

# LEARNING STYLES OF POLYTECHNIC SULTAN SALAHUDDIN ABDUL AZIZ SHAH (DIPLOMA IN PACKAGING) STUDENTS

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## ABSTRACT

The understanding of learning style preferences are very important to academicians in education environment. Students with different cultural background and various learning style sit for the same programme in polytechnic. Practices in teaching and learning seems need vital improvement to help the education system more significant. The purpose of this study is to identify student's learning styles. Moreover this study could help learners to improve their academic achievement by knowing their own individual learning style. A questionnaire is a research instrument consisting of a series of questions for the purpose of gathering information from respondents. A survey design was used and the data were analyzed using the quantitative approach. Students taking the Diploma in Packaging, (DP) Mechanical Engineering Department from Politeknik Sultan Salahuddin Abdul Aziz Shah were selected as samples. Overall, the descriptive statistical test was used to answer the research questions, and the findings indicated that most students with variety learning style background preferred "Group" learning style. They interested to do discussion and communicate between peers for the better understanding in education environment.

### *Keywords:*

Learning Style, Teaching and Learning, Academic Achievement, Education System

## 1. INTRODUCTION

### Perceptual Learning Styles of DP Students

Learning style issue has been discussed widely in education era. People talks about key to success in academic, factor that influences to success and causes of failure in the academic. All these issues are seen as serious as every researchers try to find the root course and try to come out with solution. Commonly, student achievement is always said to have major relation with student's attitudes. According to Zakaria & Yusof [1], students' attitudes towards mathematics are closely related to their attitude towards problem-solving in general. However, the cause from other factors may be neglected and unseen. Hence, all factors that may probably contribute to student achievement should be

studied. Lecturers also have to accept that the teaching style may be differ with students learning style. Students come from different demographic factor might be the cause they have different style in learning. Honigsfeld [3] found that gender is one of the several factors that influence student learning style. The other factors included age, culture, brain processing, creative thinking and academic achievement.

Realizing the difference, lectures can vary teaching style to accommodate various learners needs in the class. Lecturers have to be creative to teach different learners to achieve the same goal. Based on Thomas & Amit [2], by using learning style instruments to inform the choice of learning activities and approaches will enhance the effectiveness and quality of learning for students. Ariffin *et al* [7] discovered many studies found that learning is enhanced and the course performance improves when educators or teachers deliver course materials using the learning styles that are preferred by students. Moreover, Kamuchee [8] realised that students and teachers will benefit if they are all aware of their differences in learning and teaching styles, and try to make adjustments for their differences.

The aim of this study is to identify the Perceptual Learning Style of DP students and to determine the learning styles category of DP students at PSA. According to Karthigeyan & Nirmala [6], since the students' success is influenced by the learning style as one of the predominant factors, teachers and educators should not neglect the identification of their students learning styles.

## **2. METHODOLOGY**

As a survey method is the most appropriate design for the research of the interested issue, this method was used. The information gained from the survey are the participants' basic demographic information and the major, minor and negligible learning styles of the students. Thirty students of DP cooperatively gave respond by answering questions from the given survey form. They indicated their answers with each given statement on a 5-point Likert Scale. A quantitative descriptive methodology was utilized in this study.

Respondents of this study are from Politeknik Sultan Salahuddin Abdul Aziz Shah (PSA) attending level 1. The focus group consisting 14 females and 16 male students. All responses were received from the cooperative participants and all the data were encoded and analysed. The intentions of this study are to identify the students' learning styles of DP students and to determine the learning styles category of DP students at PSA.

This study has adopted Reid's Perceptual Learning Style Preference model [4-5]. Reid's perceptual learning style preference questionnaire (PLSPQ, 1987) became the instrument for this study.

Reid [4] has designed learning style model based on how students learn best using their types of learning styles: visual, auditory, kinesthetic and tactile preferences. It also consist of two social aspects of learning: group and individual preferences. The questionnaire that consisted 30 questions were distributed to students and they were explained the objective of the study before they answer the questions. They managed to complete within 20 minutes.

Reid [4] classified learning styles as Major, Minor or Negligible. Major is a preferred leaning style, Minor is one in which learners can still function well, and Negligible is the one that can do learning the learning process more difficult.

### 3. RESULTS AND DISCUSSIONS

#### 3.1 Result

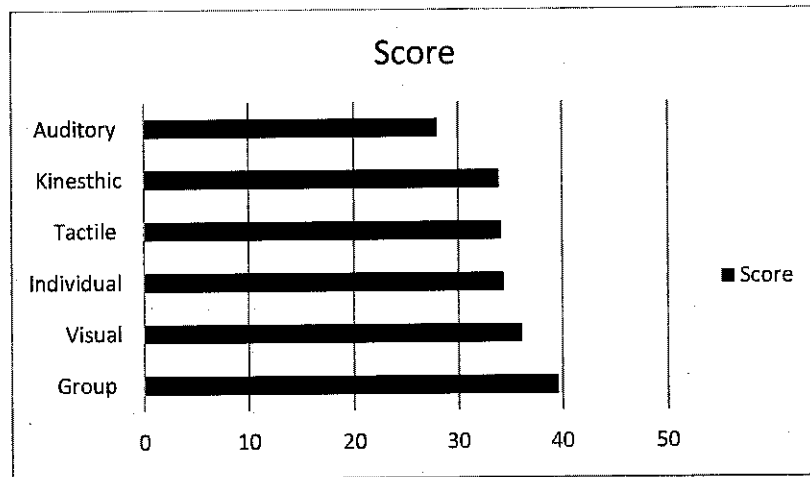
The result of the study is carried out by the score mean as shown in Table 1.

**Table 1**

The indicator

<b>Learning Style Preference</b>	<b>Score</b>
Major Learning Style Preference	38-50
Minor Learning Style Preference	25-37
Negligible	0-24

#### 3.1.1 Discussion



**Fig. 1. Score by DP students regarding Reid [4]**

The result reveals that the most preferred learning style of DP, Mechanical Engineering students is Grouping learning style. The discussion and conclusion can be made regarding the instruments given to them. It defines that study groups make them understand better because it provides a platform to exchange ideas or teaching technique. Learning in groups able to encourage all participants to be involve whether as a learner or an educator.

In addition, the implementation of assessment in presence is purposely designed to involve teamwork. Students also will get marks based on active involvement based on the related rubric. By involving friends, a task can be done easily to accomplish it.

Contrarily, student least preferred auditory learning style. The value of mean shows 2.8 indicated the least value compared to the other factors. Experiment, role-playing and participating in related activities are not become favourite activities for mechanical engineering students.

The results were ranked accordingly begins from the most preferred learning style to the least. Group 3.960 (major), Visual 3.613 (minor), Individual 3.433 (minor), Tactile 3.407 (minor), Kinaesthetic 3.393 (minor) and Auditory 2.800 (minor).

Realising that most Mechanical students showed favour in group style, teaching style also need to improve based on the situation to match the student needs. Activities, teaching tool and any other factor that contributes to encourage 'Group style' learner to involve need to be improvised. The stimulation they receive from group work helps them to learn and understand new information better.

However, the rest of students could not be ignored although they fall into minor learning style preference category. Some students with Visual style learn well by reading. They easily get the information and understand by reading without much oral explanation. Usually this kind of learner able to learn alone.

Individual learners with mean score 3.433 manage to understand and get idea when study alone. Learning by themselves is the effective way and most of the time, they do not need others to make them understand information.

Tactile learner with mean score 3.407 prefers to implement experiments and related activities to make them understand better. By touching and dealing with materials really help them to have the most efficient learning experience.

Kinaesthetic learner gives 3.393. Active participation in class activity really helps those who are Kinaesthetic learner to remember information well. By experiencing situation by themselves, students able to know and understand more about the situation rather than seeing or heard the situation by others.

Very few students are under Auditory learner category as it fall as minor, 2.800. Not many Packaging students are categorised as student who learn by listening and conversing. Auditory learners like to hear and converse to get information well. Unlike visual learners, auditory need to read aloud to listen before they can understand well.

In spite of mean, the score also calculated based on the Table 2[4]. The preferences split into three categories regarding the score. It indicates that above 38 is major, between 25 and 37 is minor and below 24 is negligible.

**Table 2**

The learning styles category of DP students at PSA

Group	Score
Group	39.6 major
Visual	36.1 minor
Individual	34.3 minor
Tactile	34.1 minor
Kinesthetic	33.9 minor
Auditory	28 minor

#### **4. CONCLUSIONS**

The research is done among student's learning styles among the Diploma in Packaging, Mechanical Engineering students in Polytechnic Sultan Salahuddin Abdul Aziz Shah . Researcher found that the preferred learning style by DP student is Grouping Learning Style.

Regarding Reid [4], the learning style can be classified into three categories; major, minor and negligible, which can be calculated by mean score. Major score means that the learning style is the most effective and suitable for the student. While minor learning style means ones still can learn well in that way. For negligible value, it defines ones may have difficulty applying that learning style.

The result showed that the mean score; Group 3.960 (major), Visual 3.613 (minor), Individual 3.433 (minor), Tactile 3.407 (minor), Kinaesthetic 3.393 (minor) and Auditory 2.800 (minor). Based on Table 2, it can be concluded that DP students could tolerate to all learning style as they had Group learning style as major score and minor score for the rest of them. None of the score was negligible indicated that students did not face difficulty to apply any learning style during the learning process.

This study showed how important to know every student learning style. Awareness among students on their learning style is very important. Students should be aware of this for the purpose of academic achievement. They have to realise their own learning style and other friends in order to get the maximum result in the learning process. Knowing ones categorized as 'group learner', he or she may avoid spending time learning alone. This absolutely may help student learning in the correct style.

As a conclusion, it is very important to identify students learning styles as it can benefit related parties and smoothen out the teaching and learning process. Teaching environment can be adjusted due to the suitable learning style to fulfil their needs in class. In achieving the best result, identifying learning style may help to reach the goal.

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