



Contents lists available at ScienceDirect

# Journal of the Anatomical Society of India

journal homepage: [www.elsevier.com/locate/jasi](http://www.elsevier.com/locate/jasi)



## Learning style and teaching methodology preferences of dental students

R. Singh<sup>a,b,\*</sup>, N. Gupta<sup>a,b</sup>, G. Singh<sup>a,b</sup>

<sup>a</sup> Dept of Pedodontics and Preventive Dentistry, Santosh Dental College & Hospital, Pratap Vihar, Ghaziabad, India

<sup>b</sup> Dentistry, Springers Nature, India

### ARTICLE INFO

#### Article history:

Received 1 February 2017

Accepted 14 February 2017

Available online xxx

#### Keywords:

Learning style

Teaching methodology

VARK

Lectures

Tutorials

### ABSTRACT

The purpose of teaching is to encourage students to learn better so as to provide better knowledge and understanding of subject. Therefore it is also important for a teacher to acquire the different learning styles so as to provide the best education which can be easily understood by the student for better learning. Learning style assessment can be carried out by a Visual Auditory Reading Kinesthetic (VARK) questionnaire which is the most accepted one.

*Aim and objective:* To study the preferred learning style among the 3rd & 4th year dental students & the preference of teaching learning methodology.

*Method:* A cross-sectional study was conducted on 185 dental students of 3rd year & final year. Two questionnaires were used: The VARK questionnaire version 7.1 & a second questionnaire were prepared to obtain the basic demographic information of the student as well as the order of preference of teaching methodology.

*Results:* The majority of students had Quadrimodal VARK preference followed by Unimodal learning style. The kinesthetic learning style was the most predominant. The most preferred teaching methodology was Practical/Clinical which was in accordance with the results obtained from the VARK study.

*Conclusion:* Problem based teaching methods are currently being more preferred over traditional methods. No one single tailor-made teaching approach is superior to other teaching methods, no matter how good the teacher is, therefore, a more individualistic approach should be followed taking students preference of teaching method and understanding into consideration. More of student and teacher orientation programs are required to create a friendly learning environment for all.

© 2017 Published by Elsevier, a division of RELX India, Pvt. Ltd on behalf of Anatomical Society of India.

### 1. Introduction

A general concept is that individuals differ in their learning style. Learning styles refer to a range of theories that account for difference in an individual's style of learning. The concept of individual learning style became popular in 1970's and since then has greatly influenced education despite criticism received from some researchers along the way.

Learning style is an individual's way of receiving, perceiving, processing and retaining information for future use. Various educational researchers have hypothesized ways to include learning style theory in teaching methodology. Proponents recommend that we as educators assess the learning styles of

our students and try and adapt our classroom methods to best fit each students learning style.<sup>1</sup>

Various models have been developed over time to explain different learning styles. These models were further divided by researchers Claxton and Murell 1987 into broader subgroups: personality models, information processing models, social-interaction models, and instructional preferences.<sup>2</sup>

The personality model examines a person's personality traits or characteristics. Information processing model focuses on a person's way of taking in information and further processing it. The social interaction model determines as to how a person reacts or behave in a particular environment or classroom. Finally, the instruction preference model segregates students on the way in which the best receive or acquire information as to how the student learns best by listening, reading, visualizing or experiencing. We as educators need to concern ourselves with this method as to best provide information to students for their betterment. There are various learning style inventories available. The VARK

\* Corresponding author at: Dept of Pedodontics and Preventive Dentistry, Santosh Dental College & Hospital, Pratap Vihar, Ghaziabad, NCR, India.  
E-mail address: [drsinghrashi@gmail.com](mailto:drsinghrashi@gmail.com) (R. Singh).

<http://dx.doi.org/10.1016/j.jasi.2017.02.009>

0003-2778/© 2017 Published by Elsevier, a division of RELX India, Pvt. Ltd on behalf of Anatomical Society of India.

inventory is one such instructional preference model. VARK was developed by Neil D. Fleming in 1987 in order to improve faculty and student learning development. It is one of the most common and widely used categorizations of the various types of learning styles.<sup>1</sup>

VARK stands for visual (V), aural (A), read/write (R) and kinesthetic (K) learning modalities. It is a questionnaire designed to determine a person's preference for sensory modalities. Visual is for learners who can process information best when they can see it. Auditory are learners who like to hear information. Readers and writers prefer to see written letters. The kinesthetic learners like to acquire information through experience and practice.<sup>1</sup>

Various instructional methods are used for teaching dental students which include lectures, tutorials, and practical/clinical and self study.

The students' preference for different learning methods usually depend more on familiarity and availability of method and more positive outcome based. Student learning style is one of the least explored fields of more beneficial outcomes. The information gained on basis of learning styles would further help students formulate more appropriate learning strategies for further study. Most of studies based on this have been carried out in the medical arena.<sup>3</sup> It is a vastly unexplored and underutilized field. However none of such studies have been carried out in the dental arena and further not much studies have correlated these with learning preferences of the students. Therefore the present study was designed to understand the learning style preferences of dental students and further correlate it with learning preferences of teaching methods.

## 2. Material and methods

This study was conducted on third and fourth year clinical dental students in Santosh Dental College & Hospital, Pratap Vihar Ghaziabad, NCR Delhi. A total of 185 students (37% males & 53% females) participated in the study. Two separate questionnaires were filled by the students. The first questionnaire was VARK questionnaire latest version 7.1 used to determine learning style pattern of students. The second questionnaire was used to obtain general demographic information i.e. name, age, gender as well as their preferences toward various teaching methodologies and their order of preference.

The VARK questionnaire was first developed by Neil Fleming in 1987, Christchurch, New Zealand. It was the first of series of systematic questionnaires with help sheets for students, teachers, employees, customers, suppliers and others to use in their own way. It is a short simple inventory with dimensions well understood and its applications are practical. It tells you something about yourself which you may or may not know. It helps you understand people and assists you and them to understand situations more effectively.

VARK questionnaire consisted of 13 questions with four options each and respondents could choose more than one options if they preferred. The VARK questionnaire was chosen for the present study because it was the most popular model and also because of its simplicity and reliability. It addressed the issue of learning styles, was open to modification, helped formulate learning strategies and finally had different strategy for each style.

The student who participated voluntarily in the study were asked to fill the VARK questionnaire of learning style preference (7.1) and the scores were noted and also the preferred learning style. The data obtained was filled in the second questionnaire along with their descriptive data and preference of teaching methods.

Descriptive statistics was used to analyze the student preference of various VARK components, as well as their preferences for

various learning methods. Student t-test was utilized to compare the VARK scores for males and females. Pearson's correlation coefficient was employed to analyze the correlation between learning style patterns and various teaching methodologies.

## 3. Results

In the present study according to VARK it was found that most students preferred a multimodal learning style; quadrimodal was most preferred 48% followed by unimodal 25.7%, bimodal (16.3%) & least preferred being trimodal (10%) (Graph 1).

The learning preferences of females were more varied compared to that of males: Quadrimodal was the most preferred learning style in females with kinesthetic preference being dominant over others whereas males usually had a more bimodal preference.

Kinesthetic was the most preferred learning style with the highest score of 10 and an average score of 6 followed by visual and aural which showed a highest score of 9 and an average score of 4 and the least preferred of all the four was read & write had an highest score of 7.

There was not much trimodal preference. Quadrimodal was followed by bimodal in which kinesthetic with visual was highest followed by kinesthetic with aural. This was followed by unimodal: kinesthetic followed by visual, then aural and last being read and write.

The learning methodologies were divided into: lectures, tutorials, clinical/practical and self study. Based on students preference clinicals and practical's were the most preferred method of teaching followed by lectures. Self study was the least preferred (Table 1).

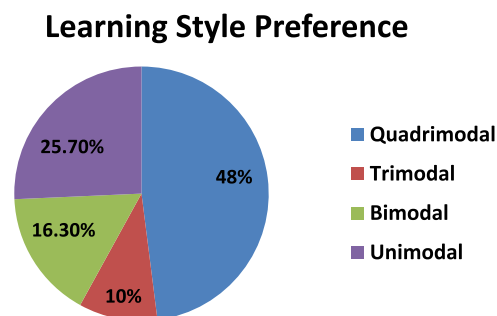
Out of the total no of students (38.2%) preferred clinical/practical as 1st choice followed by lectures as second choice (32.4%), tutorials ranked third with (29.4%) and 58.8% voted for self study as the last choice when asked to rank in order of preference (Graphs 2–5)

Based upon the preference in methods of study 54.5% had a quadrimodal approach utilizing all four modes followed a bimodal or trimodal approach both rating about 21.2% and the least being unimodal.

Correlation of leaning styles with modes of study was done, the results showed that kinesthetic was the most preferred VARK mode and practical/clinical was the most preferred in the methods of study. A positive Pearson's correlation was found between the two.

## 4. Discussion

Current education system pays more emphasis on the way students are being taught than on the way they should be according to their teaching preference. The VARK questionnaire



Graph 1. Learning Style Preference.

Download English Version:

<https://daneshyari.com/en/article/5639973>

Download Persian Version:

<https://daneshyari.com/article/5639973>

[Daneshyari.com](https://daneshyari.com)