

LEARNING STYLES AMONG TERTIARY LEVEL STUDENTS: A CASE STUDY ON PRIVATE COLLEGES IN MALAYSIA

Mohd Bakri Abu Bakar

Mohd Bakri b Abu Bakar is a lecturer of TESL at Faculty Education and Social Sciences in University Selangor, Selangor Darul Ehsan, Malaysia. E-mail: mbakri@unisel.edu.my

Accepted date: 02 September 2018

Published date: 11 October 2018

To cite this document: Bakar, M. B. A. (2018). Learning Styles Among Tertiary Level Students: A Case Study on Private Colleges in Malaysia. *International Journal of Education, Psychology and Counseling*, 3(18), 38-45.

Abstract: *The aim of the study is to find out the preference of learning styles among tertiary level students by stream programme and gender. The scope of the study is to look at private colleges in order to see the different culture and atmosphere of students in applying and practicing their learning styles against what the public universities have offered. There are 100 respondents from two (2) private colleges in Kedah and Kelantan have been selected which enrolling in the field of arts and sciences programme. A set of a questionnaire consisting of three (3) sections of learning styles (VAK) adopted by O'Brien (1985) is distributed to all respondents after the class session. The results have concretely shown that most of the respondents regardless of stream programmes prefer visual learning style as their way of learning followed by kinesthetic and auditory. And, it shows, too, female students are the most respondents who apply visual learning style into their learning process. Visual learning style becomes a preference for the most of students in learning due to an easier time processing and understanding information in any subject matter.*

Keywords: *Learning, VARK, Learning Styles, Stream Programmes*

Introduction

Keefe & Ferrel (1979) defines learning styles as “the composite of characteristics cognitive, affective, and physiological factors that serve as relatively stable indicators of how a learner perceives, interacts with and responds to the learning environment. Learning has become one of the most important parts of human life. The process of learning in human starts as early as birth in which human are born with ‘Tabula Rasa’ which is know nothing about the world of knowledge and it is only can be shaped by environment. The process of acquiring knowledge is important as it plays a vital role not only in education, but also for survival. The ways individuals acquired, preserved and retain information are known as learning style (Felder & Henriques, 1995). There are three main types of learning styles: visual, auditory and kinaesthetic/tactile (VAK) (Reid, 1987). As to succeed in their learning, learners have to earn the precise learning styles to achieve the skills and knowledge in their learning process. To reach the targeted achievements and to find answers for questions that have existed in our lives are one of the reasons why humans are learning and acquiring new knowledge. As a part of learning process,

it is a vital decision for any learners to find their own learning styles as to help them to achieve success in them by receiving and understanding knowledge easily.

Problem statement

Preferring the learning styles may create some possibilities in which learners face conflicts in their learning process when they are not able to find the suitable learning styles according to their learning preferences. The problem occurs when their learning styles are not in par with their learning behaviours such as solitary learners who try to use the social learning styles. This kind of experimentation will not only make the learner feels uncomfortable learning within groups of people, but it can also limit the learner's capabilities of delivering ideas and opinions due to interference that against their norms of learning.

The differences within individuals such as the nature of their cognitive, affective, physical, morale, social and behaviour can be identified to affect the process of learning and learning development substantially. Acquiring the appropriate learning style is difficult and it creates problems such as time consuming due to the learners are doing lots of trial and error in their efforts to discover the proper learning style. Not only that, using improper learning styles also will affect the whole process of learning which demotivates learners to cope with new environment accordingly.

Literature review

VARK is an acronym for Visual, Aural, Read/Write and Kinesthetic learning style which initially developed by Neil Fleming in 1987 that falls under four modalities as an enhancement in learning. (Kara, 2013).

One of the studies done by Murphy, Gray, Sraja, & Byert (2004) found that dental students had a stronger visual learning styles, coupled by read/write learning styles. This was as result of the needs for dental students to learn from visual demonstration and hand-on learning experience, and writing and reading notes as the enhancer to their already existed knowledge.

Whilst, some learners learn through kinesthetic or movement, in which learners can learn or easily cope with the understanding of the knowledge via physical movements as in football/soccer players learning the skills on how to dribble the ball properly (Fatin Amirah Suib, et al; 2010)

This also supported by Hatami (2013) which all individuals have different learning styles that only be differentiate by their natural, habitual, and preferred ways of absorbing, processing, and retaining new information and skills.

Kara (2013) in her study has shown that learners who have their own preferences of learning styles often confronting with the problems whereby the teacher mismatched their teaching styles with the learner's learning styles. As a result, many learners have low motivation to learn, thus many of them failed to achieve their target for academic performance.

According to Nancy (2006), teaching will not be a success without teachers understand and having the knowledge of students' learning styles and matching them with the correct teaching techniques and strategies.

Besides, There was a different perspective by Lujan and DiCarlo (2006) which administered the VARK questionnaire to the 250 first-year medical students whereby there were only 36.1% of the students preferred a single mode of learning preference and among these students, 5.4%

preferred visual learning, 4.8% preferred auditory, 7.8% preferred printed words, and the most was 18.1% preferred kinesthetic that they can use all the senses from touch, hearing, smell, taste, and sight to get along with the learning as a whole. This was also revealed by Veena and Shailaja Shastri (2013) in their study which 80% of the pure and applied science students preferred single mode of information presentation, with a preference towards visual mode (3%), auditory mode (43%), reading/writing mode (7%), kinesthetic mode (27%) and 20% of the respondents preferred multiple modes. From these studies, it can be seen that most of science respondents preferred whether kinesthetic and auditory in their modes of learning. In addition, Yemane, Ambaye, Alehegn, Sahile, Dimtsu B, et al. (2017) had a different result towards their science programme respondents which showed that of the total 415 students, 305 (73.5%) of the students were unimodal and visual learning style was the most preferred mode.

On the other hand, Wehrwein, Lujan and DiCarlo (2006) found out that majority of male students preferred multimodal instruction, specifically, four modes (VARK), but preferring more auditory and none of them chose auditory. Whereas, a majority of female students (33.3%) preferred single-mode instruction with a preference toward Kinesthetic. This is also supported by Veena and Shaijila (2013) that both male and female respondents are into auditory learning styles followed by kinesthetic, read/write and visual. They also stressed out that the pure science and applied science course students differ significantly in their preference for visual learning style. There was no significant difference in learning style preference between high and low academic achievement students. Gender differences show that boys and girls differed significantly in their preference for auditory and the other three modes respectively. However, Yemane, Ambaye, Alehegn, Sahile, Dimtsu B, et al. (2017) had a different result towards their science programme respondents which showed that the male and female students were dominantly preferred visual learning style; and also the finding found that there was no significant association between gender and learning style preference.

Methodology

A quantitative research design has been used to tabulate the data as it is useful to explain and response to questions regarding the respondents and contexts. A set of modality (learning channel preference) questionnaire reproduced by O'Brien (1985) had been distributed to 100 respondents which consist of twenty-eight (28) male students and seventy-two (72) of them are females. They were randomly selected from two (2) private colleges in Kedah and Kelantan which enrolling in the field of arts and sciences programmes. The data then will be tabulated and analysed by using simple equations.

Findings and Discussion

The findings are looking at the learning channel preferences by both gender of students and also preferences by courses taken by the respondents. The three learning preferences (Visual, Auditory and Kinesthetic) are considered the most practice and implemented while learning by the students.

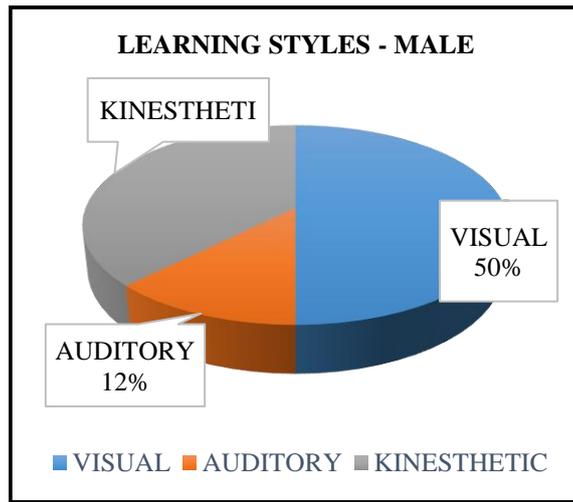


Figure 1: Percentage on learning style by male respondents

Figure 1 presents the percentage on the learning style by male respondents. There are twenty-eight (N=28) of male respondents from all two private colleges had been randomly chosen and 50% (14) of overall are mostly preferred visual learning style as their learning preference. While, 38% of them are more inclined to kinesthetic and the remaining (12%) of male respondents are preferring auditory as a part of their learning techniques.

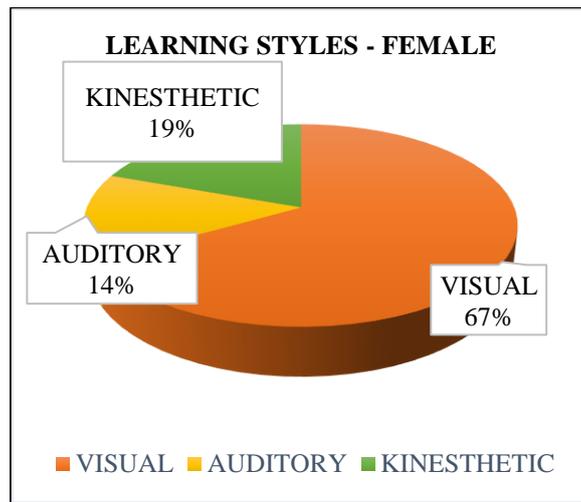


Figure 2: Percentage on learning style by female respondents

Figure 2 illustrates the percentage on the learning style by female respondents. Out of 72 respondents, 67% (48) of female respondents believe that visual learning style helps them in obtaining information fast from the rest. The second preference which kinesthetic contributes to 19% (14) respondents. While 14% (10) of respondents prefer auditory as their learning style. Most of female respondents, too, are on the same track with male students which visual learning preference give more advantage to them to learn.

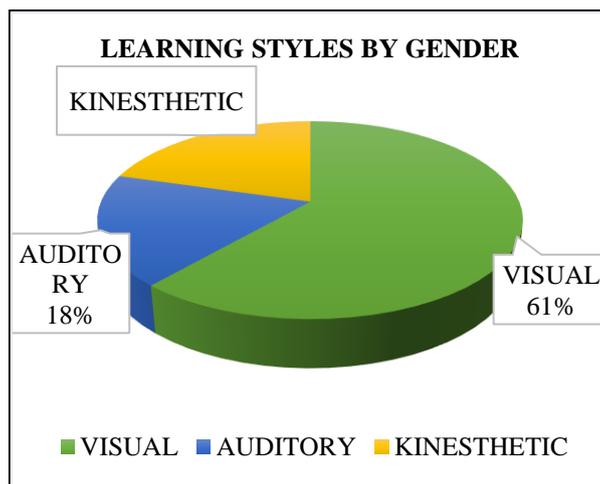


Figure 3: Percentage on learning style by gender

Figure 3 sums up the percentage on the learning style by both respondents. It is clearly showed that visual learning (61%) is the most learning preference preferred by both gender. Kinesthetic (21%) and Auditory is the least (18%) preferred learning style. Visual learning style is a preference to the most of the respondents because it can assist them in incorporating imagery into their visualization of information and also help them to make sense of what they hear. This includes using pictures, images, colours or other visual media to help organize and process information. Many visual learners may find they have images always floating around in their heads.

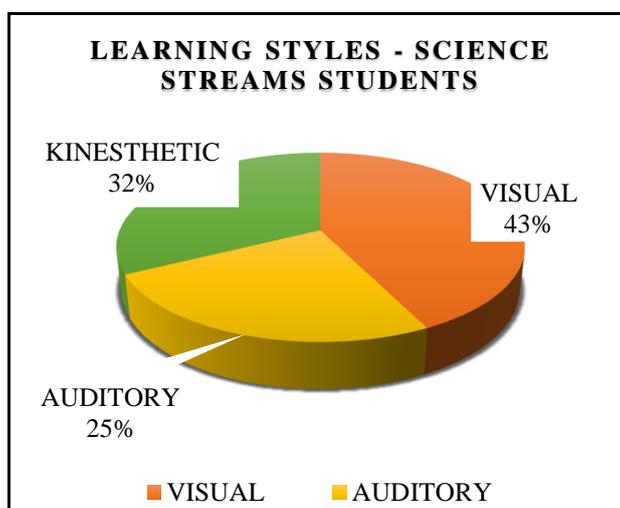


Figure 4: Percentage on learning style by science streams students

Figure 4 shows the percentage on learning style by science stream students. The total number of respondents enrolling science streams courses are seventy (N=70) and most of them (43%) are preferring visual learning style as their learning preference. 32% (22) of respondents are choosing kinesthetic learning preference, while, 25% (18) are comfortable with auditory learning style. Again, visual learning style are the most preferable and practiced among the students in order to obtain knowledge during classroom session or individual learning.

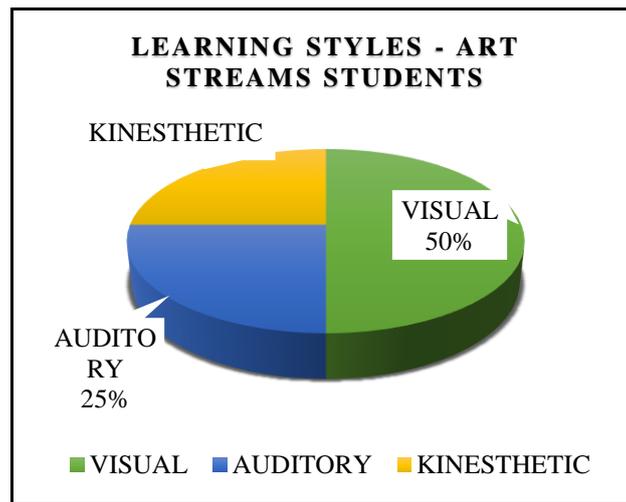


Figure 5: Percentage on learning style by art streams students

The equality in preferring learning style by art streams respondents on visual learning can be seen in Figure 5. With total number of 30 respondents, half (50%) of them are fond to visual learning. About 25% for both kinaesthetic and auditory are preferred by some of the respondents. This is clearly seen that visual learning is still the most preferred learning style for the most of respondents specifically and the students generally.

Conclusion

The term “learning styles” visualizes to the understanding that every student learns differently. Technically, an individual’s learning style refers to the preferential way in which the student absorbs, processes, comprehends and retains information. This notion of individualized learning styles has gained widespread recognition in education theory and classroom management strategy. Individual learning styles depend on cognitive, emotional and environmental factors, as well as one’s prior experience. It is important for educators to understand the differences in their students’ learning styles, so that they can implement best practice strategies into their daily activities, curriculum and assessments.

One of the most accepted understandings of learning styles is that student learning styles fall into three common categories: Visual Learners, Auditory Learners and Kinesthetic Learners. are introduced by Neil Fleming (1987). VARK is an acronym that refers to the four types of learning styles: Visual, Auditory, Reading/Writing Preference, and Kinesthetic. (The VARK model is also referred to as the VAK model, eliminating Reading/Writing as a category of preferential learning.) The VARK model acknowledges that students have different approaches to how they process information, referred to as “preferred learning modes.” Students’ preferred learning modes have significant influence on their behaviour and learning

- Students’ preferred learning modes should be matched with appropriate learning strategies.
- Information that is accessed through students’ use of their modality preferences shows an increase in their levels of comprehension, motivation, and metacognition.

Based on the study, most of the respondents regardless of gender and stream preferred visual learning style that influences them more in learning compare to other learning modes. Visual learners have an amazing memory. They are usually highly sensitive to how certain things look and can easily see the big picture. In other words, visual learners often feel the need to have

goals. These goals are then divided into small tasks that they can focus on. Visual learners are also good at imagining situations and events. They can simulate scenarios in their minds and carefully plan their actions according to each outcome. This means that most people who learn mainly through visualization are the ones who plan things carefully.

Lujan & DiCarlo (2006) reflects that most students are able to learn effectively as long as educators provide a blend of visual, auditory, reading/writing and kinesthetic activities. However, some students prefer one of the modalities over the other three so strongly that they struggle to understand the subject matter unless special care is taken to present it in their preferred mode. Therefore, students should engage in multi-modal learning styles and educators should motivate and absorb the importance of using all the modalities to enhance students' academic achievement.

References

- Felder, R.M. & Henriques, E.R. (1995). Learning and teaching styles in foreign and second language education. 21-31, Vol. 28(1). Retrieved from <http://www.ncsu.edu>.
- Fleming, N.D. (Dec, 2012). Fact, Fallacies and Myths: VARK and learning preferences. Retrieved on Aug 8th 2018 from <http://vark-learn.com/wp-content/uploads/2014/08/Some-Facts-About-VARK.pdf>.
- Hatami, S. (2013). Learning styles. *ELT Journal*, 67 (4) p. 488-490. Oxford University Press. Retrieved on Aug 17th, 2017 from <http://www.eltj.oxfordjournals.org>.
- Kara, S. (2013). Learning Styles and Teaching Styles: A Case Study in Foreign Language Classroom. Conference of the International Journal of Arts and Sciences. Retrieved on Aug 17th, 2017 from http://www.openaccesslibrary.org/images/BOS134_Selma_Kara.pdf.
- Keefe, J. W., & Ferrell, B. G. (1990, October). Developing a defensible learning style paradigm. Retrieved May 8th, 2018 from <https://pdfs.semanticscholar.org/f9f5/42869986f4a369251ef3c96a9e6d98fd29be.pdf>
- Keefe, J. W. (1979). "Learning style: An overview." student learning styles diagnosing & prescribing programs. NASSP National Association of Secondary School Principals, 1-17. Retrieved on May 8th, 2018 from <https://eric.ed.gov/?id=ED182859>.
- Khalid, R., Mokhtar, A. A., Omar-Fauzee, M. S., Kasim, A. L., et. Al. (2013). The learning styles and academic achievements among arts and science streams student *International Journal of Academic Research in Progressive Education and Development*. 2, No. 2. Retrieved on August 8th, 2018 from <http://www.hrmars.com/admin/pics/1774.pdf>.
- Kolb, D.A. (2015). *Experiential Learning: Experience as the source of learning and development* 2nd edition. Pearson Education, New Jersey. Retrieved on May 8th, 2018 from <http://ptgmedia.pearsoncmg.com/images/9780133892406/samplepages/.pdf>
- Lujan, H. L., and DiCarlo, S. E. (2006). First-year medical students prefer multiple learning styles. *Journal of Physiology Educational Advanced*, 30: 13–16. Retrieved on August 8th, 2018 from <https://www.physiology.org/doi/abs/10.1152/advan.00045.2005>.
- Murphy, R.J., Gray, S.A., Straja, S.R., Bogert, M.C. (2004). Student Learning Preferences and Teaching Implications. *Journal of Dental Education*, Vol.68/8. Retrieved on Aug 17th, 2017 from <http://www.jdentaled.org/content/68/8/859.full.pdf.html>.
- Nancy, R. H. (2006). The Role of Learning Styles in The Teaching and Learning Process. Vol. 7/1. Retrieved on Aug 17th, 2017 from http://www.iacis.org/iis/2006/Csapo_Hayen.pdf.
- O' Brien, L. (1985). *Learning Channel Preference*, Rockville, MD: Specific Diagnostics, Inc.
- Reid, J.M. (1987). The learning style preferences of ESL students. Vol. 32(1). *TESOL Quaterly*. Colarado State University. Retrieved from <http://old.fltrp.com/download/06071807.pdf>.

- Suib, F.A., Lutfi Amir, N., Mohd Jauni, N.A., & Madon, N.Z. (2010). The Relationship of Learning Styles on A Friday Quiz's Performance Among Pre-Clinical Students of Cyberjaya University College of Medical Science. Centre for Languages and General Studies. Unpublished thesis. Cyberjaya University College of Medical Sciences.
- Veena, N. and Shailaja Shastri. (2013). Learning preferences among students. *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*, Volume 15, Issue 6, pp. 26-32. Retrieved on August 8th, 2018 from www.Iosrjournals.org.
- Wehrwein, E. A, Lujan, H. L. & DiCarlo, S. E. (2007). Gender differences in learning style preferences among undergraduate physiology students. *Journal of Physiology Educational Advanced*, 31: 153–157. Retrieved on August 8th, 2018 from <https://www.physiology.org/doi/abs/10.1152/advan.00060.2006>.
- Yemane Y, Ambaye E, Alehegn A, Sahile E, Dimtsu B, et al. (2017). Assessment of Gender Difference on Learning Styles Preferences among Regular Undergraduate Students of Mekelle University Collage of Health Science. *J. Stem Cell Biol. Transplant.* Vol. 1, No. 2: 14. doi: 10.21767/2575-7725.100014. Retrieved on August 8th, 2018 from <http://www.imedpub.com/articles/assessment-of-gender-difference-onlearning-styles-preferences-among-regularundergraduate-students-of-mekelle-universitycollageof.php?aid=20294>.