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LEARNING STYLES AND LEARNERS'ACADEMIC ACHIEVEMENTS

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Abstract

     Learning styles has been delineated as a sophisticated method within which the learner ought to understand, process, save, and recall ideas expeditiously and effectively. Learning styles involves a process in which learners obtain knowledge and information via explicitly visual tools. This paper attempts to examine the relationship between learners' learning styles and their academic achievements in English. A quantitative research method was used for data collection through a pre-post-test. The participants of the study included 160 diploma students in a college in Malaysia. The data were analyzed quantitatively using Analysis of Variation (ANOVA). The results of the study showed that there is a significant relationship in the learners' academic achievements in English language course and their learning styles. There is also a significant difference between the assimilating and converging learners' performance. The Scheffe test ratios for the two pairs ($F1=6.704$ and $F2=5.036$) were greater than the F critical$=4.31$ at significance level 0.01 with 59 degrees of freedom. However, the other Scheffe Test ratios F3, F4, F5 and F critical. This implies that there was no significant difference between the four pairs of means. Hence, the four pairs were almost the same in terms of performance even though they learn differently.

Keywords:Learning styles, Academic achievement, English language
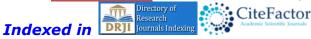
Introduction

     Learning styles are the individual processes used for understanding and gaining information or skills (Kunnu and Sukwises, 2014). Learning styles involves the process in which learners begin to consider, process, attribute and retain new educational information. Individual

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differences play a significant role in learners'academic achievements. Many studies have been carried out to address the problems and challenges of low academic achievement and some factors have been identified in explaining academic achievements JilardiDamavandi et al. (2011).

In fact, learning styles are not concerned with "what" learners learn, but rather "how" they prefer to learn. Learning styles play a significant role in terms of learners' academic achievements s and achievements. Learners are varied regarding the strength and skills in the way how they process the knowledge which leads to having diverse learning styles. Gopalakrishnan and Pazhalanivelu (2017) believe that some learners prefer to work concrete information (experimental data, facts) while others are more interested in abstraction (symbolic information, theories mathematical models). Therefore, individuals enjoy various learning styles. In many cases what is being taught has a less effect on learners' academic achievements s rather than the way learning materials are presented. "Learning styles is also a broad terminology, containing categorizations and concepts of various kinds, which might produce troubles for newcomers to have a panoramic understanding of the field" (Li et al. 2016, p 90). Therefore, this study attempts to examine the effectiveness of learning styles on the students' academic achievements in English Language course.
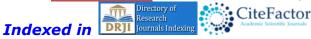
Literature Review

The purpose of the study is to examine the effectiveness of learners' learning styles on their academic achievements. Kolb's (2005) Model of learning styles is the 'Experiential Learning Theory" which is one of the most widely used models for identifying the learning styles of individuals. Kolb's Learning Style Model suggests that knowledge is generated by grasping and transforming experience. It also states that there are two modes of grasping and transforming experiences namely; Concrete Experience (CE) and Abstract Conceptualization (AC). He further stated that the learning process can be visualized as a recursive cycle with the phrase of experiencing, reflecting, thinking, as well as acting. Immediate or concrete experiences are basis for observations and reflections. These implications can be actively tested and served as a guide in creating new experiences. Kolb (2005) believed that individuals tend to favour and develop one mode of grasping experience and one mode of transforming experience, which eventually shape their learning styles. In terms of learning styles, learners were classified into four types according to their preferences of cognitive stages of learning: accommodating, assimilating, diverging, and converging. In the context of this study, Kolb's Learning Style Model was a suitable framework because it was used as the backbone for this study to explain how the learners learn and

investigate the factors which affect individuals' learning styles towards their academic achievements in English language course.

Jackson-Allen, &Christenberry (2008) used the learning styles inventory in the Dunn & Dunn (2006) Model and investigated the different learning styles between 25 low achieving African-American males and 25 high achieving African-American males in the tenth Grade at Clark Atlanta University. The researchers were particularly concerned with the learning modalities and motivational factors of the two groups. The results of their study indicated more learning similarities rather than differences. They found that there is no statistical difference in auditory, visual, tactile, or modalities learning styles between the two groups. Kinash (2012) used the Kolb's learning style inventory and asked the learners to rate their academic achievements. She collected data from nearly 6,000 high school learners in Southern Carolina. The findings of her study revealed that learners' learning styles had a significant effect on their academic achievements. The learners whose style favoured interpersonal relationships over deductive reasoning often rated themselves as academically "poor". On the contrary, the learners who showed an analytical preference in learning style rated themselves as being academically strong.

Hatami (2012) correlated the learning style of a group of 182 British secondary school level students regarding their achievements on the general Certificate of Secondary Education (GSCE) examination. He believed that learning style characteristics can be simplified into two forms, Global/Analytical and Visual/ Imagery. Hatami (2012) developed a learning style inventory to measure the dimensions and subsequently graphed the learners' performance on the GSCE examination, and the he theorized that the students had the ability to avoid the limitations of an extreme of style and can utilize the most appropriate facilities of both dimensions as the task requires. Murray (2002) carried out a study on adult learners whose reading abilities were below a 6th Grade level. Murray administered Kolb (2005) learning style inventory to the participants and discovered that the adult learners preferred a reflective observation learning style orientation. The least preferred learning style was abstract conceptualization. The adult learners were able to view situations from different perspectives and apply their experiences to evaluate information. The findings of her study also showed that adult students often have difficulties in acquiring new knowledge if not presented in a visual style. The incorporation of learning style into the adult education classroom significantly improved the reading ability of the adult students.

Method

This paper attempts to examine the effectiveness of learning styles on the students' academic achievements in English Language course. This study adopted quantitative approach

and the participant of the study were 160 college students who were enrolled in an English language course. Random sampling technique was selected to carry out this study. The questions of the pre-post test were verified and approved by three experts in this research area. It is worth noting that the questions were pilot tested for the accuracy, validity, and reliability. The researchers used the Analysis of Variance (ANOVA) to analyze the data quantitatively.

Findings and Discussion

The effects of learning styles on the learners' performance were determined by comparing the English language course pre- test and post- test results. These results were analysed using descriptive statistics by calculating the mean, median, and the standard deviation of each group as shown in Table 1.

Learning style	Number of learners	Pre- test			Post- test		
		Mean	Median	STD	Mean	Median	STD
Diverging	15	12.1	12	1.87	15.2	15	2.76
Converging	16	12.1	12.5	1.76	17.7	18	2.75
Accommodating	15	11.9	12	2.55	16.4	16	3.75
Assimilating	17	12	12	3.49	15.6	16	3.38

Table 1: Descriptive statistics of learners' academic achievements in English language

The mean scores of all the four groups were almost the same in the pre- test and ranged from 11.9 to 12.1. Each learning styles group was taught using the appropriate method of learning English language. In fact, the researchers posed the questions in the form of scenarios to the learning styles groups. Each learning style group reacted in a way that they learn the best. The diverging and accommodating learners always consulted with others to ensure that their answers to the questions were correct before providing the answers to the researchers. While the converging and assimilating learners provided their answers to the researchers without any consultations with others.

Furthermore, the converging learning style learners were interested in knowing how a certain problem was solved and they were willing to be given more exercises to practice. The researchers functioned as the couches providing practical guidance and feedback using demonstration method when working with converging learning style learners. The converging learning styles learners worked on their activities individually. The diverging learners were interested in exploring why a particular question was answered in a given manner using certain steps. The researchers motivated the learners to answer the questions using the method that they knew following the correct structure. According to Kolb (2005) the accommodating learners prefer to carry out plans and tasks and get involved in new experiences. For this group, the researchers posed the open-ended questions almost all 12 lessons for all the learners to make their own analysis of the questions. The learners participated in the group activities in order to listen to other learners' ideas and make the conclusion. It is worth noting that the researchers explained the necessary steps involved in solving the given problems and provided the learners with some activities.

After the intervention, all the learners were asked to answer the questions in the post- test. The post- test results showed that the converging learning styles, learners performed better than other learning styles groups. Based on the results as shown in Table 1, the mean score of 17.7 for converging learners was greater than the mean score for the other three learning styles groups. According to Kolb (2005) learners with converging and accommodating learning styles like to apply ideas to the world around them and see what the results would be. The learners discovered that the exercises which they had in the classrooms can be applied in their daily life. For instance, the tips which were given to them regarding writing a resume can be used for job applications in the future.

The results in Table 1 also illustrates that the learners' scores spread out from their mean scores. The scores of the "assimilators" were spread out more (3.49) from their mean scores in the pre-test and (3.38) from their means of post-test. The standard deviation for the assimilating learning style learners in English language pre-test and post-test were almost the same. The quantitative data were analysed using ANOVA at the 0.01 level of significance to test null hypothesis. The results of the study proved that there is no significant difference in the learners' achievements in English language course and their learning styles. The results are shown in the table below:

SP Publications
International Journal Of English and Studies (IJOES)
An International Peer-Reviewed English Journal
www.ijoes.in   **Vol-1, Issue-5, 2019**   **ISSN: 2581-8333**

Indexed in   Directory of Research Journals Indexing DRJI   CiteFactor Academic Scientific Journals

Sources of variation	Sum of squares	Df	Means square	F-ratio
Between groups	7.218	3	2.406	
Within groups	283.76	59	4.809	0.500
Total	290.978	62		

Table 2: The ANOVA summary for the pre-test results

The F-ratio was found to be equal to 0.500 and Fcritical at significant level 0.01 was 4.31 with 59 degrees of freedom. Therefore, it can be concluded that there was no significant difference between the learners' achievements and their learning styles in the pre-test. The learning achievements for all learners in the pre-test were about the same. The researchers taught English language topics to each learning styles group and all learners took the post-tested. The post-test results are shown in the following table:

Sources of variation	Sum of squares	Df	Means square	F-ratio
Between groups	228.85	3	76.282	
Within groups	351.87	59	5.964	12.79
Total	580.72	62		

Table 3: The ANOVA summary for the post-test results

The ANOVA results of the post-test in table 4 shows the F-ratio equal to 12.79 and Fcritical was 4.31 at significance level 0.01 and 59 degrees of freedom. This showed that Fcritical < Fcalculated and thus the null hypothesis was rejected (i.e there was a significant difference in the learners' achievements in English language course and their learning styles). Furthermore, the

Scheffe test was carried out with the aim of finding out which pairs of means were significantly different at 0.01 significance level. Six pairs of mean were compared, and the results were obtained as presented in Table 4.

Mean	Scheffe test	Pair of mean being compared	Conclusion
$\bar{X}_1$=15.2 & $\bar{X}_2$=17.7	F_1=6.704	Diverging and Converging (F_1> $F_{crit,}$)	There was a significant difference in the Diverging and Converging learners' academic achievements.
$\bar{X}_2$=17.7 & $\bar{X}_3$=15.6	F_2=5.036	Converging Assimilating (F_2>F_{crit})	There was a significant difference in the Converging and Assimilating learners' academic achievements.
$\bar{X}_3$=15.6 & $\bar{X}_1$=15.2	F_3=0.177	Assimilating and Diverging (F_3<F_{crit})	There was no significant difference in the Assimilating and Diverging leaners' academic achievements.
$\bar{X}_4$=16.4 & $\bar{X}_1$=15.2	F_4=1.496	Accommodating and Diverging (F_4<F_{crit})	There was no significant difference in the Accommodating and Diverging learners' academic achievements.
$\bar{X}_4$=16.4 & $\bar{X}_2$=17.7	F_5=1.813	Accommodating and Converging (F_5<F_{crit})	There was no significant difference in the accommodating and Converging learners' academic achievements.
$\bar{X}_4$=16.4 & $\bar{X}_3$=15.6	F_6=0.707	Accommodating and Assimilating (F_6<F_{crit})	There was no significant difference in the Accommodating and Assimilating learners' academic achievements.

Table 4: The comparison of pairs of means in the post-test

The means as shown in Table 4, were as follows: $\bar{X}1$ was the mean for diverging learners, $\bar{X}2$ was the mean for converging, $\bar{X}3$ was the mean for assimilating, and $\bar{X}4$ was the mean for accommodating learners. The results in Table 4. illustrate that there was a significant difference between the diverging and converging learners' achievements. There was also a significant difference between the assimilating and converging learners' achievements. The Scheffe test ratios for the two pairs (F1=6.704 and F2=5.036) were greater than the Fcritical=4.31 at significance level 0.01 with 59 degrees of freedom. This implies that there was no significant difference between the four pairs of means. Hence, the four pairs were almost the same in terms of academic achievements even though they learn differently.

The results of the study revealed that there was no significant difference between learners' learning styles and their academic achievements in English Language learning. The converging learning style learners achieved higher scores as compared to other learning styles groups with the diverging learning style learners who achieved lower scores in the post-test. The Scheffe test was carried out to find out which pairs of means were significant in the post-test. The Scheffe test revealed that there was a significant difference between the converging and diverging learning styles as well as between the converging and the assimilating learning styles at significant level 0.01 with 59 degrees of freedom because F1>Fcritical. It can be concluded that the incorporating the learners' learning styles in learning English language enhanced the learners' academic achievements in circular letter. All learners performed better in the post-test as compared to the pre-test.

Conclusion

In summary, understanding learners' learning styles is very important for all lecturers to design their lesson plans and teaching methods in order to fulfil the requirements of all learners in the learning process. The lecturers ought to experiment with varied teaching methods and styles in classroom to decide on the best strategy which meets the educational vogue of the learners. In other words, knowing learners' learning styles provide lecturers with the opportunity to figure out the learners' various learning levels such as slow, average, and fast learners throughout interactions in the classroom. The results of the study showed that there is no significant difference in the learners' academic achievements in English language course and their learning styles.

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