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The comparative Study on Relationship between Learning style preferences and Academic achievement among undergraduate arts, science and commerce students.

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ABSTRACT: *Learning is the beginning of wealth. Learning is the beginning of health. Learning is the beginning of spirituality. Searching and learning is where the miracle process all begins by Jim Rohn. Learning is often defined as relatively lasting change in behaviour that is the result of experience. When people are learning adopt some skills to memorize and grasp the information. So that will call it as learning styles. A benchmark definition of "learning styles" is "characteristic cognitive, effective, and psychosocial behaviours that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment. When the learners have adopted the some learning styles preferences so they will be success in there own field. It can be academic and work life. Keeping the above points in view, the present study aim was to study the relationship between learning styles preference and academic achievement among undergraduate students. Hypothesis of present study was There is no difference in learning style preferences among arts, science and commerce students and There is no relationship between learning styles preferences and academic achievement among arts, science and commerce undergraduate students. The sample of present study was 312 undergraduate students in 3 streams. The data was collected using Learning style Inventory and 12th standard marks are collected for check the academic achievement. The results show that there is a difference in learning styles preferences in arts, science and commerce students and there is relationship in learning style preference in learning styles and academic achievement.*

Key words: *Learning styles, academic achievement and under graduate students.*

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I. INTRODUCTION

Learning is often defined as a relatively lasting change in behaviour that is the result of experience. Learning became a major focus of study in psychology during the early part of the twentieth century as behaviourism rose to become a major school of thought. Today, learning remains an important concept in numerous areas of psychology, including cognitive, educational, social, and developmental psychology.

One important thing to remember is that learning can involve both beneficial and negative behaviours. Learning is a natural and ongoing part of life that takes place continually, both for better and for worse. Sometimes people learn things that help them become more knowledgeable and lead better lives. In other instances, people can learn things that are detrimental to their overall health and well-being.

A benchmark definition of "learning styles" is "characteristic cognitive, effective, and psychosocial behaviours that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment. Learning styles are considered by many to be one factor of success in higher education. Confounding research and, in many instances, application of learning style theory has begat the myriad of methods used to categorize learning styles. No single commonly accepted method currently exists, but alternatively several potential scales and classifications are in use. Most of these scales and classifications are more similar than dissimilar and focus on environmental preferences, sensory modalities, personality types, and/or cognitive styles.

As early as 334 BC, Aristotle said that "each child possessed specific talents and skills" and he noticed individual differences in young children. In the early 1900's, several personality theories and classifications for individual differences were advanced; these focused especially on the relationship between memory and visual or oral instructional methods. The research in learning styles then declined due to the emphasis on the student's IQ and academic achievement. In the last half of the 1900's, however, there has been a renewed interest in learning styles research and many educators are attempting to apply the results within the classroom. There were different model of learning styles In 1984, Social Psychologist David A. Kolb developed his experience-based

learning model. Dr. Kolb's work in the 80s and 90s was the most influential for creating emphasis that teachers modify teaching style to accommodate student learning style.

In 1995, Professor Mark Tennant categorized types of learning into three categories: (A) Attitude, (S)Skills, and (K) Knowledge with his ASK design, which has been innumerably copied, modified and utilized among a variety of for-profit programs.

In 2003, Dr. L. Dee Fink published Creating Significant Learning Experiences: An Integrated Approach to Designing College Courses. Dr. Fink's book adds to some of the principles of Blooms Taxonomy and expands upon them to accommodate new learning types. NeilFleming'sVARKmodel is one of the most popular representations. In 1987, Fleming developed an inventory designed to help students and others learn more about their individual learning preferences. In Fleming's model, which are often referred to as VARK learning styles, learners are identified by whether they have a preference for visual learning (pictures, movies, diagrams), auditory learning (music, discussion, lectures), reading and writing (making lists, reading textbooks, taking notes), or kinaesthetic learning (movement, experiments, hands-on activities). Aural (or auditory) learners learn best by hearing information. They tend to get a great deal out of lectures and are good at remembering things they are told. Reading and writing learners prefer to take in information displayed as words. Learning materials that are primarily text-based are strongly preferred by these learners. Kinaesthetic (or tactile) learners learn best by touching and doing. Hands-on experience is important to kinaesthetic learners. The previous studies shows that there is association between the learning styles and personality and academic achievement. (Vittorio, V., Frans. B., Jan, J. and Hamaker, C.(2000)).

II. METHODOLOGY

The present chapter is explain about the methodology which used for the present study. The present study aim was to study the relationship between learning style preferences and academic achievement among undergraduate students.

Objectives of the Study was to To Identify the learning style preferences among arts, science and commerce undergraduate students. And To study the relationship between learning style preferences and Academic Achievement among undergraduate students of arts, science and commerce.

Hypothesis of the present study was to There is no difference in learning style preferences among arts, science and commerce students. And There is no relationship between learning styles preferences and academic achievement among arts, science and commerce undergraduate students.

Design of the present study was to The Learning Style Inventory by Dr. S. V. Surya Rekha was administered and scored and the learning preferences of the subjects were identified. The Academic achievement of the subjects were noted on the basis of percentage obtained in class XII. The relationship between learning style preferences and academic achievement was analyzed.

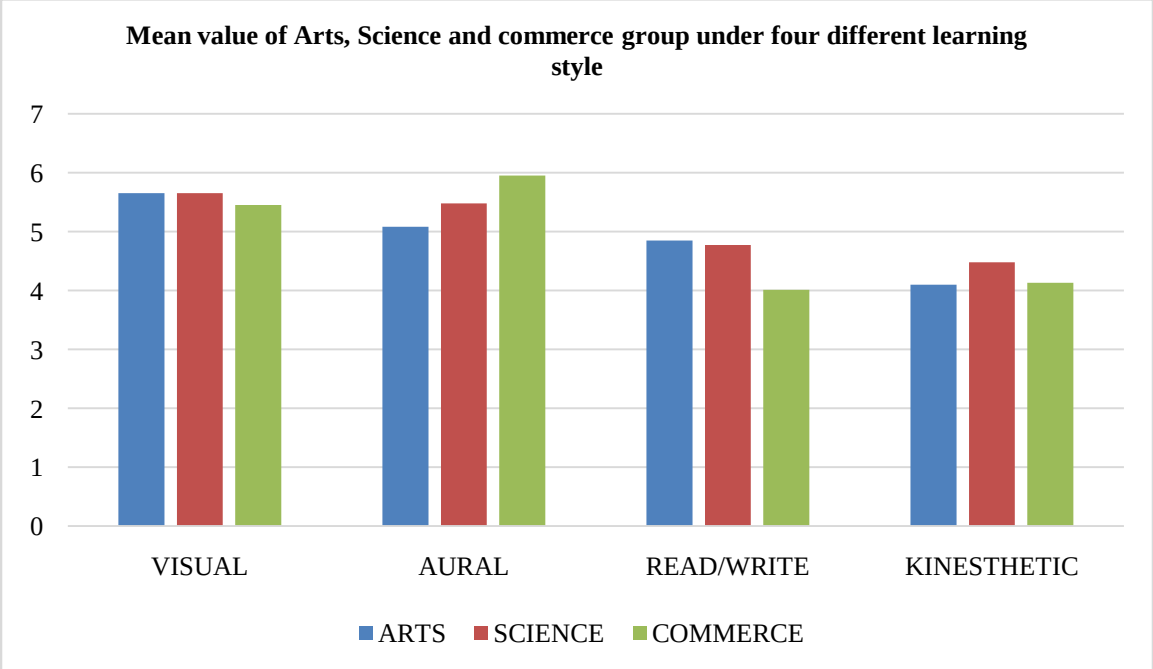
Materials was used in the study was, Socio demographic data profile, which also includes the percentage obtained in class XII and The Learning Style Inventory. The Inventory consists of 40 questions classified into 4 sub-groups namely V, A, R, K – Each standing for different levels of Learning style Inventory in Neil Fleming's VAK/VARK Model: V – Visual, A – Auditory, R – Read / Write, K – Kinesthetic. Instructions to the Participants: "Given below are a number of statements about your preferences while learning. Read each statement and put a "×" mark in the blank box provided at the end of each statement, if you agree with it. If you do not agree with the statement, do not put any mark against it." Scoring key: the number of statements marked by the subject in each category, that is V=Visual, A=Aural, R=Read-write, K=Kinesthetic was noted down separately. The maximum score in any one category is 10. The subjects learning styles were identified from the interpretation as follows. 7-10 high preference, 4-6 Moderate Preference and 1-3 Low Preference. Sample size of the present study was 312 undergraduate students. The sample chosen for the study comprises of 312 undergraduate students studying in Arts, Science and Commerce streams from different cities in India. Data was collected by a group of 52 researchers each of them collecting data from 6 participants of which 3 female students and 3 male students, one each from arts, science and commerce streams respectively. The data collected was pooled together to get 312 data. Inclusion criteria's are undergraduate students from arts science and commerce streams and students in the age range of 18- 22 years. Exclusion criteria's are Evening college students were not included in the study. Procedure was used in the study was Subjects fulfilling the study criteria were met personally by the researcher. The purpose of assessment was explained to them and then obtained consent for the study, and then assessment session was planned. The following procedure was used while collecting the data from each subject. The subject was seated comfortably and rapport was established with the subject. Socio demographic data was collected.

Subject was provided with Learning Inventory and advised to read the same comfortably before answering. The necessary instructions for answering the 40 questions of inventory were given. After the subject completed the inventory, the scoring and analysis of subject's learning preference was done by the researcher by referring to the scoring key. Analysis of the Data In order to arrive at the results scoring key was used to analyze

the subject's preferences for each type of learning. The sample questionnaire and key are appended as annexure to this project as an example. If subject had answered (ticked as 'x') for the question one (1) of the questionnaire, as per the 'key' it would mean that subject has a preference for Visual Learning Style ('V'). Marking statement ten (10) implied subject's preference as Aural ('A') and so on. All the answered statements of the inventory for the subject were summarized to establish whether subject has 'high', 'moderate' or 'low' preference for each of the styles. The same procedure was used to analyze all 312 data.

III. DISCUSSION

The aim of this study is to study the relationship between the learning style preferences and academic achievement among undergraduate students. The hypothesis of the present study was There is no difference in learning style preferences among arts, science and commerce undergraduate students and to study the relationship between learning style preferences and academic achievement among undergraduate students of arts, science and commerce. The sample comprised of 258 undergraduate students of which 85 students of arts, 86 students of science and 87 students of commerce.



Graph 1 shows the mean value of arts, science and commerce stream under four different learning style.

The mean value of the group under four learning style categories are in arts 5.64, science 5.48 and commerce 5.45 in visual learning styles. Under aural learning style arts 5.08, science 5.45 and commerce 4.95 as their mean value. Under read/write learning style arts 4.85, science 4.77 and commerce 4.09 as their mean value. Under kinesthetic learning style arts 4.10, science 4.48 and commerce 4.13 as their mean value. By the mean value and using the scoring key we can show that the group of all the stream have scored moderate learning preference under all the four different learning style. Hence the group as a whole retain the null hypothesis that there is no difference in learning style preferences among arts, science and commerce students. Present study results supports the previous study -To investigate the relationship between the learning style preferences of Saudi medical students and their academic achievements. A cross-sectional study was conducted among 600 medical students at King Saud University in Riyadh, Kingdom of Saudi Arabia from October 2012 to July 2013. The Visual, Aural, Read/Write, and Kinesthetic questionnaire (VARK) questionnaire was used to categorize learning style preferences. Descriptive and analytical statistics were used to identify the learning style preferences of medical students and their relationship to academic achievement, gender, marital status, residency. The results indicated that 261 students (43%) preferred to learn using all VARK modalities. There was a significant difference in learning style preferences between genders. The relationship between learning style preferences and students in different teaching curricula was also statistically significant. However, learning style preferences are not related to a student's academic achievements, marital status, residency, or study resources.(Saudi Med, J. (2015))

Table 1 shows the total score, mean value and correlation of the group of undergraduate commerce students under the four leaning style.

Learning Styles	Total Score	Mean Value	Correlation	Interpretation
Visual	469	5.453	0.105	Negligible
Aural	426	4.953	0.039	Negligible
Read/Write	345	4.011	0.207	Negligible
Kinesthetic	356	4.139	0.127	Negligible
Acadamic achievement	6910	71.97		Significant relationship

The mean value and correlation of the group under four learning style categories. The group as a whole mean values are 5.453 in visual, 4.953 in aural, 4.011 in read/write and 4.139 in kinesthetic. The correlation of the in each learning style are 0.105 in visual, 0.039 in aural, 0.207 in read/write and 0.127 in kinesthetic. The group as a whole prefers visual as there learning style and the group as a whole have scored 71.97% in their academic achievements. This shows that the correlation from visual to kinesthetic are with in 0.00 to 0.20 correlation. Therefore the group as a whole have a positive negligible relationship. Hence the group as a whole shows that there is no difference in learning style preferences among commerce students and there is a negligle relationship between learning styles and academic achievement among commerce undergraduate students.

Table 2 shows the total score, mean value and correlation of the group of undergraduate science students under the four leaning style.

Learning Styles	Total Score	Mean Value	Correlation	Interpretation
Visual	492	5.655	0.041	Negligible
Aural	477	5.482	0.058	Negligible
Read/Write	415	4.770	0.035	Negligible
Kinesthetic	390	4.482	-0.005	Negatively Negligible
Academic achievement	6050.23	69.54		Significant relationship

The mean value and correlation of the group under four learning style categories. The group as a whole mean values are 5.655 in visual, 5.482 in aural, 4.770 in read/write and 4.482 in kinesthetic. The correlation of the in each learning style are 0.041 in visual, 0.058 in aural, 0.035 in read/write and -0.005 in kinesthetic. The group as a whole prefers visual as there learning style and the group as a whole have scored 69.54% in their academic achievements. This shows that the correlation from visual to read/write are within 0.00 to 0.20 correlation. Therefore the group as a whole have a negligible relationship. Hence the group as a whole shows that there is no difference in learning style preferences among science students and there is no relationship between learning styles and academic achievement among science undergraduate students. But the group as a whole have got negative correlation in kinesthetic therefore this shows that there is a negligible relationship with the learning style and academic achievement among the group in this learning style.

Table 3 shows the total score, mean value and correlation of the group of undergraduate arts students under the four leaning style.

Learning Styles	Total Score	Mean Value	Correlation	Interpretation
Visual	480	5.647	-0.052	Negative Negligible
Aural	432	5.082	0.018	Negligible
Read/Write	413	4.858	-0.040	Negative Negligible
Kinesthetic	349	4.105	0.151	Negligible
Acadamic achievement	6061.165	71.30		Significant relationship

The mean value and correlation of the group under four learning style categories. The group as a whole mean values are 5.6447 in visual, 5.082 in aural, 4.858 in read/write and 4.105 in kinesthetic. The correlation of the in each learning style are -0.052 in visual, 0.018 in aural, -0.040 in read/write and -0.151 in kinesthetic. The group as a whole prefers visual as there learning style and the group as a whole have scored 71.30% in their academic achievements.This shows that the correlation from visual to kinesthetic are with in 0.00 to 0.20 correlation. Therefore the group as a whole have a negligible relationship. Hence the group as a whole shows that there is no difference in learning style preferences among arts students and there is no relationship between learning styles and academic achievement among arts undergraduate students. But the group as a whole have got negative correlation in visual and read/write therefore this shows that there is a negligible relationship with the learning style and academic achievement among the group in these two learning style.

IV. CONCLUSION

The Commerce group students as whole have scored high in visual and the group as whole prefers visual as their learning style, but the group as a whole have a positive negligible relationship. Therefore the group support the hypothesis that there is no difference in learning style preferences among commerce students and there is no relationship between learning styles and academic achievement among commerce undergraduate students. The Science group students as whole have scored high in visual and the group as whole prefers visual as their learning style, but the group as a whole have a got negative negligible relationship in kinesthetic learning style. Therefore the group does support the hypothesis .Therefore that their is a difference in learning style preferences among science students and there is relationship between learning styles and academic achievement among science undergraduate students. Rejecting the null hypothesis that " there is no relationship between learning style and academic achievement. The Arts group students as whole have scored high in visual and the group as whole prefers visual as their learning style, but the group as a whole have a got negative negligible relationship in visual and read/write learning style. Therefore the group does support the hypothesis .Therefore that their is a difference in learning style preferences among arts students and there is relationship between learning styles and academic achievement among arts undergraduate students. Rejecting the null hypothesis that " there is no relationship between learning style and academic achievement. The group as whole have scored moderate preference under all the four different learning styles. Therefore the group not support the hypothesis that there is no difference in learning style preferences among arts, science and commerce students and there is no relationship between learning styles and academic achievement among arts, science and commerce undergraduate students. Individual difference exist with the groups correlation value like science and arts group students. Rejecting the null hypothesis that "there is no relationship between learning style and academic achievement.

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