

P.KHIDMAT MAKLUMAT AKADEMIK  
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# **LEARNING STYLES OF IN-SERVICE TEACHER TRAINEES**

**GEORFFERY STEVEN SEMPURAI  
(9395)**

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Faculty of Cognitive Science and Human Development  
Universiti Malaysia Sarawak**

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A project entitled **Learning Styles of In-service Teacher Trainees** was written by Georffery Steven Sempurai and submitted to the Faculty of Cognitive Science and Human Development in fulfillment of the requirements for the degree of Bachelor of Education with Honours (English as a Second Language).

It is hereby confirmed that the student has done all the necessary amendments of the project for acceptance.

\_\_\_\_\_  
(Signature of Supervisor)

**Mahanita Mahadhir**  
(Supervisor)

Date: \_\_\_\_\_

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## **LIST OF ABBREVIATIONS**

ESL	=	English as a Second Language
IT	=	Information Technology
PKPG	=	Program Khas Pensiswazahan Guru
CGPA	=	Cumulative Grade Point Average
PNGK	=	Purata Nilai Gred Terkumpul



## **ABSTRACT**

### **Learning Styles of In-service Teacher Trainees**

**Georffery Steven Sempurai**

This study aims to identify the perceptual learning style preferences used by the PKPG in-service teacher trainees in ESL, IT, Chemistry and Biology programmes. The study also attempts to find out the perceptual learning style preferences used by the PKPG in-service teacher trainees who have obtained 3.00 CGPA and above. A total of 136 in-service teacher trainees who were in their final year in Unimas were selected as the respondents for this study. The data was obtained through self reporting questionnaires. Generally, the findings of this study revealed that there were some noticeable patterns in the perceptual learning style preferences used by the in-service teacher trainees from the various programmes and also from those who obtained 3.00 CGPA and above in each programme

## **ABSTRAK**

### **Gaya Pembelajaran Guru Berkhusus Dalam Perkhidmatan**

**Georffery Steven Sempurai**

Kajian ini bertujuan untuk mengenal pasti preferens terhadap persepsi gaya pembelajaran guru-guru yang mengikuti latihan PKPG di dalam program Bahasa Inggeris sebagai Bahasa Kedua, Teknologi Maklumat, Kimia dan Biologi. Kajian ini juga bertujuan mengesan preferens terhadap persepsi gaya pembelajaran guru-guru PKPG yang telah memperolehi PNGK 3.00 dan ke atas. Seramai 136 guru-guru PKPG tahun akhir di Unimas telah dipilih sebagai responden untuk kajian ini. Data-data dikumpul melalui soal selidik pelaporan sendiri. Hasil kajian ini menunjukkan adanya bentuk-bentuk yang menerangkan dengan jelas preferens terhadap persepsi gaya pembelajaran yang diguna pakai oleh guru-guru PKPG daripada pelbagai program, dan juga daripada mereka yang memperolehi PNGK 3.00 dan ke atas di dalam setiap program tersebut.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.0 Introduction**

In any institution of learning, students are inclined to use diverse approaches of learning in their academic undertakings. Some students may use one particular way of learning, while others might use a combination of learning preferences. These diverse ways of learning may help them to comprehend the instructions better and thus achieve good academic outcomes. These different types of learning are termed as learning styles and are described as “the ways a student prefers to go about learning” (Chitravelu, Sithamparam & Teh, 1995:11). Zwarenberg, et al. (2000) claimed that “there seems to be a general agreement in the psychological literature that individuals do differ in the ways in which they prefer to gather and absorb data, and in how they process such data”. As such, appropriate selections of learning styles are important for students to excel in their academic undertakings. Thus, learning styles play a significant role for students to receive and process information efficiently and effectively in their learning environments.

Unimas in-service teacher trainees who are currently pursuing their first degrees in the PKPG programme are aware of the importance of striving for good academic results. Hence, in an effort to strive for the excellence they should need to be aware of their own

learning style preferences. Self-understanding of one's own learning style preference enables individual student to identify his/her strong or weak points of preferred learning styles. In this respect, the student is able to distinguish which learning style best suits his/her learning process and reject those that do not contribute to positive learning. As such self-knowledge of own most preferred learning style is vital in helping students to produce desirable academic results.

According to Barnes 1999:7, successful students are those who take charge of their own learning. Therefore, it is important that learners take control of their own learning process and one of the areas they could consider in doing so is choosing the appropriate learning style that suits them best. Consideration of this aspect could promote better understanding of the instructional content of a particular course and subsequently, they can achieve their goals of obtaining degrees successfully. Zwarenberg, et al. (2000) indicated that there is a measure of agreement that the preferred way of gathering, absorbing and processing data may have positive consequences on how students perform on a variety of educational programmes. Although many researchers abroad have investigated individual learning styles, which resulting in a myriad of theories and styles, more studies need to be performed to investigate the learning style preferences among our local university students.

There are three dimensions of learning styles as proposed by James and Gardner (1995, cited in Brown 1998). These dimensions include cognitive, affective and perceptual. For the purpose of this study, the researcher is looking at the perceptual dimension. This is because the researcher wants to find out what learning style preferences or dissimilarity of different senses were being used by the students who have obtained CGPA 3-pointer and above. Thus, learning style dimensions that reflect the ways students think about and process information (cognitive dimension), and the ways personality traits influence learning (affective dimension) are excluded from this study. Furthermore, perceptual learning styles have been studied extensively and widely the world over as compared to the other two dimensions.

Perceptual dimension is a learning style that individual student uses to take delivery of and process the information through the sensory channel in order to understand the lesson content effectively. It is a biologically based reaction whereby the surrounding input is adopted efficiently through a representation of preferred way of learning that one would like to represent the input (Conner, et al., 2000). Perceptual learning style is divided into four basic features, which are named as auditory, visual, kinesthetic and tactile.

### **1.1 Statement of the Problem**

In-service teacher trainees are teachers undergoing a special degree-training programme (PKPG) in UNIMAS, which is offered by Bahagian Pendidikan Guru (BPG) to all

qualified Malaysian non-graduate trained teachers who wish to upgrade their knowledge and skills in their respective area of specialization, and at the same time, to upgrade the status of teachers from non-graduate to graduate. The selected teachers were required to undergo a three-year first degree programme in any local universities (<http://www.mpbl.edu.my/mpbl03/pkpg.cfm>).

Most of the selected teachers of this special degree-training programme were primary school teachers who have served in the rural schools for many years. The gap between the time they stopped schooling and the time they entered this special programme in the university had been long enough, and this had affected their academic results in the university. Thus, PKPG students who failed in their studies were common. For instance, PKPG ESL students of Cohort 4 (2002/2003 intake) had quite a number of failures. There had been one failure in 2002, 4 failures in 2003 and another 3 failures in 2004. These numbers do not include those who have failed one or more subjects every semester. The implications of failing are enormous. Besides having to lose seniority, time and money, they also lost their self-esteem.

As such, they need to employ the effective learning strategies in their undertakings. One of the learning strategies is to use the appropriate perceptual learning style, which they can emulate from those who had achieved CGPA 3.00 and above in their previous semester assessment results.

In the process of assimilating ideas or some educational input, students employed a myriad of perceptual learning style preferences. As such, when tackling the academic tasks, the students used these perceptual learning style preferences consciously or unconsciously. Likewise, students of tertiary level, in their effort to understand what had been lectured and to pass their assessments, utilize multiplicity of perceptual learning style preferences. Some would learn effectively through auditory (hearing), some would use visual (seeing) to understand better the instructional content while others would prefer to draw on a hands-on approach through tactile or kinesthetic (actively exploring the physical world around them).

Identification of the perceptual learning style preferences among the “three-pointer” students will hopefully reveal the choices of sensory learning channels that help them to excel. Others can try to follow such learning preferences in an effort to improve their learning capabilities.

## **1.2 Research Objectives**

The objectives of this study are to:

- (a) find out the perceptual learning style preferences of PKPG in-service teachers in ESL, IT, Chemistry and Biology programmes.
- (b) find out the perceptual learning style preference of the PKPG in-service teachers who have obtained 3.00 CGPA and above in ESL, IT, Chemistry and Biology programmes.

### **1.3 Research Questions**

This study attempt to answer the following research questions:

- (a) What are the perceptual learning style preferences used by the PKPG in-service teachers in ESL, IT, Chemistry and Biology programmes?
- (b) What are the perceptual learning style preferences used by the PKPG in-service teachers who have obtained 3.00 CGPA and above in ESL, IT, Chemistry and Biology programmes?

### **1.4 Significance of the Study**

It is hoped that the findings of this study will provide information about the perceptual learning style preferences among the “three-pointer” students based on their recent semester results. This information is useful to the students themselves as it provides a focal point for them to enhance their strengths in their learning processes. It is equally useful for other students who had not achieved good academic results and the future students of PKPG to emulate relevant learning style preferences used by the “three-pointer” students.



Indirectly, this study will hope to make known to lecturers the most commonly used learning style preferences in each programme so that they can align their instructional tasks with those perceptual learning style preferences.

## **1.5 Definitions of Key Terms**

For the purpose of this study, the following terms are defined as follows:

### **(a) learning styles**

Sternberg (1997) defined the concept of learning styles as how people prefer to learn. The definition describes the use of the various modalities or channels to comprehend what are been taught.

Entwistle & Ramsden (1983) explained explicitly that learning styles refer to how students adapt their learning activities to the specific task demands at hand.

According Dunn & Dunn (1992), learning styles are the positive acts taken by students in order to concentrate on, process, and retain new and difficult information. The application of such acts varied among individual learners.

(b) perceptual learning style preferences

Perceptual learning style preferences are the dissimilarity among students in the usage of different senses to understand, organize and retain experiences. The four basic aspects of perceptual learning style preferences, which are auditory, visual, tactile and kinesthetic, are further categorized into six preferences to suit Reid's (1987) questionnaire. There are auditory, visual, tactile, kinesthetic, group and individual learning.

**1.6 Limitation of the Study**

The collected data may not reflect the exact nature of the findings because the respondents may simply respond just for the sake of completing the questionnaires. And this will affect the legitimacy of the findings.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This chapter reviews the literature related to learning styles. It includes learning styles, learning styles dimensions, learners of perceptual learning styles and some related studies about perceptual learning styles.

#### **2.1 Learning Styles**

It is undeniable that students use various ways to acquire input from their learning processes in every academic institution. These different ways of learning used by the students may contribute to a positive or negative implication on the outcome of their studies. These are termed as learning styles.

Researchers described learning styles in many definitions but they refer to the same thing. James and Gardner (1995; cited in Brown, 1998) described learning styles as the complex manner and conditions where learners undergo learning process efficiently and effectively. Dunn and Dunn (1992) explained learning styles as the preferred way learners process new and difficult information. On the other hand, Chitravelu, Sithamparam and Teh (1995) described learning styles as the preferred ways learners go about learning.

Based on these definitions, learning styles refer to actions initiated by the students to facilitate a specific situation or task in order to acquire knowledge and skills. In simple terms, they refer to different approaches or ways of learning.

## **2.2 Learning Styles Dimensions**

To this date, many research studies have been done on learning styles and because of this, there are a number of theories, models and findings that had been developed and presented.

James and Gardner (1995; cited in Brown, 1998) had grouped learning styles into 3 dimensions. There are cognitive, affective and perceptual learning styles.

Cognitive learning styles describe the way an individual uses his/her cognitive capabilities in negotiating meaning. Merriam and Caffarella (1991; cited in Brown 1998) stated learning styles as the processing of new information through “receiving, storing, retrieving, transforming, and transmitting” in the brain.

Affective learning styles explain how individual learning behavior is influenced by his/her personality traits as indicated by Swanson (1995; cited in Brown, 1998). The personality traits comprised of one’s genetic, culture, environment and experience. These give rise to the different ways each individual go about learning.

Perceptual learning styles describe individual learning process through which he/she uses the sensory receptors to process data effectively in one's environment. Conner, et al. (2000) explained vividly that it is a biological based reaction in adopting raw data.

Students use all the sensory channels to perceive information but some sensory channels are used frequently than others. The selected sensory channel gives a positive implication on one's learning process and thus, it is described as the most preferred perceptual learning style of that individual. Asselin and Mooney (1996; cited in Brown, 1998) claimed that people remember 90% of what they say and do as compared to 30% of what they see and hear.

Thus, cognitive, affective and perceptual learning styles are strategies that students used in order to learn in certain situations. However, for the purpose of this study, perceptual learning style is highlighted as learning strategy PKPG students apply in their learning activities and the reasons for selecting perceptual learning styles had been mentioned earlier in the beginning of the chapter.

### **2.3 Learners Perceptual Learning Styles**

According to Reid (1987), there are six categories of learners. These include auditory, visual, tactile, kinesthetic, individual and group learners.

### **2.3.1 Auditory Learners**

Auditory learners learn best through listening. They learn best through verbal lectures, discussions, talking things through and listening to what others have to say. They interpret the underlying meanings of speech through listening to tone of voice, pitch, speed and other nuances. Written information may have little meaning until it is heard. These learners often benefit from reading text aloud and using a tape recorder.

### **2.3.2 Visual Learners**

Visual learners learn through seeing objects, visual displays or body movements. They need to see the teacher's body language and facial expression to fully understand the content of a lesson. They tend to prefer sitting at the front of the classroom to avoid visual obstructions. These learners may think in pictures and learn best from visual displays including diagrams, illustrated textbooks, overhead transparencies, videos, flipcharts and handouts.

### **2.3.3 Tactile Learners**

Tactile learners learn best through a hands-on approach, actively exploring the physical world around them. They may find it hard to sit still for long periods and may become distracted by their need for activity and exploration.

#### **2.3.4 Kinesthetic Learners**

These learners learn best by being actively involve in the classroom activities such as role-play and simulation. They remember well the information by experiencing the lesson physically.

#### **2.3.5 Individual Learners**

Individual learners, as the name suggests, learn best through working alone. They comprehend the new information much better by studying alone than in groups. Their thinking abilities perform extra-ordinarily in such a condition.

#### **2.3.6 Group Learners**

These learners learn best through working out the classroom tasks with a number of students. They value group interaction because such situation helps them to understand new materials better and successful completing the assignments.

These learning styles are learning tools used by students to comprehend new information, which are taught to them in their academic endeavors. The most preferred selection of the learning style depends largely on how effective one learning style as compares to another. This means that a student might prefer to use one particular learning style or a combination of learning styles in order to produce excellent academic results.

## **2.4 Other Related Studies**

Over the recent years, research studies on perceptual learning styles have been carried out on ESL students. Among them were the studies done by Reid (1987) and Park (2000). Both studies employed Reid's (1987) Self-Reporting Questionnaires,

Reid (1987) conducted a study on perceptual learning styles of college students learning English as a Second Language. They include Korean, Malay, Japanese, Arab, Chinese and Spanish students. Her overall conclusion was that the college ESL students were active kinesthetic and tactile learners. At the same time, she also found out that Chinese and Arab students were visual learners, while Malay students shown a high preference as group learners.

Park (2000) conducted the same study on Cambodian, Hmong, Lao and Vietnamese students. It is concluded that the Southeast Asian students rated high as group learners. The differences in ethnic groups of Southeast Asian Students also amplify the differences in their perceptual learning styles, especially with regard to auditory, visual, tactile, kinesthetic and group learning.

In another study carried out by Park (1997a; cited in Park, 2002), there was no gender difference of perceptual learning styles of the secondary school students, which were made up of Chinese, Korean, Anglo, Vietnamese and Filipino. However, the result