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Does Learning Style Impacts on Performance of Management Students?

Dr Pranjali Madhur
Universal Business School, Karjat India
Prashant Goyal
Post Graduate Diploma in Management Universal Business School, Karjat, India
Prof. Elora Basumatary
Program Director – Universal Business School, Karjat, India
Komal Jain
Post Graduate Diploma in Management Universal Business School, Karjat, India

Abstract - Purpose – In today's education, we need to stay informed of the different strategies and resources available to provide a more personalized learning experience for the students. The VARK model is designed to allow students to learn more about their learning preferences. This is a short and simple inventory that is well-received due to its intuitive understanding and practical application. The paper aims to clarify the concept of how management students perform with their learning style. It proposes various learning styles & their performance at different stages in an MBA career and outlining why and how learning style is essential throughout the learning process. The study aims to expand using the VARK questionnaire by including a broader range of human resource & their behaviour-related aspects.
Design/methodology/approach – The paper opted for an exploratory study using the open-ended approach of grounded theory, including 83 depth interviews and one group discussion with students representing senior and junior management students having mainly different specialization such as marketing, HR, Operations, Finance. The data were complemented by documentary analysis, opinions, group discussions & expert views, etc. The following paper is contextualized different learning styles and discusses the challenges and practical suggestions for using VARK. It will also analyse the learning styles of students doing Management degree by questionnaire and interviews as methods for data collection and the type of learning best suited for management students.
Findings – The paper provides empirical insights about how change is brought into students' performance due to their learning style. It suggests that successful leaders can be made only "learning by doing" & also to identify their learning style.
Research limitations/implications – Because of the chosen research approach, the research results may lack generalisability. Therefore, researchers are encouraged to test the proposed propositions further.
Practical implications – The paper includes implementation in the learning process, the development of "brand ambassadors" among students, and creating leaders.
Originality/value – This paper fulfils an identified need to study how a change in learning behaviour can be enabled.

Keywords: *Visual, Kinaesthetic, Multimodal learning, VARK, Learning Style, Teaching methods, Business Management*

INTRODUCTION

Learning styles indicate an individual's preferential focus on different types of information, the different ways of perceiving information, and the rate of understanding information Lohri-Posey (2003) [1]. Often, students are not able to perform well, this is since they do not have the knowledge of their preferred learning style. Matching the teachers learning methods to the students learning preferences will allow the student to "acquire a better understanding of the subject matter in question (Cegielski, Hazen, & Rainer, n.d., p. 136) [2]. This paper will underline the need of determining the learning style to help increase student efficiency and their performance.

The VARK model was Designed by Neil Fleming in 1987. In this model, Fleming built up a path for students to become familiar with their learning preferences. VARK means visual, auditory, read/write and kinaesthetic. These are sensory mechanisms that are utilized to learn data. This category reflects the experiences of our students as we instruct in schools, colleges, and universities. There are also some combinations of these learning styles that can be classified as multimodal learners. [3]
According to the VARK model, learners are identified by whether they prefer:

- Visual learning (pictures, movies, diagrams)
- Auditory learning (music, discussion, lectures)
- Reading and writing (making lists, reading textbooks, taking notes)
- Kinaesthetic learning (movement, experiments, hands-on activities) [4]

A. Visual - This method portrays the data using maps, outlines, charts, graphs, flow charts, and all the symbols like circles, different devices, and hierarchies that individuals use to present what could have been introduced in words. This mode could have been called Graphic (G) as that better clarifies what it covers. It must be more than simple words in boxes that would be useful by the individuals who have an inclination towards Read/Write. Students who have a visual learning style may

frequently prefer sitting in the front of the classroom. They may like to highlight, or utilize a great deal of connectors or charts, make diagrams, and might be seen taking more nitty gritty notes which are sorted out or have different methods of making differentiations between the data.

B. **Auditory** - This perceptual mode depicts an inclination for data that is "heard or spoken." Learners who have this as their fundamental inclination report that they gain best from lectures, group discussion, using mobile phones, speaking, webchat and talking things through. The Aural involves speaking out loud and speaking to oneself. These learners listen cautiously and focus primarily on the tone or the pace of speech. These students' advantage more by conversations and trading thoughts. These learners may state again what has just been stated or ask an obvious and recently addressed inquiry. They learn through saying it in their own way.

C. **Read/Write** - Read and write learners often prefer text-based input and output. Reading and writing in all formats, especially booklets, reports, articles, and assignments. Those who prefer this method are often familiar with PowerPoint, the Internet, catalogues, diaries, dictionaries, abstracts, reference books, words. Regardless of whether they initially write and afterward rewrite their notes, perused their notes every day for review and class preparation, but most communicate in writing. Students may make charts and afterward convert them once more into articulations, making records or orchestrating words in chain of importance.

D. **Kinaesthetic** - It incorporates exhibits, re-enactments, videos as well as case studies, practice, and application. The key is the reality or solid nature of the sample. Individuals with this as a solid inclination gain from the experience of doing something and they esteem their own experience more than the experience of others. It is easy to write or speak Kinaesthetically if the point is firmly situated in all actuality. A task that requires the details of who will do what and when, is fit to those with this inclination, like a case study or an example of a job that has a purpose or suggestion. Kinaesthetic students learn best through Hands-on learning opportunities.

E. **Multimodal** - Individuals who do not have a specific preference with a preferred rating that is higher than other rankings are defined as multimodal. These are flexible in their communication preferences and who change from mode-to-mode contingent upon what they are really going after. They pick a specific mode to suit the event or circumstance. When dealing with legalities they will apply their Read/Write inclination. If they are to watch the demonstration of a method, they will communicate their Kinaesthetic inclination. They take more time to accumulate data from every mode and, subsequently, they regularly have a more profound and more extensive understanding. [5]

OBJECTIVES

The purpose of this research study is to evaluate the learning methods of students pursuing a degree in management and to improve the academic performance of each student using the VARK model. The main role of this exploration study is to find which learning style on majority will make the students understand the concept thoroughly, make them involved in the learning process and to state that the best learning style always increase student's efficiency. It likewise means to discover the distinction between understudy's impression of their learning style and the style they are really inclined towards.

The objectives of the research paper are as below:

A. To evaluate the learning methods of management students.

B. To improve an academic performance of management students by using VARK model of learning style.

C. To evaluate & explore how management students' performance affects by changing learning style.

RESEARCH METHODOLOGY

A. Sample

The target population was the students at a Universal Business School which is in the Mumbai, Karjat. To guarantee greater representation of the data, all the students from first year and second year were selected as a sample, using census method. Out of the overall population 124 was the sample size selected for this research. The sample consisted of 46 females (37.1%) and 78 males (62.9%); overall, 83 students (66.9%) were from commerce background, 25 students (20.2%) were from science background and 12 students (12.9%) were from other fields.

B. Data Collection

Data were collected by questionnaire method which was divided in two parts. The first part included questions on age, gender, work experience, region, educational background. The second part was use of VARK questionnaire developed by Fleming, which helps in determine learning styles of students. The VARK inventory, consists of 16 multiple choice questions, each with four choices. The students can select multiple choice, based on the sensory Modelities which are preferred by them. All the participants were briefed as to the objectives of the study, and confidentiality of responses as ensured by maintaining anonymity of responders.

C. Analysis

Each response was noted according to protocols developed by the developers. A detailed evaluation was done for the data using different analytical tools. Bar graphs and pie charts were formulated showing the learning preferences of the students based on age, gender, work experience, educational background, and region. Ten random students were interviewed to find out in detail about their study preferences.

LITERATURE REVIEW

This study by Rogers Katherine Mary Ann (2009) [6] shows that the use of different teaching techniques encouraged students to participate in the course and improved their performance. The answers were analysed, and the author adapted the curriculum to different teaching techniques to consider the results obtained during the preliminary VARK survey.

An article by Othman Norasmah and Mohd Hasril Amiruddin (2010) [7] tell us about different learning style and relation between learning styles with teaching and learning process. It also discusses the advantages of VARK (Visual, Aural, Reading or Write and Kinesthetic) model as an effective learning style.

Study by Espinoza-Poves, J., Miranda-Vílchez, W., & ChafloqueCéspedes, R. (2019) [8] states that 25.5% of students have a multimodal learning style. It was additionally discovered that age is fundamentally connected with learning styles. At long last, a critical connection between the learning style and professional school is illustrated. From one perspective, the Administration students have generally a multimodal learning style (at least two styles), while global business students have a perusing/composing learning style.

The study by Gentry, James A. and Helgesen, Marlene (Marne) G. (2000) [9] presents learning styles as a technique that can help teachers of the core financial management course see how students learn and, simultaneously, improve their teaching performance and enhance student learning.

Jena, R. K. (2018) [10] has done the research to develop a model to automatically detect the students' learning styles from their personal, academic, and social media data and make recommendations for students, teachers, educators, and administrators for overall improvement of learning outcomes. A 10-fold cross-validation was used to create and test the models. The data were analysed by R and R-Studio.

Klement, M. (2014) [11] carried out an analysis of a representative sample of students, to determine what learning styles, classified according to sensory preferences, they prefer. The research sample consisted of 354 students of Palacky University in Olomouc. It was found that proportional representation of men and women according to their favourite learning style is the same in each group and corresponds to the total ratio of men and women in the sample, with just one exception. It is the kinaesthetic learning style, where the proportion of men is higher than with the other three learning styles.

Morgan, R. & Baker, F. (2013) [12] states that Learning Styles are important elements for teachers and teacher educators to consider for any learning environment. The VARK instrument is easy to administer, and the results can impact the effectiveness and quality of a learning environment if these elements are considered and accounted for in the learning environment. Teachers and teacher educators should consider the possible impact of accounting for learning styles through a simple administration of the VARK instrument.

DATA ANALYSIS

The best learning style will increase the student's efficiency as this will be the method of their preference, and they will feel more comfortable and involved in the process. If a student prefers kinesthetics' learning and we will provide them a practical approach to learning, then they will show more interest in it and will be able to better understand the concept, which in turn will increase their efficiency.

In this research, we have analysed the preferred learning style of management students based on age, gender, work experience, region, and educational background. Moreover, we compared student's perception of their learning style with the analysis we did was based on VARK inventory and it was noted that there is a lot of variation between student's perception and their actual learning style. When asked about their preference, 36% of the students prefer unimodal learning style in which kinesthetics' has the most significant share at 31%, whereas according to VARK analysis, 33% students prefer unimodal learning style, which is divided as V (5%), A (10%), R (4%), K (14%). AK & AR model was given 0% preference, which in turn was AK (14%), and AR (4%). 20% of students think that they respond to a combination of VRK, which, according to our research, was only 3%. It can be inferred that student do not have a clear understanding of what their learning style is. The main reason behind that is not much preference is given to students' learning styles at the school level, nor is there awareness about how determining learning style can help improve students' performance. (Figure 1)

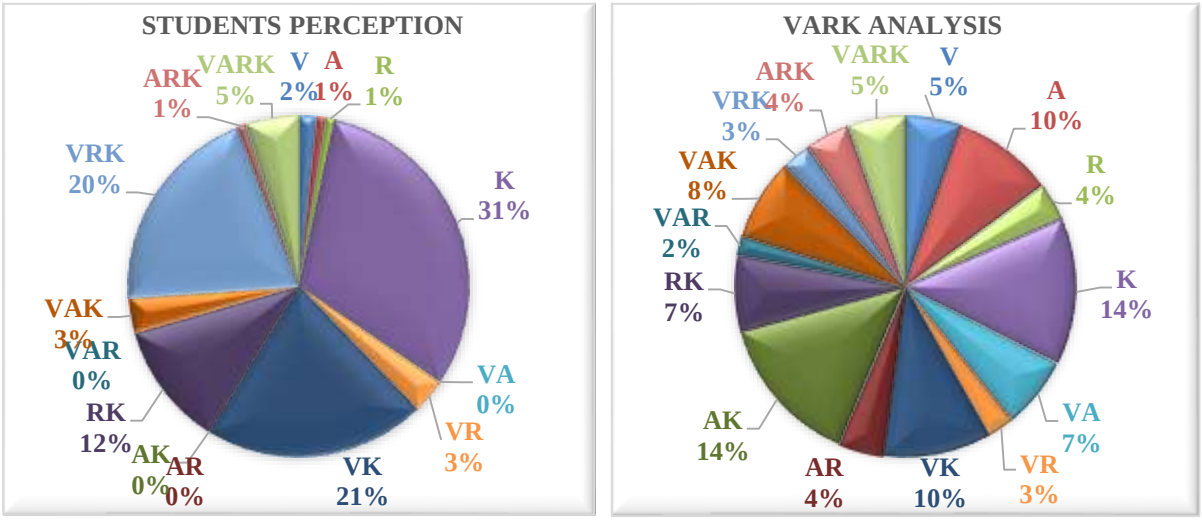


FIGURE 1 – 1 STUDENTS PERCEPTION AND VARK INVENTORY ANALYSIS

The sample we picked comprise of students whose ages go from 18 to 28. During our research, it was discovered that students of age group 18-20 favour both the Auditory (32%) and Kinesthetics (42%) learning model; however, as the age increases, students started giving more significance to the Kinesthetics model. In the long run, the preference for the auditory learning model reduces, and students are inclined more towards kinesthetics learning models, as shown in Exhibit 2. Likewise, the students pursuing the management degree by and large do not lean toward the read/write model of learning. Regardless of age, the inclination for multimodal continues to fluctuate. We can infer that as the students grow old, they start developing analytical and critical thinking skills.

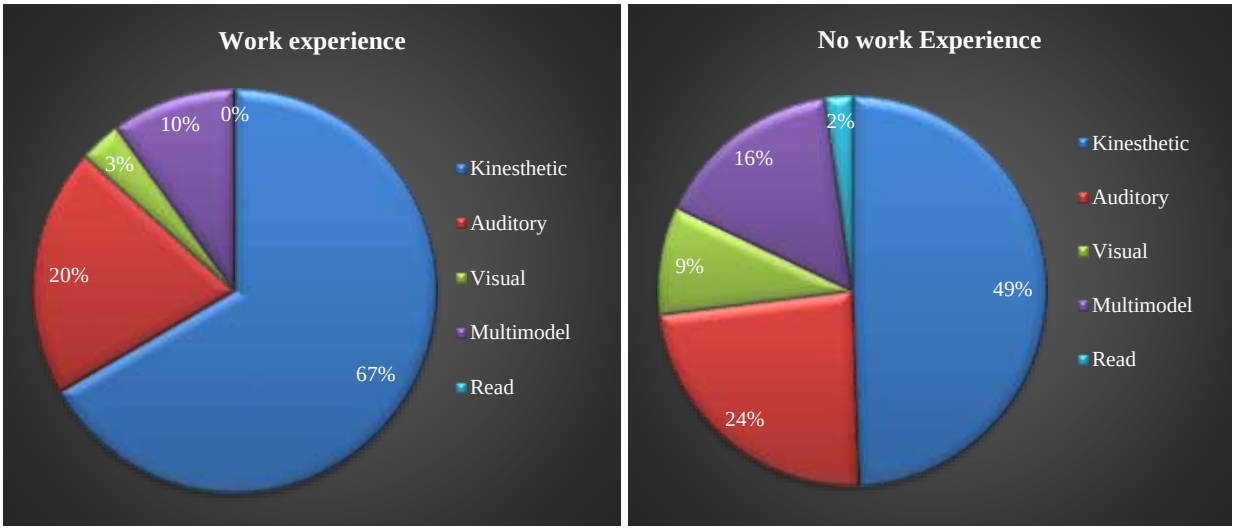
Table 1 – VARK analysis based on age. (in %)					
Age	**Kinesthetic**	**Auditory**	**Visual**	**Read/Write**	multimodal
18-20	42	32	5	0	21
21	56	28	11	0	6
22	53	27	6	7	7
23	55	14	4	0	27
24-28	60	17	10	0	13

Another factor influencing understudy's learning Styles is the "area where they live" or "region." Independent of the region kinesthetics' model is favoured the most. Other preferences vary from region to region. In the central region, students give equivalent significance to visual and auditory models (19%). In the eastern region, multimodal is shown the most inclination after kinesthetics. In the northern region, students similarly lean toward auditory and multimodal (18%). Both southern and western area students give the second inclination to auditory and multimodal styles of learning. It is additionally noticed that the multimodal style in every case is majorly a mix of the auditory and kinesthetics learning model. From the above data, it very well may be surmised that students doing a management degree from all the regions are inclined towards kinesthetics, auditory, or a combination of both as their preferred learning style. (Exhibit 3)

Table 2 – Region wise learning preference (in %)					
Region	**Kinesthetic**	**Auditory**	**Visual**	**Read**	Multimodal
Central	58	19	19	0	4
Eastern	63	8	4	0	25
Northern	55	18	4	5	18
Southern	47	40	0	0	13
Western	48	32	7	0	13

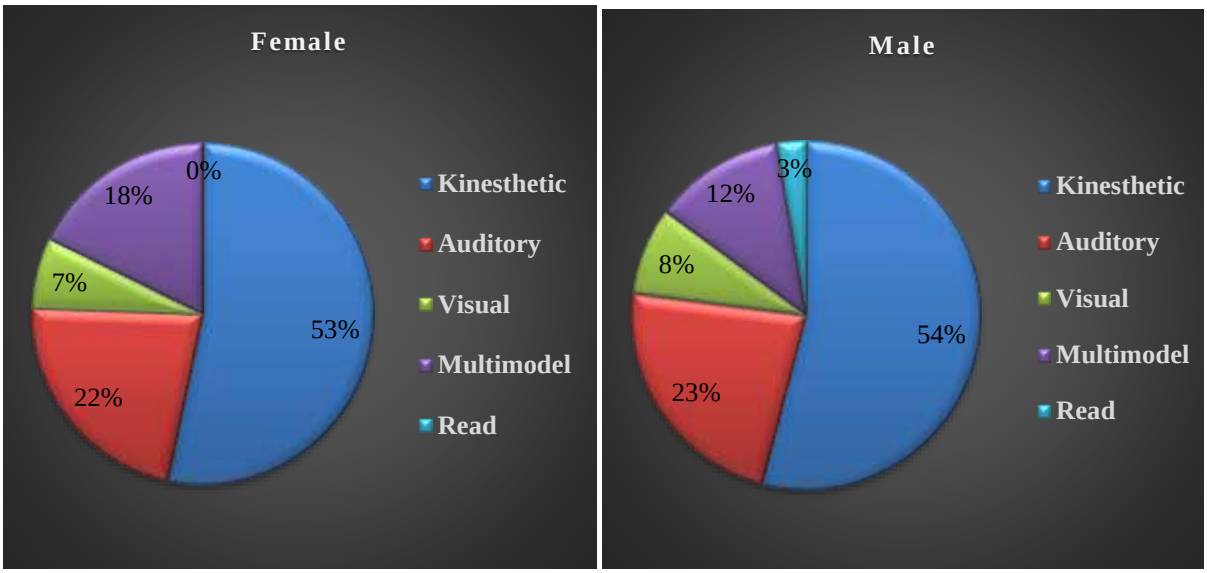
The learning styles of students change depending upon the work experience. In our study, it has been found that students with no work experience favour different learning styles like multimodal, auditory, kinesthetics, when contrasted with those students who have a work experience ranging from 1-3 years, they give more inclination to kinesthetics and auditory learning styles. Likewise, these students understand utilizing distinctive learning styles in various circumstances. (Exhibit – 4)

FIGURE 2 – PREFERENCE OF LEARNING STYLES BASED ON WORK EXPERIENCE

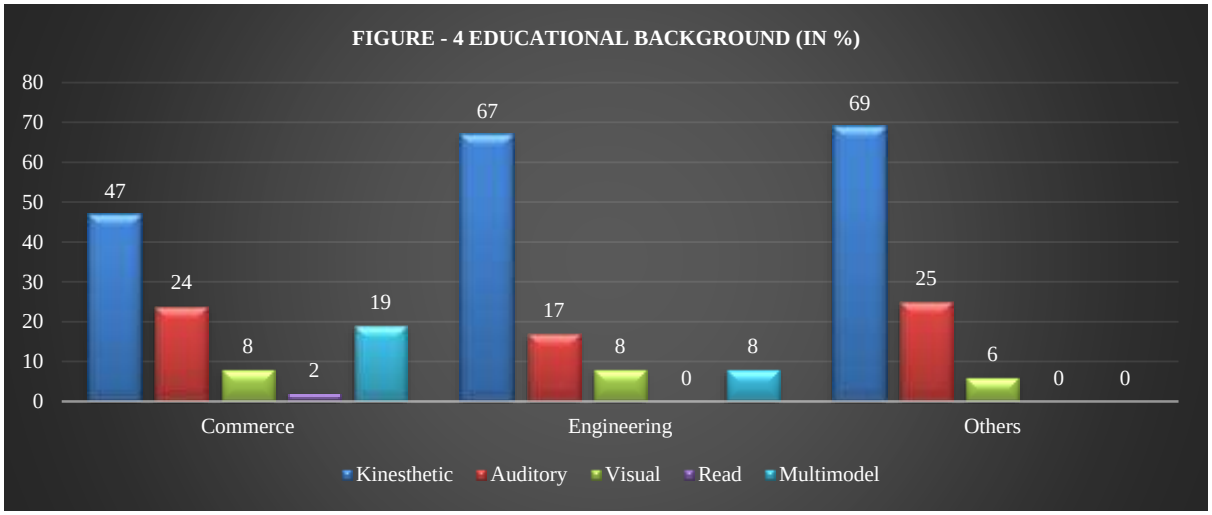


This study shows that gender does not affect determining the learning styles of management students. In our assessment, both the gender favours the Kinesthetics learning style, and their second inclination is the Auditory style. It very well may be gathered that management students give more preference to experiential learning. This strategy permits students to work inside a particular significant zone or industry of intrigue. Additionally, numerous internship programs fall into this class. This strategy is tied in with learning while at the same time doing, a significant factor of how things work in the real world, factoring in the human element always at play. It helps in easing the transition back to the workplace. (Exhibit - 5)

FIGURE 3 - PREFERENCE OF LEARNING STYLES BASED ON GENDER



This examination depends on the educational background. Engineering students mostly prefer a kinesthetics learning style (67%), and the reason behind this is that they use a lot of complexes thinking and practical knowledge during engineering. This is not the same with a student commerce background. Students coming from a commerce background include thinking critically but do not have a practical focus during their course. And that is why 47% of students prefer the kinesthetics learning style, 24% of students prefer the Auditory learning style, and 19% prefer multimodal. Visual is equally preferred by commerce and engineering students. Others include students from various backgrounds, such as computer applications, biology, science, humanities, and management, etc. In this category 69% preferred the kinesthetics learning style, while 25% chose the Auditory model.



According to our analysis, the top 2 learning styles preferred by the students are kinesthetics and auditory. These styles will make students more involved in the learning process, and these are the two learning models that are followed by UBS i.e., Experience Learning and Transformation by Storytelling.

RECOMMENDATIONS

There is a drastic change between the ‘preference of the students’ and ‘what we analysed from our research’ because students are not aware of their learning style. So, to overcome this problem, at the time of admission, we can take their VARK test, which will help them know their learning style. Moreover, this will also help the student gain confidence in applying different learning styles in different scenarios. We will provide a detailed analysis of the students' learning preferences so that they are aware of their true learning style and can work based on the same to perform better in their academics.

Students are dynamic with their approach. The faculties cannot teach the student using a different kind of learning style to teach one topic. Moreover, a student must be flexible with all types of learning patterns to survive in the corporate world to deal with a different kind of problems. To enable this flexibility in learning style, mentors can allot different assignments and tasks individually and in turn students can tell them about their performance and problem they are facing during the session and according to which mentor will guide them. Moreover, from these guidelines the student will be able to adopt different learning style, we do not mean to change their preferences, but we recommend that the learning model should be something which does not focus on one learning preference but will allow the student to be able to use different learning styles in a different scenario.

CONCLUSION

Learning style can result in improved attitudes toward learning as well as increased self-esteem and academic achievement. It is essential to become familiar with the learning style because it will help oneself become more effective and creative in their studies and other things. This research on the learning pattern of the management students at Universal Business School based on the VARK questionnaire was conducted to discover their preferred learning technique and alongside the differentiation between their preference and the results based on our research. The research was done based on five critical parameters: age, region, work experience, gender, and educational background. Regardless of the factor to be considered, the Kinesthetics model is the most preferred option by the students, and the Auditory model is the second preference. Further, a significant proportion of students were inclined towards a combination of more than one learning style in each category. Compared to these techniques, the Visual model is hardly given an edge above, and the Read/Write model is always the least preferred. As the research sample consisted entirely of management students, they usually prefer to learn by doing things rather than by a theoretical approach. Research has also shown that there are many dissimilarities between what the sample thinks its learning style is and what was proved with us' help. This clearly shows that people generally never figure out the type of learner they are. Instead, they assume the category they like as their approach to learning.

LIMITATIONS

There were some potential limitations to this study that may have affect the results. It was limited to a single university, and it had a restricted sample size. The results of the statistical analysis are not attributed to chance; however, this did not really infer that they are valid outside the university or that they could be generalized in other circumstances.

Another limitation of this study, and the use of the designed VARK questionnaire, was that it did not consider interrelated factors such as socio-economic status, race, and culture. The number of personal interviews that this study includes were not sufficient due to the prevailing conditions.

This study does not include sufficient students with work experience of 2+ years and since management courses are additionally for working experts it can go about as a limitation for this exploration.

FURTHER SCOPE FOR RESEARCH

In the same research field, it would be interesting to conduct other studies with more students from different management universities, which will provide sufficient data and more comprehensive results for the subject and will be of great usefulness to management universities.

Further study will be incorporating many socio-economic and other variables. It will be interesting to find out the impact of these factors on the learning preference of students.

Here the study focuses significantly on students without work experience. While a near investigation of students with work understanding of 2 years or more would be a fascinating examination to analyse variations with regards to learning styles. It will be an interesting piece of information for the universities focusing on executive management courses.

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