on their former learning experience or “an acceptance of and adherence to the prominent pedagogical theories of the time” (Jacques, 2001). Nunan (1989) found that teachers were much more positive about communicative activities such as pair work, peer and self-correction of errors, and use of multimedia than were their students, who preferred vocabulary and pronunciation exercises and teacher correction of errors. Stafford (1995), in a study of Japanese learners of English in Hawaii, found that the least popular class in the students’ program of study was the one based on a communicative approach, which included pair-work, group work, and information-gap tasks. On the contrary, the students preferred more structured, teacher-fronted grammar and pronunciation classes. Jacques (2001) examined motivation both in

terms of ESL/EFL students and teachers teaching a foreign language and how they may or may not be different depending on their own perspective. Results of the data indicated that certain types of students and teachers engage in foreign languages for different purposes and prefer to learn or teach through certain classroom activities. Schmidt (2001) also investigated the links between motivation and students' attitudes towards different aspects of language pedagogy and found that motivation did affect students' preferences for different types of classroom activities. The overall findings of above research imply that students' motivation may affect their second/foreign language achievement, their preferences for learning/teaching activities, and that teachers and students may have different motivations and also different perspectives regarding what is going on in the ESL/EFL classroom.

EFL Motivation Studies in Taiwan

Because students' motivation plays a central role in their target language learning, more and more researchers have studied Taiwanese learners' motivation in English learning. Some researchers found that there is indeed some relationship between students' language learning motivation and their language achievement. For instance, Zeng (1984) explored junior high school students' English learning behavior and found that high achievers had greater motivation for achievements than low achievers, and so did the results of Hsu's (1986) study, which also revealed that junior high school students' learning motivation was significantly correlated with their English grades. Likewise, Tang (1989), investigating the motivation and attitude of 249 senior high school students, found that there was a significant correlation between males and females, high achievers and low achievers, and teacher-student interaction.

Moreover, Cheng (1993) and Peng (2002) found that there is a strong association between students' motivational intensity and their EFL achievement. Chen (2004)

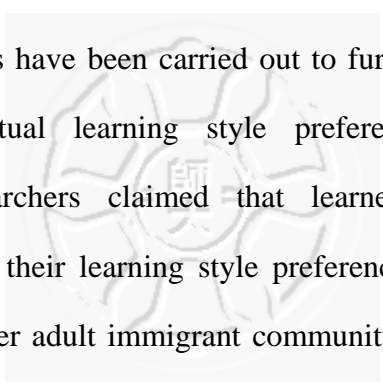
using Dunn's (1984) Learning Style Inventory investigated the learning styles of 170 senior-high female EFL learners in Taipei County and found that in the emotional category, except for motivation, there was no big difference among the other three categories. The high achievers were more motivated, responsible, peer-oriented and preferred structure. Besides, Chang (1999) who investigated Taiwanese junior high school students' motivation in learning English by means of a motivational questionnaire and qualitative techniques found that students' ability and self-confidence were mediate to students' motivation and classroom behavior.

In spite of the studies on students' motivation and EFL achievement, there is little research concerning the relationship between students' motivation and their preferences for learning/teaching activities. Therefore, in the present study, the researcher explored students' motivational intensity and its relationship with their preferences for instructional activities in order to assist teachers to plan their own activities and evaluate the textbook in use.

Issues on Learning Style Research

With the development of learning style theory and practice, many researchers have investigated the relationship between learning styles and learners' language achievement (e.g., Milgram & Price, 1993; Cheng, 1997; Chen, 2004), learning style and culture differences (e.g., Reid, 1987; Rossi-Le, 1995; Stebbins, 1995), learning style and gender differences (e.g., Keefe, 1987; Oxford, 1995; Park, 2000), and learning style and learning/teaching activities (e.g., Reid, 1987; Dunn, 1989; Kinsella, 1995).

Learning Style and Language Achievement



A number of studies have been carried out to further explore the association between learners' perceptual learning style preferences and their language achievement. Many researchers claimed that learners of different language achievement may differ in their learning style preferences. For example, Rossi-Le (1995) found that among her adult immigrant community college ESL students, the older students and the students with higher language proficiency showed a preference for visual learning. Higher proficiency English language students also preferred learning through interactive methods and direct experiences with language. Park (1997) investigated 1283 ESL students in secondary schools and found that there were statistically significant differences among high achievers, middle achievers, and low achievers in auditory, individual, visual, and group learning style preferences. The high achievers had major preferences for auditory and individual learning while the low achievers showed no strong preferences for any of the learning style modes. Also, High achievers had negative preference for group learning whereas low achievers had negative preferences for individual and visual learning. Similar to Park's (1997) findings, Tso's (2002) study showed that the students' English achievement was significantly correlated to their auditory, visual and individual learning styles; the high achievers showed a significantly positive preference for auditory and individual learning.

Different from Park's (1997b) and Tso's (2002) findings, Chang (1998) investigated 95 Taiwanese English major freshmen's learning styles using and their TOEFL scores and found that there was a significant correlation between global, intuitive, hands-on (tactile) learning styles and the listening ability. Besides, the total scores of TOEFL were correlated with global and hands-on (tactile) learning styles. Chen (1999) discovered that most of the 187 Taiwanese junior high school students preferred a visual learning style, and the students having a similar learning style

preference with their teachers tended to have a better academic achievement in English. Likewise, Ko (2002) found that the students with multiple style preferences and with preferred visual learning styles performed better on English tests. Kinsella (1993) also pointed out that students with multiple sensory preferences were found to have a higher possibility of academic achievement.

On the other hand, Keefe (1979) and Price (1980) all discovered that underachievers were almost exclusively kinesthetic/tactile learners. Carbo (1983) also found that good learners preferred to learn through their visual and auditory senses, while poor ones had a stronger preference for kinesthetic and tactile learning. In addition, Dunn and Dunn (1978) observed that underachieving students were mostly kinesthetic/tactile learners. Likewise, the high achievers in Chen's (2004) study were found to show significantly stronger motivation but weaker preferences for tactile learning styles than low achievers. Since some instructions in the classroom are usually delivered by visual or auditory methods, it is easy for these students to fail to learn efficiently at school; therefore, they are often regarded as the typical "learning disabled" profile (Dunn & Dunn, 1978).

However, some research has reported that there may be no learning style difference among different language proficiency groups. For instance, Milgram & Price (1993) looked into the learning styles of 985 Israeli gifted adolescents and found that those gifted in foreign language showed no significant preferences for perceptual learning styles. Similarly, Cheng's (1997) research on 104 Taiwanese military college students' learning styles demonstrated that the subjects did not express strong preferences in any perceptual learning styles and their learning styles were not directly related to foreign language achievement. Thomas et al. (2000) investigated the learning style preferences of 44 Japanese ESL college students and their TOEIC (Test of English for International Communication) scores. No strong relationship was

found between learning style and TOEIC scores in the study. The findings of Park's (2000) study revealed a quite different result from the former research (1997b)-- that there were not any learning style differences among high-, middle-, and low-achieving groups.

To sum up, the above research shows that the results were contradictory. Thus, the researcher will explore if there is any relationship between perceptual learning styles and learners' ESL/EFL English achievement in the present study.

Learning Style and Cultural Difference

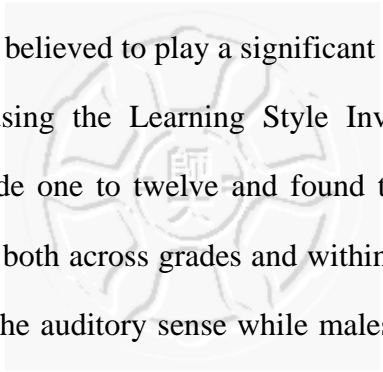
Cultural influence on learning styles has been a hot issue in learning style research (e.g. Nelson, 1995; Park, 1997b, 2000; Reid, 1987; Rossi-Le, 1995; Stebbins, 1995; Torkleson, 1995). Oxford et al. (1992) believed that culture plays a significant role in learning style preference and stated "cross-cultural understanding of language learning styles is crucial to success in language teaching and learning" (Oxford and Anderson, 1995, p. 201). If native language is viewed as one aspect of the broader classification of cultural background, then it is not surprising to find similarities in the way people select their perceptual preferences (Stebbins, 1995). Therefore, teachers are advised to develop "culture-sensitive pedagogy" (Reid, 1987, p. 100).

Southeast students are reported to have strong visual and/or auditory learning style preferences in many studies (Reid, 1987; Park, 1997b; Park, 2000; Rossi-Le, 1995). Reid (1987) investigated the perceptual learning style preference of 1,388 ESL college students and discovered that learning styles were affected by cultures among diverse ethnic groups. In her study, although most of the subjects preferred kinesthetic and tactile learning modes, Chinese American students were found to be strong visual learners and showed a strong preference for auditory learning. Stebbins (1995), on the other hand, found that Chinese students expressed no strong preferences for any

modality, yet Korean American students strongly preferred visual learning. Similarly, Park (1997b) found that Korean American students were the most visual learners. Park (2000) also discovered that Southeast Asian high school students exhibited much greater preferences for visual and auditory learning when compared with Whites. Rossi-Le (1995) had similar results in her study, where Chinese and Vietnamese students demonstrated a very strong learning style preference for visual learning. The relationship between language background and dominant perceptual mode were clear in Rossie-Le's results. That is the learners' native language background had an effect on his or her perceptual learning style preference, a result that supports Reid's findings. For instance, Chinese and Vietnamese students demonstrated a very strong learning style preference for visual learning, possibly due to the fact that Asian cultures emphasize the visual mode for learning their greatly iconographic language system (Lee, 1976, cited in Stebbins, 1995).

Dunn et al. (1990) conducted a comparative research of Chinese, African, Greek, and Mexican backgrounds in elementary schools and found results that were different from Reid's (1987), Park's (1997b, 2000), and Rossie-Le's (1995) studies. The findings indicated that the Chinese were the most kinesthetic and tactile among four ethnic groups (cited in Park, 2000). Research on EFL students' perceptual learning styles in Taiwan also showed different results. For example, Chen's (2004) study revealed that the subjects preferred auditory learning the least and visual learning second to the least. Lin and Shen (1996) found their subjects did not show any strong preference for any of the perceptual learning modes, and so did Cheng (1997). Owing to the diverse results, more research has to be done on the perceptual learning style of Taiwanese EFL students in order to better understand our learner's individual characteristics.

Learning Style and Gender Difference



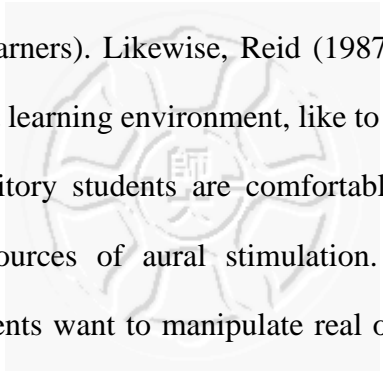
Gender difference is believed to play a significant role regarding learning style preference. Price (1978) using the Learning Style Inventory examined students' learning styles through grade one to twelve and found there was gender difference between males and females both across grades and within grades. In general, females preferred learning through the auditory sense while males preferred learning through the tactile and kinesthetic senses. Likewise, Oxford's (1995) study revealed that tactile or kinesthetic style preferences relate more closely to males than females, and females prefer auditory style preferences more than males. Males are also found to be more field-independent, analytic, objective, and logically minded in processing information. Similarly Dunn et al. (1993) exploring learning styles of Mexican and Anglo-American children in elementary schools, surmised that male Mexican American students had the strongest tactual learning, while girls generally prefer the least amount of tactual learning (cited in Park, 2000). In addition, Reid (1987) found out that males prefer tactile and visual learning significantly more than females, and Keefe (1987) pointed out that males are generally more aggressive and more sensitive to spatial (visual) relations while females are more verbal. On the other hand, Park (1997b) examining the learning style preferences of 1,283 ESL students in secondary schools observed that girls had statistically significantly higher preference for kinesthetic learning style than boys within four ethnic groups—Mexican, Armenian, Korean American, and Anglo students. Similar to Park's (1997b) finding, Tso (2002) found that the female subjects preferred kinesthetic learning style most while the male subjects preferred auditory learning style most.

However, Lin and Shen (1996), Park (2000), and Thomas et al. (2000) found there was no sex difference in their research. Park (2000) surveyed 738 ESL (Southeast Asian) high school students to explore their learning style preference and did not confirm any sex differences between boys and girls. Thomas, Cox, and

Kojima (2000) used the Perceptual Learning Style Preference Questionnaire (PLSPQ) and the Style Analysis Survey (SAS) to examine the learning style preferences of 44 second-year Japanese college students pursuing an undergraduate degree and learning English as a second language at New Zealand College. They also found that no particular learning style preference was significantly related to gender. Lin and Shen (1996) explored Taiwanese junior college students' learning styles using Reid's PLSPQ. They discovered that the subjects did not express strong preferences for any of the learning styles. Female students expressed more willingness to adopt more learning styles than males; they also showed higher willingness to learn, better learning achievement, and better teacher-student relationships.

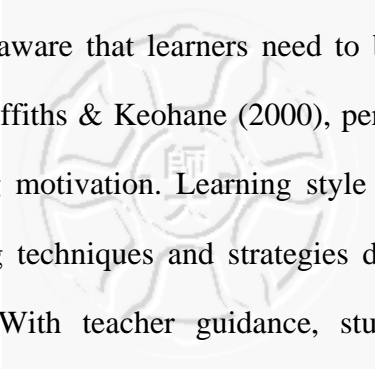
Learning Style and Learning/Teaching Activities

Many researchers have claimed that learning styles may affect students' ways of learning (Reid, 1987; Dunn, Dunn & Price, 1989; Kinsella, 1995), and that learning styles have close relationship to students' preferences for learning/teaching activities (Dunn & Griggs, 1988; Chen, 1999; Rossie-Le, 1995). Jonassen and Grabowski (1993) pointed out that leaning styles describes learner preferences for different types of learning and instructional activities. Kroonenberg (1995) and Oxford and Ehrman (1993) also emphasized that students absorb new material and skills through their senses and prefer some senses to others in specific situations. Therefore, it would be reasonable to assume that students' learning styles may directly affect their personal involvement in the learning/teaching activities in the classroom. For example, Dunn and Dunn (1979) observed that students may prefer different types of activities depending on their learning styles: some learn through listening activities (auditory learners), some learn by looking at visual input (visual learners); others learn by doing projects themselves (tactile learners), and still others learn through whole-body



involvement (kinesthetic learners). Likewise, Reid (1987) found that visual learners enjoy reading, prefer a quiet learning environment, like to work alone, and need visual support to oral input. Auditory students are comfortable without visual input and frequently like multiple sources of aural stimulation. Kinesthetic students need movement, and tactile students want to manipulate real objects in the classroom; for both kinesthetic and tactile groups, sitting at a desk for very long can be detrimental to learning.

Furthermore, teachers and researchers believe that the awareness, understanding, and use of different teaching and learning styles may influence success in the classroom and develop students' positive attitude toward ESL/EFL learning (Reid, 1987; Oxford, 1991; Kroonenberg, 1995). Dunn et al. (1989) found that students achieved statistically higher test scores in modality-matched treatment, rather than mismatched ones. Chen (1999) examining the perceptual learning styles of Taiwanese junior high students observed that students whose learning style preferences match with their English had higher English achievement and held more positive attitude toward English learning. She also suggested that for lower-achieved ESL students, learning about individual learning style preferences may help them boost their self-esteem by showing them they just learn differently. Besides, Dunn and Dunn's (1979) study showed that all students learn better when they are actively involved in the instructional process through multiple sensory channels, such as learning through their ears, eyes, touch, and whole-body movements. Similarly, Kinsella (1995) also found that when teachers presented lessons visually as well as verbally, and reinforced them through various activities, like writing, drawing, or speaking, students' grades will increase even more because they can not only learn in the way best suited to their style but also equip themselves with multiple modality strengths.



Every teacher is well aware that learners need to be motivated in order to be successful; according to Griffiths & Keohane (2000), personal involvement is a very effective way of enhancing motivation. Learning style research allows teachers to examine their best teaching techniques and strategies depending on their students' individual characteristics. With teacher guidance, students can be more easily motivated to identify and utilize their preferred learning styles (Friedman and Alley, 1984), and they will also be able to take advantage of their preferences and be more willing to participate in the learning/teaching activities (Griffiths & Keohane, 2000). The research mentioned above verify the importance of learning styles in students' preferences for classroom activities and at the practical level of teacher's decision-making and teaching preparation; that is, activities had better be designed in a way that students can better learn by complying to and expanding their learning style preferences (Chen, 1999).

In addition to the match of perceptual learning styles and types of learning/teaching activities, some researchers proposed that the difficulty level of the teaching/learning activities would also affect learners' motivation to learn. Crozier (1997) claimed that learning activities should be designed so that their requirements are within the grasp of students but not so close to what they can do that they set no challenge. Similarly, Hunt (1961) argued that motivation is greatest when there is a match, or an optimal amount of incongruity, between the activities and the learners' competence. In other words, challenging activities that are just beyond a learner's current level of proficiency will be more motivating (Schmidt et al., 1996). If the level of congruity is too small, the activity is unstimulating and there is no incentive to students since no one enjoys tasks that are trivial or meaningless to them. On the contrary, if it is too great, students would become daunted or have negative feelings, such as frustration and troubles, which may affect their learning motivation. The

teacher participants in Liao's (2000) study also found that their students' motivational intensity got weaker and weaker as the teaching materials became more and more difficult.

According to the above research, teaching/learning activities should be designed to fit students' different learning styles rather than be repetitive in content or presentation and they should also be challenging or match the abilities of students. In Taiwan, however, most teachers rely on textbook activities and seldom design their own teaching activities (Chan, 2003; Liao, 2003). Thus, textbooks become the core material for most classrooms and very often fail to consider students' individual learning styles or how to get students involved in the learning/teaching process. Kinsella (1995) pointed out that students who had gone through activities that made them feel uncomfortable and inadequate would often get frustrated and helpless, and thus lost their motivation to learn. In Dunn's (1979) research, most underachievers or dropout students possessed tactile or kinesthetic learning styles, which may not be adequately addressed in traditional language classrooms. In order to increase students' learning motivation, teachers are supposed to understand their students' learning preferences and thus be able to shape their teaching activities accordingly. However, despite the importance of learning styles on students' learning/teaching activities, there is no related study concerning students' preferences for learning/teaching activities, their learning styles, and learning motivation. Therefore, in the present study, the researcher will explore whether students' preferences for instructional activities have a positive relationship with students' learning styles, which was suggested by previous studies, and if there is other factors that may affect students' preferences for instructional activities.