

*The teaching learning process of the institution nurtures creativity, analytical skills and innovation among students*

**Teaching Learning Methods for Undergraduates that nurtures analytical skills**

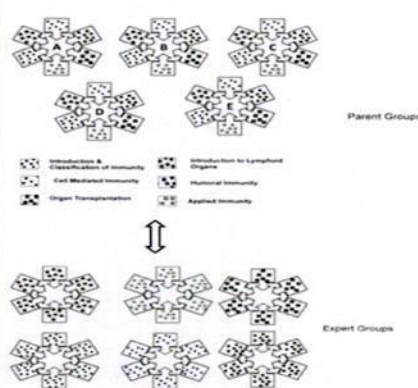
*Department of Physiology*

<b>Name of the Method</b>	<b><i>Jigsaw technique</i></b>
<b>Objectives of the Method</b>	To facilitate active learning among the students
<b>Competencies/Topics addressed by the method</b>	<p><b>PY 2.10</b> Define and classify different types of immunity. Describe the development of immunity and its regulation.</p> <p><b>PY 10.17</b> Describe and discuss functional anatomy of eye, physiology of image formation, physiology of vision including colour vision, refractive errors, colour blindness, physiology of pupil and light reflex</p>
<b>Short description of the method</b>	<p>A physiological concept is chosen. It is divided into sub-topics. The students are divided into parent groups, where each student in the parent group is assigned a sub-topic of the chosen concept. Then expert groups will be temporarily formed by having one student from each parent group join other students assigned with the same sub-topic. After discussion among the expert groups, the students will return to their original parent groups. Each student in the parent-group will give a presentation of their concerned sub-topic. As a result, every student will get a holistic view of the chosen physiological concept. Finally, there will be a presentation to the entire batch of students</p>
<b>Any kind of assessment done with the use of the method (Ex: Pretest/ Posttest)</b>	Nil

Dr. KAGNE. R.N  
 DEAN  
 SRI MANAKULA VINAYAGAR  
 MEDICAL COLLEGE & HOSPITAL  
 KALITHEERTHALKUPPAM,  
 PUDUCHERRY-605107.

**Feedback obtained from the students and Faculty regarding the method**  
(Mention the key points, up to 5)

Enhanced Concept understanding (5)  
Referral habits (10), Teaching habits (3)  
Categorization of the topic under study (5)  
Integration of learnt information with other subjects (4), Time consuming (15)  
Took time to adapt to this technique (10)



**Figure 1 : Formation of Parent groups and Expert Groups in the Jigsaw Technique**

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#### Research article

#### Jigsaw technique as an active learning strategy in Physiology for I MBBS Students

K. Soundarya<sup>1</sup>, M. Senthilvelou<sup>2</sup>, Shivayyappa S. Telu<sup>3</sup>, V. Deepika<sup>4</sup>, K. Senthil Selvi<sup>5</sup>, S. Mangal Mangalavalli<sup>6</sup>

<sup>1</sup>Professor, <sup>2</sup>Professor and Head, <sup>3</sup>Associate Professor, <sup>4</sup>Assistant Professor, Department of Physiology, Sri Manakula Vinayagar Medical College and Hospital, Puducherry, India

<sup>5</sup>Assistant Professor, Department of Physiology, AIDIS, Mangaluru, Andhra Pradesh, India

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Corresponding author: K. Soundarya. Email: dsoundarya@gmail.com

#### ABSTRACT

**Introduction and Aim:** Innovative learning strategies may be introduced along with the conventional methods to enhance active learning by the students. Jigsaw technique is a co-operative learning method, where students play a dual role as an active learner and teacher. Hence the present study aimed to introduce and assess the acceptability of the Jigsaw technique as an active learning strategy in Physiology for first year medical undergraduates.

**Methods:** Five parent groups were formed from 30 first year medical undergraduates with six members in each group. Each member in the parent group was allotted a sub-topic in "Immunity". Members with the same sub-topic joined to form the expert groups. After three sessions of face-face and asynchronous online discussions spanning a duration of three weeks, facilitated by faculty, the students returned to their parent groups for peer teaching and presentation. The content of the presentation was evaluated by faculty with help of a checklist. Feedback questionnaire was administered to both the students and the faculty to assess their perceptions and acceptability of Jigsaw technique.

**Results:** Jigsaw method was addressed as an innovative method that favored active participation, high interaction and promoted communication skills and referral habits among the students. However, it was time consuming, and students expressed difficulty in adapting to the technique.

**Conclusion:** Students consider the learning process enjoyable and effective with Jigsaw technique in Physiology. However, owing to the time consumption and its complexity it may be sparingly used in routine curriculum.

**Keywords:** Active learning, jigsaw technique, medical education, physiology.



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#### Original Article

### UNCLE (Unconventional Learning Exercises): An Innovative approach towards active learning in Physiology for I MBBS students

Krishnamurthy Soundarya<sup>1</sup>, Deepika Velusami<sup>2</sup>

<sup>1</sup>Department of Physiology, Sri Manakula Vinayagar Medical College and Hospital, Puducherry, India.



**\*Corresponding author:**  
Deepika Velusami,  
Department of Physiology,  
Sri Manakula Vinayagar  
Medical College and Hospital,  
Puducherry, India.  
deepy44@gmail.com

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#### ABSTRACT

**Objectives:** Physiology is a constantly evolving subject, hence, it demands participation from the students for effective learning. In the current trend of medical education, medical teachers need to accumulate a good knowledge of efficient "Teaching-Learning Methods" that enable active student participation. "UNCLE- Unconventional Learning Exercises" is one such approach that facilitates learning through discussions with colleagues and helps in acquiring facts through "Participatory learning" rather than through rote memory. The present study aimed to assess the effectiveness of an active learning method "UNCLE" in learning physiology among I MBBS students.

**Materials and Methods:** Thirty I MBBS students were exposed to "Unconventional Learning Exercises" in small groups during the regular tutorial sessions. The study tools used for "UNCLE" were worksheets with critical thinking questions and analogies shown in flash cards. Pre- and post-test scores were obtained for the evaluation of their learning. Feedback was obtained from the students to elicit their perception about the effectiveness of the new method.

**Results:** The post-test scores (7.7 ± 1.37) were significantly greater than the pre-test scores (6.24 ± 1.57). The students reported the method to be innovative, interesting, refreshing, and more engaging. They reported that this method enhanced team work and improved their communication skills.

**Conclusion:** UNCLE may be considered an effective active learning strategy in physiology for I MBBS students.

**Keywords:** Active learning, Physiology, Unconventional learning exercises

**Dr. KAGNE. R.N**

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MEDICAL COLLEGE & HOSPITAL  
KALTHEERTHAKUPPAM,  
PUDUCHERRY-605107.



## Department of Dermatology

<b>Name of the Method</b>	<b>Image based teaching and assessment</b>
<b>Objectives of the Method</b>	To interpret the images
<b>Competencies/Topics addressed by the method</b>	To identify and diagnose common diseases from the image bank.
<b>Short description of the method</b>	Clinical posting is carried out through images. Images are taken from the department image bank. For each class, 10 to 15 images are selected covering the clinical, complications and laboratorial aspects. At the end of posting, computer assisted - OSCE is conducted in the digital library of our institutions.
<b>Any kind of assessment done with the use of the method (Ex: Pretest/ Posttest)</b>	MCQ based pre test & post test Computer assisted OSCE (CA - OSCE)
<b>Feedback obtained from the students and Faculty regarding the method (Mention the key points, up to 5)</b>	Students were more attentive in class CA - OSCE is less stressful Objective way of assessment

### Concise Communication

#### Image Based Teaching and Computer Assisted – Image Based Assessment for Undergraduate Medical Students in Dermatology Clinics amidst the COVID-19 Pandemic: Students' Perspectives

The emergence and rapid escalation of the coronavirus disease-19 (COVID-19) pandemic have caused a global disruption in medical education. A major challenge for the medical faculty in this pandemic is the inability to reproduce the experience of real-time clinical exposure to patients for the students. To overcome the shortcomings, such as lockdown restrictions and reduced outpatient consultations, our department created an Image-Based Teaching (IBT) module followed by Computer-Assisted Image-Based Assessment (CA-IBA) at the end of their clinical rotations. We have evaluated the perceptions of undergraduates about the IBT and CA-IBA. This cross-sectional pilot study was conducted among 18 final-year undergraduate medical students in the Department of Dermatology at Sri Manakula Vinayagar Medical College and Hospital, Puducherry.

On the week before the clinical posting in our department faculty meeting was held. For each clinical topic, 10-15 images were selected from our department image bank to cover the varied clinical presentations of each disease, diagnostic signs, and representative images of the laboratory procedures were shared by the faculty. The findings in images were marked with annotations such as arrows and circles for better understanding. In a fog-ventilated hall, clinical sessions were conducted over 2 weeks using the selected images in an interactive manner.

At the end of the clinical posting, each student was allotted a personal desktop computer in our digital library preloaded with a Microsoft PowerPoint presentation containing 10 image-based clinical questions (Figure 1). Each image was

accompanied by a set of five questions, giving equal weightage of marks to each of them. A maximum score of 100 was allotted with 10 marks for each question. The examination answer sheets were evaluated by two examiners separately and the mean value was taken as the final mark.

A feedback questionnaire covering various aspects of IBT was collected from the students maintaining their anonymity and responses were recorded using the 5-point Likert scale. The questionnaire had good reliability (Cronbach's alpha = 0.72). The data were entered in MS Excel and analyzed using the SPSS version 24 software (SPSS Inc., Chicago, IL, USA) package. The overall response to the IBT was positive and encouraging. The feedback received is documented in Table 1.

Clinical Dermatology is a visually oriented field, which can be easily taught and assessed through images. However, there is a paucity of literature regarding the use of images in undergraduate Dermatology teaching and assessment in India.<sup>1</sup> In our department, previously Kumar et al.<sup>2</sup> had studied the role of clinical images as a teaching tool supplementing the conventional clinical teaching in the dermatology specialty. A significant improvement in the student's knowledge and skills was observed after the introduction of clinical images as a teaching tool in their study. Fawcett et al.<sup>3</sup> demonstrated improved diagnostic skills in skin lesions among family medicine residents, when they used digital photographs made into posters as a mode of teaching. Kumar et al.<sup>2</sup> reported longer retention of learning and better

Vijayashankar Palanisappan, Keerthi Subramanian, Kalagarasani Kartikeyan, Raghavan Sundhara<sup>1</sup>  
Department of Dermatology, Venereology and Leprosy, and Communicable Diseases, Sri Manakula Vinayagar Medical College and Hospital, Puducherry, India

Address for correspondence: Dr. Raghavan Sundhara, Department of Dermatology, Venereology and Leprosy, Sri Manakula Vinayagar Medical College and Hospital, Puducherry - 605 007, India. E-mail: raghsundhara@smv.ac.in



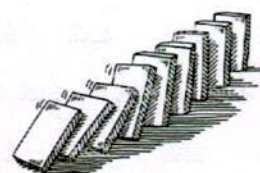
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For reprint requests, please contact: raghsundhara@smv.ac.in

**Dr. KAGNE. R.N.**  
DEAN  
SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSPITAL  
KALITHEERTHALKUPPAM,  
PUDUCHERRY-605107.

<b>Name of the Method</b>	<b><i>Unconventional Learning Exercises (UNCLE)</i></b>
<b>Objectives of the Method</b>	To facilitate active learning among the students
<b>Competencies/Topics addressed by the method</b>	<p>PY 1.1 Describe the structure and functions of a mammalian cell</p> <p>PY 1.2 Describe and discuss the principles of homeostasis</p> <p>PY 1.5 Describe and discuss transport mechanisms across cell membranes</p>
<b>Short description of the method</b>	<p>Students were exposed to unconventional learning exercises through worksheets with critical thinking questions and flashcards with analogies.</p> <p>It is a form of collaborative learning exercise, where the students work in small groups</p>
<b>Any kind of assessment done with the use of the method (Ex: Pretest/ Posttest)</b>	<p>Pre Test score - <math>6.24 \pm 1.57</math></p> <p>Post test score - <math>7.7 \pm 1.37</math></p>
<b>Feedback obtained from the students and Faculty regarding the method (Mention the key points, up to 5)</b>	<ul style="list-style-type: none"> <li>- Favoured long term retention</li> <li>- Innovative, interesting and easy learning, quick, interactive learning</li> <li>- Enjoyed the learning process</li> <li>- Refreshing knowledge</li> <li>- Hidden points in the book are discovered</li> </ul>



Compare this analogy to positive feedback mechanism

**Dr. KAGNE. R.N**  
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**SRI MANAKULA VINAYAGAR**  
**MEDICAL COLLEGE & HOSPITAL**  
**KALITHEERTHALKUPPAM,**  
**PUDUCHERRY-605107**



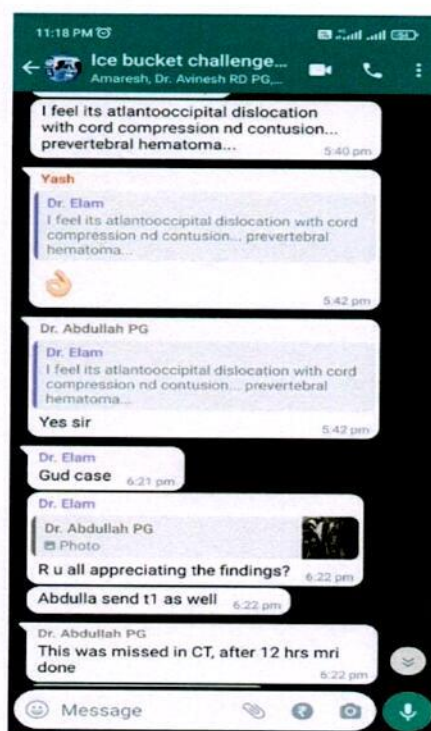
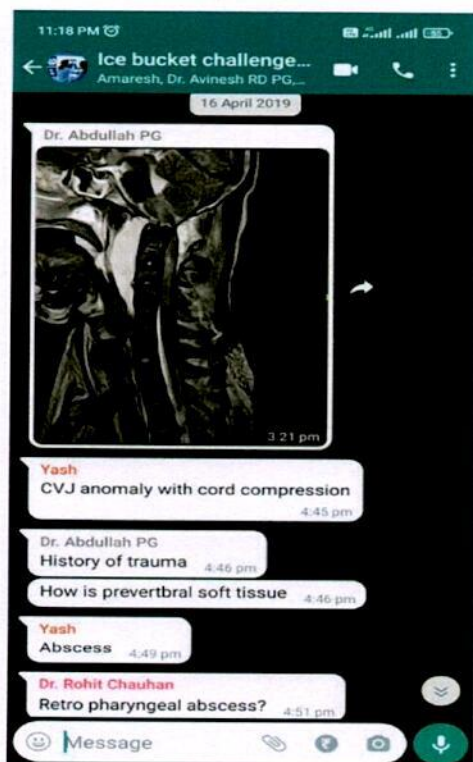
**Department of Radiodiagnosis**

<b>Name of the Method</b>	<b><i>Quiz Box for Undergraduates and Postgraduates.</i></b>
<b>Objectives of the Method</b>	To interpret the image displayed in the quiz box.
<b>Competencies/Topics addressed by the method</b>	To assess the skill in picking up imaging findings.
<b>Short description of the method</b>	<ul style="list-style-type: none"> <li>• X-ray/CT image is displayed in the quiz box placed in the ground floor (Hospital block), on weekly basis.</li> <li>• Answers can be dropped in the adjacent drop box.</li> <li>• Prize for winners are given the yearly Roentgen day celebration.</li> </ul>
<b>Any kind of assessment done with the use of the method (Ex: Pretest/ Posttest)</b>	<ul style="list-style-type: none"> <li>• Prize for winners are given the yearly Roentgen day celebration.</li> </ul>
<b>Feedback obtained from the students and Faculty regarding the method (Mention the key points, up to 5)</b>	<ul style="list-style-type: none"> <li>• Increases the recalling capacity</li> <li>• Thought provoking</li> </ul>



Dr. KAGNE. R.N  
DEAN  
SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSPITAL  
KADTHEERTHALKUPPAM,  
PUDUCHERRY-605107.

<b>Name of the Method</b>	<b>Online PG quiz</b>
<b>Objectives of the Method</b>	To assess the ability of the post graduates in interpreting images.
<b>Competencies/Topics addressed by the method</b>	The topics address various imaging systems
<b>Short description of the method</b>	Whats app group has been created in which radiological images are uploaded; Post graduates are encouraged to send the answers, following which the findings and diagnosis would be discussed.
<b>Any kind of assessment done with the use of the method (Ex: Pretest/ Posttest)</b>	No
<b>Feedback obtained from the students and Faculty regarding the method (Mention the key points, up to 5)</b>	<ul style="list-style-type: none"> <li>• The post graduates are exposed to various sorts of imaging findings and diagnosis.</li> <li>• Thought provoking</li> </ul>



Dr. KAGNE. R.N  
DEAN  
SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSPITAL  
KATTHEERTHAKUPPAM,  
PUDUCHERRY-605 107.



<b>Name of the Method</b>	<b><i>Concept Mapping</i></b>
<b>Objectives of the Method</b>	To explain the rule to be followed at the PG Quiz
<b>Competencies/Topics addressed by the method</b>	For case of understanding of rules of the quiz
<b>Short description of the method</b>	Inter-college PG quiz was conducted on 06.11.2021 at MIT auditorium, Sri Manakula Vinayagar Medical College and Hospital. The concept mapping was used to in order to explain the rule to be followed in the quiz, step by step.
<b>Any kind of assessment done with the use of the method (Ex: Pretest/ Posttest)</b>	No
<b>Feedback obtained from the students and Faculty regarding the method (Mention the key points, up to 5)</b>	Ease of understanding of the rules of the quiz.




**Dr. KAGNE. R.N**  
 DEAN  
 SRI MANAKULA VINAYAGAR  
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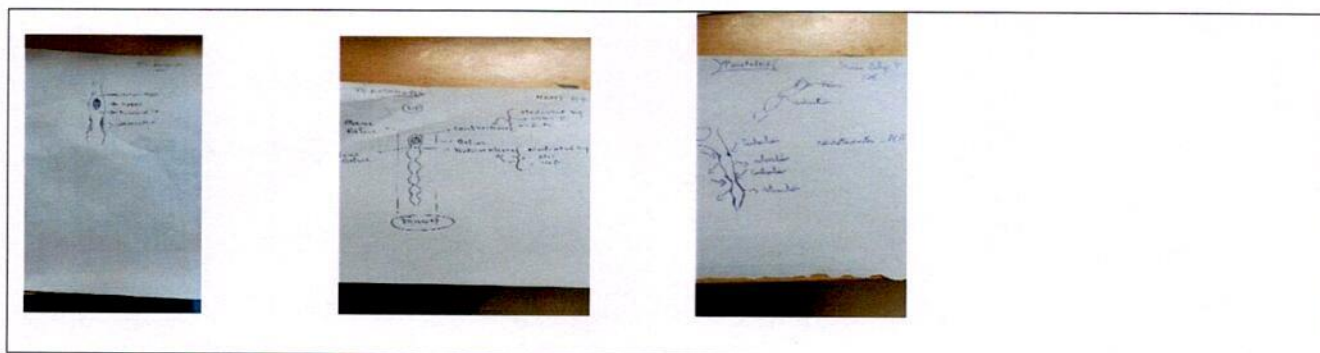


### *Department of Physiology*

<b>Name of the method</b>	<i>Picturing to learn</i>
<b>Objectives of the method</b>	To make the students to get a deeper learning in the class and also to assess the reach of our teaching to the students
<b>Competencies/Topics addressed by the method</b>	Functional anatomy of heart, Mechanism of action of Insulin Peristalsis
<b>Short description of the method</b>	During the teaching of the topic in the lecture class, the concept was explained without showing any related picture. After explanation the students were asked to depict the concept in the form of a picture by drawing in a paper. Correct diagram was shown after that for reference and correction
<b>Assessment done</b>	<p>Based on the correct conceptions and mis conceptions in the diagram the percentage of marks were given for the topic "Route of blood flow through heart and the blood vessels attached to it.</p> <p>Only 6 students out of 135 students' drawing were more than 90% similar to correct diagram. Two students' drawings were completely wrong. Majority of the students (n=34) depicted 80 – 90 % of the correct diagram. 33 students scores were between 60-70%. 24 and 26 students scored 50 – 60% and 70-80% respectively. 9 students' drawings showed that they conceived below 50% of the explanation</p>
<b>Feedback obtained from the students and Faculty regarding the method</b>	Feedback was not obtained

  
**Dr. KAGNE. R.N**  
 DEAN  
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 MEDICAL COLLEGE & HOSPITAL  
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<b>Name of the Method</b>	<b><i>Concept Mapping &amp; Mind Mapping</i></b>
<b>Objectives of the Method</b>	To enrich the students' understanding of a particular concept
<b>Competencies/Topics addressed by the method</b>	<p><b>PY 2.10</b> Define and classify different types of immunity. Describe the development of immunity and its regulation.</p> <p><b>PY 5.1</b> Describe the functional anatomy of heart including chambers, sounds; and Pacemaker tissue and conducting system.</p>
<b>Short description of the method</b>	<p>Concept map is a graphic organizer that enables the students to visualize the concepts in a hierarchical fashion and facilitate their understanding of the relationship between the concepts. During the lecture class, the students are instructed to design a concept map, on the difficult concepts of a particular topic.</p> <p>Students were encouraged to utilise softwares like freemind app</p>

### *Department of Anatomy*

<b>Name of the method</b>	<b><i>Concept mapping</i></b>
<b>Objective of the method</b>	To impart better understanding of the cellular components of histology
<b>Topics addressed by this method</b>	Histology (general and systemic)

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DEAN  
SRI MANAKULA VINAYAGAR  
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<b>Short description of the method</b>	The class starts with a single topic say "cartilage" it is divided by lines into types, cellular components and are further linked to other components as the discussion proceeds. This graphical linking of concepts reduces the monotony of the lecture and gives a better overview of the subject content
<b>Assessment</b>	Multiple choice questions
<b>Feedback</b>	1) Useful during the exam revision

**Department of Paediatrics**

<b>Name of the method</b>	<i>Spellbee competition</i>
<b>Objective of the method</b>	To explain the spellings and meanings of medical terminology and conditions in Neonatology
<b>Topics addressed by this method</b>	<p>PE20.1 Define the common neonatal nomenclatures including the classification and describe the characteristics of a Normal Term Neonate and High Risk Neonates</p> <p>PE20.6 Discuss the etiology, clinical features and management of Birth asphyxia</p> <p>PE20.7 Explain the follow up care for neonates including Breast Feeding, Temperature maintenance, immunization, importance of growth monitoring and red flags</p> <p>PE20.8 Discuss the etiology, clinical features and management of respiratory distress in New born including meconium aspiration and transient tachypnoea of newborn</p> <p>PE20.10 Discuss the etiology, clinical features and management of Hemorrhagic disease of New born</p> <p>PE20.12 Discuss the temperature regulation in neonates, clinical features and management of Neonatal Hypothermia</p> <p>PE20.13 Discuss the temperature regulation in neonates, clinical features and management of Neonatal Hypoglycemia</p> <p>PE20.15 Discuss the etiology, clinical features and management of Neonatal seizures</p> <p>PE20.16 Discuss the etiology, clinical features and management of Neonatal Sepsis</p>

Dr. KAGNE. R.N  
DEAN  
SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSPITAL  
KALITHEERTHAKUPPAM,  
PUDUCHERRY-605107




<b>Short description of the method</b>	<p>As a part of National Newborn Week celebration by Department of Pediatrics, Sri Manakula Vinayagar Medical College and Hospital, Puducherry conducted a "SPELLBEE COMPETITION" for final year MBBS students. This was done considering the fact that due attention is not being paid by the students to the spelling of medical terms and names. Also, this was an interesting way to explain the meaning of various conditions in Neonatology. Initially 10 students had given their names for participation and the competition was started with them facing the audience. The terms were displayed using a PowerPoint presentation which was visible to the audience, who were enthusiastically watching. The students who got the spellings wrong were eliminated one by one. The meaning of terms were explained by the moderator of the session (Dr.T.Preethi, Associate Professor), which encompassed a variety of "must know" topics as part of CBME curriculum under Neonatology subdivision. The session was found to be so interesting by the students that another two sets of 10 students each also requested on spot and the competition went on.</p> <p>The winner N. Jayapraba and runner up Aishwarya Shri M, were awarded their prizes during Valedictory function held at the end of the Newborn week celebration.</p>
<b>Feedback</b>	<p>Feedback in the form of questionnaire was obtained and the students scored high for this format of teaching which was found to be interesting and they wanted more similar, novel teaching methods.</p>



**Dr. KAGNE. R.N**  
DEAN  
SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSPITAL  
KALITHEERTHAKUPPAM,  
PUDUCHERRY-605107

*Department of Anatomy*

<b>Name of the method</b>	<b><i>Animation based teaching</i></b>
<b>Objective of the method</b>	To impart better three-dimensional orientation and understanding of the anatomical structures
<b>Topics addressed by this method</b>	Inguinal canal Pterygopalatine fossa
<b>Short description of the method</b>	Based on the rough sketches, schematic animations were designed in Microsoft PowerPoint software using Mayer's multimedia principles to minimize the intrinsic cognitive load. To provide depth perception to the animation, colour transparency variations in the shapes or dotted lines were used. Arrow tools were used to represent the direction or path of the anatomical structures. The topographical orientation to the animation was explained using arrows on the top right corner of the slide. Important terms related to the class were introduced before the animation. The various components of the animation were brought on sequentially and the related concepts were explained to augment the visual content.
<b>Assessment</b>	Multiple choice questions
<b>Feedback</b>	1) Complicated concepts were explained in a simple and understandable way, 2) Less monotonous and felt less sleepy

  
**Dr. KAGNE. R.N**  
DEAN  
SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSPITAL  
KADUTHURTHALKUPPAM,  
PUDUCHERRY-605107.





# The influence of learning style in understanding analogies and 2D animations in embryology course

Suresh Narayanan<sup>1</sup>, Vimala Ananth<sup>2</sup>

<sup>1</sup>Department of Anatomy, Sri Manakula Vinayagar Medical College and Hospital, Puducherry, <sup>2</sup>Department of Pharmacology, Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Karaikal, India

**Abstract:** Undergraduate students struggle to comprehend embryology because of its dynamic nature. Studies have recommended using a combination of teaching methods to match the student's learning style. But there has been no study to describe the effect of such teaching strategy over the different types of learners. In the present study, an attempt has been made to teach embryology using the combination of analogies and simple 2D animations made with Microsoft powerpoint software. The objective of the study is to estimate the difference in academic improvement and perception scale between the different types of learners after introducing analogies and 2D animation in a lecture environment. Based on Visual, Aural, Read/Write, and Kinesthetic (VARK) scoring system the learners were grouped into unimodal and multimodal learners. There was significant improvement in post-test score among the unimodal ( $P<0.001$ ) and multimodal learners ( $P<0.001$ ). When the post-test score was compared between the two groups, the multimodal learners performed better than the unimodal learners ( $P=0.018$ ). But there was no difference in the perception of animations and analogies and long-term assessment between the groups. The multimodal learners performed better than unimodal learners in short term recollection, but in long term retention of knowledge the varied learning style didn't influence its outcome.

**Key words:** 2D animations, Analogy, Learning style, Student's perception

## Department of Biochemistry

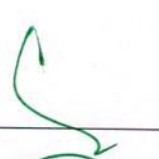
Name of the Method	<i>Rewarding system in Learning process</i>
Objectives of the method	To address the problem of low scores in very short answer questions (VSAQ)
Competencies / Topics addressed by the method	Minerals
Short description of the method	The VSAQ in the concerned topic was displayed on the notice board, a week prior to the day of activity. Students were instructed to prepare answers for the questions displayed and they were informed about rewards they get by answering the questions. On the day of activity the students were divided into small groups. All the students were given equal opportunity to answer the questions. Based on the performance, students were rewarded with marks ranging from -2 to +2. These marks scored by the students were included in IA.
Any kind of assessment done with the use of the method (Pretest / Posttest)	No
Feedback obtained from the students and Faculty regarding the method (Mention the key points, upto 5)	Feedback obtained. Helped the students to complete the topic for the exam. Scores improved in VSAQ Strengthening of knowledge in desirable to areas was effectively done

Dr. KAGNE. R.N.  
DEAN  
SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSPITAL  
KARUTHIERTHALKUPPAM,  
PUDUCHERRY-605107.

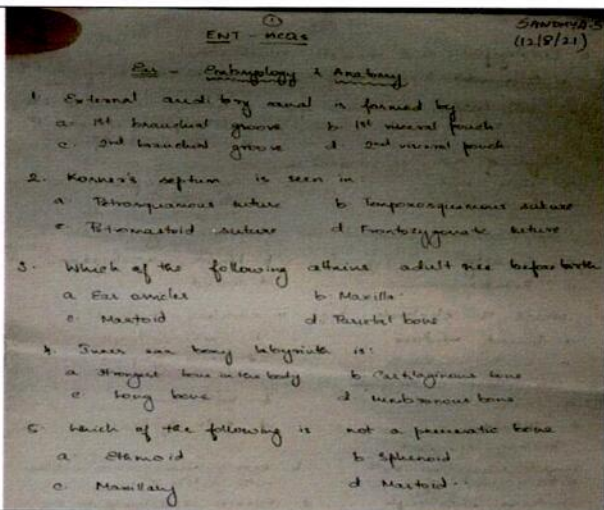
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**Department of Otorhinolaryngology**

<b>Name of the Method</b>	<b><i>MCQ Framing by Interns</i></b>
<b>Objectives of the Method</b>	<ul style="list-style-type: none"> <li>- To encourage the CRRIs in advanced learning</li> <li>- To enhance MCQ answering skills among the interns</li> <li>- To encourage interns' preparation for upcoming entrance exams</li> <li>- To increase involvement and interest in ENT subject among interns</li> </ul>
<b>Competencies/Topics addressed by the method</b>	<ul style="list-style-type: none"> <li>- MCQs in ENT</li> </ul>
<b>Short description of the method</b>	<ul style="list-style-type: none"> <li>- CRRIs posted in ENT are encouraged to write and submit MCQ questions on particular topics during their 2 weeks posting in ENT</li> </ul>

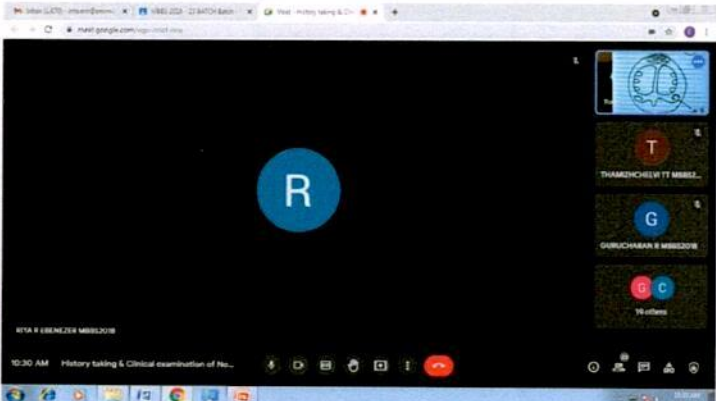
  
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 DEAN  
 SRI MANAKULA VINAYAGAR  
 MEDICAL COLLEGE & HOSPITAL  
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 PUDUCHERRY-605107.



	 <p>ENT - MCQs</p> <p>1. External and bony canal is formed by  a. 1st branchial groove      b. 1st visceral pouch  c. 2nd branchial groove      d. 2nd visceral pouch</p> <p>2. Kerner's septum is seen in:  a. Tympanic membrane      b. Tympanic membrane  c. Tympanic membrane      d. Tympanic membrane</p> <p>3. Which of the following attains adult size before birth  a. Ear ossicles      b. Maxilla  c. Mandible      d. Parietal bone</p> <p>4. Sphenoid bone is long bony point is:  a. Sphenoid bone      b. Sphenoid bone  c. Sphenoid bone      d. Sphenoid bone</p> <p>5. Which of the following is not a paranasal bone  a. Sphenoid      b. Sphenoid  c. Mandible      d. Mandible</p>
Any kind of assessment done with the use of the method (Ex: Pretest/ Posttest)	<ul style="list-style-type: none"> <li>- MCQs and answers are discussed and queries are answered by the faculties.</li> </ul>
Feedback obtained from the students and Faculty regarding the method (Mention the key points, up to 5)	<ul style="list-style-type: none"> <li>- Interns felt that MCQs are a good way of preparation for Entrance exams</li> <li>- Posting-related MCQs help to retain the points better</li> <li>- MCQ submission helps in boosting their entrance preparation speed and helps to utilize the time better.</li> </ul>

<b>Name of the Method</b>	<b>Online Class- Interactive Activities during the Class</b>
<b>Objectives of the Method</b>	<ul style="list-style-type: none"> <li>- To break the monotony of the lecture and increase students' interest in the topic</li> <li>- To promote attentive listening among students</li> <li>- To improve diagram drawing and concept understanding</li> </ul>
<b>Competencies/Topics addressed by the method</b>	<ul style="list-style-type: none"> <li>- Post-nasal Examination</li> <li>- Indirect laryngoscopy examination</li> </ul>

Dr. KAGNE, R.N  
DEAN  
SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSP  
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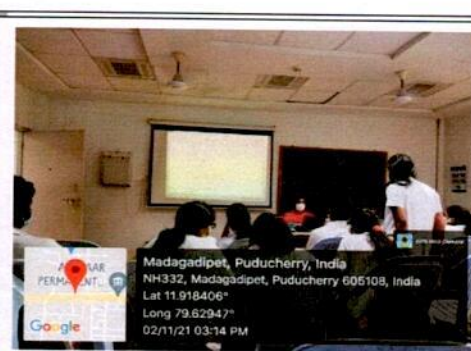
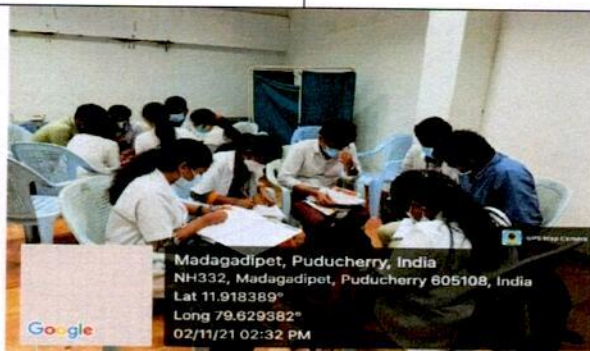
<b>Short description of the method</b>	<ul style="list-style-type: none"> <li>- During the class, students are asked to draw the diagrams with specified findings and share with the class.</li> <li>-</li> </ul> 
<b>Any kind of assessment done with the use of the method (Ex: Pretest/ Posttest)</b>	<ul style="list-style-type: none"> <li>- The diagrams are assessed by the faculty and corrections are explained in the class.</li> </ul>
<b>Feedback obtained from the students and Faculty regarding the method (Mention the key points, up to 5)</b>	<p>Feedbacks are obtained after each class using Google Classroom</p> <ul style="list-style-type: none"> <li>- Drawing the diagram gives better understanding of the topic</li> <li>- Improves the diagram skills</li> <li>- Corrections made are helpful</li> <li>- Increases the attentive span during class</li> </ul>

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Dr. KAGNE. R.N  
DEAN  
SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSPITAL  
KALITHEERTHALKUPPAM,  
PUDUCHERRY-605107.



<b>Name of the method</b>	<b><i>Student - Generated Multiple Choice Questions to Enhance Team – Based Learning</i></b>
<b>Objectives of the method</b>	To provide equal opportunity for all students to participate for an interactive educative session.
<b>Competencies/Topics addressed by the method</b>	<ol style="list-style-type: none"> <li>1. Hyperemesis gravidarum</li> <li>2. Management of a Rh incompatible pregnancy</li> <li>3. Causes for jaundice during pregnancy</li> </ol>
<b>Short description of the method</b>	Topic of discussion was given on previous day and students were instructed to study the topic. Students were divided into small groups. Each group was allotted different topics and each student were asked to prepare two questions in 30 minutes duration. All the multiple-choice questions are combined and quiz was conducted.
<b>Assessment done</b>	No
<b>Feedback obtained from the students and Faculty regarding the method</b>	<ul style="list-style-type: none"> <li>• Students felt that session was more interactive and engaging.</li> <li>• Even the introvert students came out for discussion in this technique.</li> </ul>



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**Dr. KAGNE. R.N**  
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 MEDICAL COLLEGE & HOSPITAL  
 KALITHEERTHALKUPPAM,  
 PUDUCHERRY-605107.

<b>Name of the Method</b>	<b><i>Learning by MCQ preparation</i></b>
<b>Objectives of the method</b>	To acquire in-depth knowledge on the concerned topic To enhance team work
<b>Competencies / Topics addressed by the method</b>	Nutrition, Protein Chemistry, Acid Base balance
<b>Short description of the method</b>	This activity was done in Online mode Students were divided into small groups and topics were allotted. Each group had a facilitator. The students were asked to prepare MCQ on the allotted topic as a team and to be presented in the online stage.
<b>Any kind of assessment done with the use of the method (Pretest / Posttest)</b>	No
<b>Feedback obtained from the students and Faculty regarding the method (Mention the key points, upto 5)</b>	Working as a team enhanced their knowledge Got in-depth knowledge on the topic Knowledge sharing

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**Dr. KAGNE. R.N**  
DEAN  
SRI MANAKULA VINAYAGAR  
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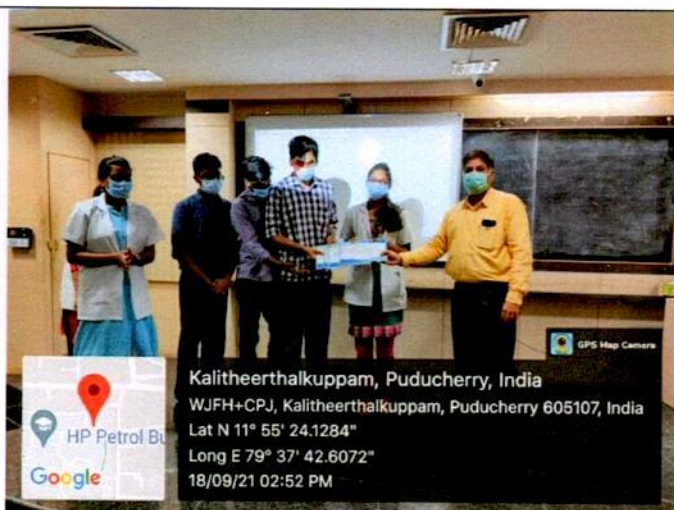
<b>Name of the method</b>	<b><i>Focused Small Group Discussion &amp; Presentation</i></b>
<b>Objectives of the method</b>	<ol style="list-style-type: none"> <li>1. To bring up the students individual participation skills for learning the given topic in a better way.</li> <li>2. To make students improve their responsibility skills.</li> </ol>
<b>Competencies / topics addressed by the method</b>	1. Autonomy, 2. Health care as a right, 3. Toxicology
<b>Short description of the method</b>	Entire class will be divided into small equal groups of 5-6 students per group. Each group will be given one topic or problem based scenario and time will be given to discuss on the given topic with each person being given one sub-topic to prepare. There will be one student acting as a GROUP LEADER and one student acting as a TIME KEEPER who will monitor the group activities. At the end of the given time the students will be presenting on the given topic or scenario in the group.
<b>Any kind of the assessment done with the use of the method (Ex: Pretest / Post-test)</b>	Pre-test and post-test will be done on the given topic before and after the focused small group discussion.
<b>Feedback obtained from the students and faculty regarding the method</b>	<p>Following feedback were obtained both from students and faculties:</p> <ol style="list-style-type: none"> <li>1. Students have expressed that this method have improved their responsibility as they take various roles.</li> <li>2. Also students have overcome the fear of presenting in front of other students.</li> <li>3. Faculties were able to see every students have better retaining of the topic when they get motivated by peer discussion.</li> </ol>
	

**Dr. KAGNE. R.N**  
 DEAN  
 SRI MANAKULA VINAYAGAR  
 MEDICAL COLLEGE & HOSPITAL  
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<b>Name of the method</b>	<b><i>DEBATE</i></b>
<b>Objectives of the method</b>	<ol style="list-style-type: none"> <li>1. To make the students update their knowledge on the current and latest trends in the field of forensic medicine.</li> <li>2. To improve the communication skills of the students.</li> </ol>
<b>Competencies / topics addressed by the method</b>	<ol style="list-style-type: none"> <li>1. Sexual offences</li> <li>2. Recent trends in Forensic medicine</li> <li>3. Legal cases in relation to Forensic Medicine</li> </ol>
<b>Short description of the method</b>	<p>Voluntarily willing students will be asked to pick from the list of topics available for the session one month before itself.</p> <p>Each student will be allotted to faculty to guide in preparing the debate session points.</p> <p>One week before the session students will be given resource materials collected by the debate speakers for reference reading.</p> <p>Along with the topic session debate will be conducted for a specific time period with voting for the best speaker followed by certificate distribution.</p>
<b>Any kind of the assessment done with the use of the method (Ex: Pretest / Post-test)</b>	Assessment is done in the form of pre-test and post-test before and after the session.
<b>Feedback obtained from the students and faculty regarding the method</b>	<p>Following feedback were obtained both from students and faculties:</p> <ol style="list-style-type: none"> <li>1. Students expressed that they felt confidence in themselves after delivering the session.</li> <li>2. They were able to get a 360 picture about the various issues in the given topic.</li> <li>3. Faculties were able to find out to what extent a student can go in depth to learn the trends in the given topic.</li> </ol>

  
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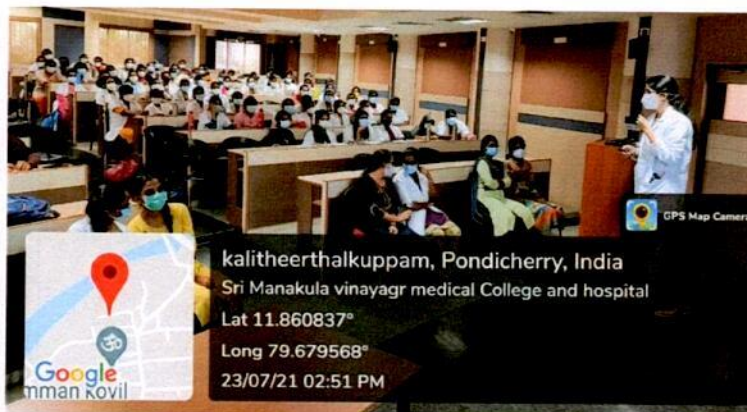




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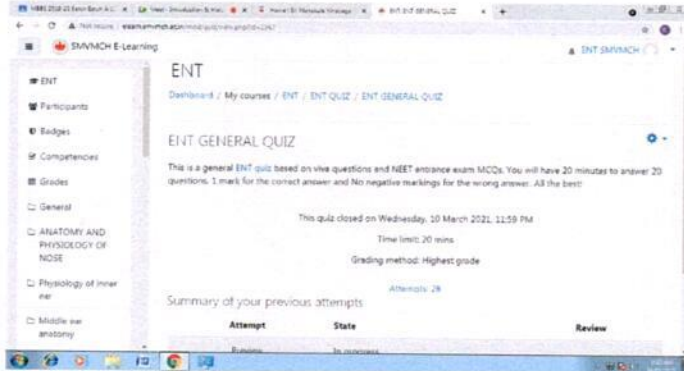
**Department of Otorhinolaryngology**

<b>Name of the Method</b>	<b>Quiz</b>
<b>Objectives of the Method</b>	<ul style="list-style-type: none"> <li>- To encourage the students in advanced learning</li> <li>- To enhance MCQ answering skills among the students</li> </ul> <p>To enhance students' interest in the subject</p>
<b>Competencies/Topics addressed by the method</b>	Rhinology
<b>Short description of the method</b>	<ul style="list-style-type: none"> <li>- This was a quiz conducted on Rhinology</li> <li>- Prelims were conducted in the theory class, and best 4 teams were selected</li> <li>- Quiz was conducted based on MCQs and Images</li> <li>- Audience questions were also included to enhance participation of rest of the students</li> </ul>
<b>Any kind of assessment done with the use of the method (Ex: Pretest/ Posttest)</b>	<ul style="list-style-type: none"> <li>- Preliminary responses were corrected and correct answers were discussed</li> </ul> <p>Best 1<sup>st</sup> and 2<sup>nd</sup> teams were selected based on the scores.</p>
<b>Feedback obtained from the students and Faculty regarding the method (Mention the key points, up to 5)</b>	<ul style="list-style-type: none"> <li>- Students felt Quiz was helpful for them in understanding Rhinology better</li> <li>- MCQ questions were very helpful</li> <li>- More time was desired for preparation for quiz</li> </ul> <p>Students want more quiz programs to be conducted, on frequent intervals</p>



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MANAKULA VINAYAGAR  
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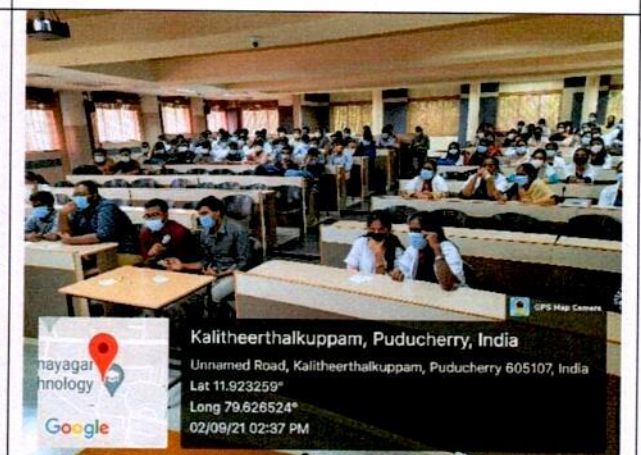


<b>Name of the Method</b>	<b>Online Quiz</b>
<b>Objectives of the Method</b>	<ul style="list-style-type: none"> <li>- To encourage MCQ answering skills</li> <li>- To enhance interest of students in the subject</li> <li>- To promote higher order thinking</li> </ul>
<b>Competencies/Topics addressed by the method</b>	<ul style="list-style-type: none"> <li>- ENT general Quiz</li> </ul>
<b>Short description of the method</b>	<ul style="list-style-type: none"> <li>- This was an Online quiz conducted on ENT on LMS platform</li> <li>- Quiz was conducted based on MCQs</li> </ul> 
<b>Any kind of assessment done with the use of the method (Ex: Pretest/ Posttest)</b>	Scores were given on the Online Quiz
<b>Feedback obtained from the students and Faculty regarding the method (Mention the key points, up to 5)</b>	-

Dr. KAGNE. R.N  
DEAN  
SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSPITAL  
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*Department of Ophthalmology*

<b>Name of the method</b>	<b>UG quiz</b>
<b>Objectives of the method</b>	To assess the knowledge and awareness of eye donation among the students
<b>Competencies or Topic addressed by the method</b>	Eye donation
<b>Short description of the method</b>	Preliminary test was conducted based on MCQ Five teams were selected based on the marks scored Quiz was conducted to the selected team using PPT Winners were awarded
<b>Any kind of assessment done by this method</b>	Nil
<b>Feedback obtained from students and faculty regarding this method</b>	Students showed interest to participate They felt their knowledge improved on the topic concerned They also felt now they will be able to educate public about eye donation Faculty-Found it an interesting method to teach the students



Dr. KAGNE, R.N  
DEAN  
SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSPITAL  
KALITHEERTHALKUPPAM,  
PUDUCHERRY-605107.



## Postgraduates

### Department of Obstetrics & Gynaecology

<b>Name of the method</b>	<b>PG quiz</b>
<b>Objectives of the method</b>	To check the in depth understanding of the postgraduates on that particular topic.
<b>Competencies/Topics addressed by the method</b>	1. Contraception 2. Postpartum haemorrhage 3. Gynecological cancers
<b>Short description of the method</b>	Quiz is usually conducted in a monthly basis. Topic of the quiz for the month will be announced one month earlier. Quiz will be framed in Kahoot. Each topic nearly 30 questions framed. Quiz was conducted for PGs in basement auditorium. Winner of the quiz was awarded at the end.
<b>Assessment</b>	Nil
<b>Feedback obtained from the students and Faculty regarding the method</b>	PG students felt they developed interest in learning the topics in depth before quiz for winning in competition They felt indepth understanding of topic happens, as they are encountered with difficult questions They go back and check the points again after quiz



Dr. KAGNE. R.N  
DEAN  
SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSPITAL  
KALTHEERTHALKUPPAM,  
PUDUCHERRY-605 007

<b>Name of the method</b>	<b>Case Based Learning</b>
<b>Objectives of the method</b>	To make the students to learn the applied conditions of physiology by discussing a case scenario
<b>Competencies/Topics addressed by the method</b>	All the systems in physiology
<b>Short description of the method</b>	Each tutorial group were divided into small groups with five students in each group. They were given a case scenario in a paper with the specific learning objectives. The students were asked to discuss and learn the information specified in the objectives. They were allowed to use any source of information to learn. The teacher's role was only to facilitate learning. At last, one student was asked to give an overview of what they learnt through discussion.
<b>assessment done</b>	No assessment was done
<b>Feedback obtained from the students and Faculty regarding the method</b>	Feedback was obtained from students. The main responses were <ol style="list-style-type: none"> <li>1. Made the learning clear</li> <li>2. More time should be given for discussion</li> </ol>



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Original Research

**Design, Implementation, and Evaluation of Student-centric learning in Physiology**

Shivayogappa, S. Teji<sup>1</sup>, M. Senthilvelu<sup>2</sup>, K. Soundarya<sup>1</sup>, Deepika Velumani<sup>2</sup>, Senthil Selvi, K.<sup>2</sup>, Mangani Mangalavalli, S.<sup>2</sup>

<sup>1</sup>Department of Physiology, Sri Manakula Vinayagar Medical College and Hospital, Pondicherry University, Puducherry, India  
<sup>2</sup>Department of Physiology, All India Institute of Medical Sciences (AIIMS), Mangalagiri, Andhra Pradesh, India

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**Abstract**

**Background:** The quality of teaching and learning in health education determines the competency of doctors produced and ultimately the patient care. Realizing the necessity of active learning at the undergraduate level, curricular reforms are crucial to ensure that students play an active role in their learning process and also the prerequisite qualities of a competent health professional. The current study aimed to implement and evaluate case-based learning in a physiology curriculum.

**Methods:** The study included 150 first-year MBBS students using a mixed methods research design. A short lecture on anemia was followed by two sessions of case-based learning with a gap of one week. A structured questionnaire using a 5-point Likert scale was used to collect students' perceptions. The internal consistency of the questionnaire had a Cronbach's alpha of 0.8. Faculty feedback was collected using a Focus Group Discussion.

**Results:** Of 145 participants, 117 provided feedback. Students perceived that the case-based learning method promoted meaningful learning (83%), helped in the future application of knowledge (81%), helped to understand physiology concepts better (72%); improved student-teacher relationships (72%); was effective in understanding the anemia topic (71%); led to the development of problem-solving abilities (70%); encouraged teamwork (69%); motivated self-directed learning (66%); and improved communication skills (65%). Faculty members suggested developing an assessment plan for future case-based learning sessions.

**Conclusion:** According to student and faculty feedback, case-based learning is an effective, active teaching-learning tool that improves students' understanding of basic concepts, clinical knowledge, problem-solving abilities, teamwork, communication skills, student-teacher relationship, and self-directed learning.

Dr. KAGNE. R.N  
DEAN  
SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSPITAL  
KALITHEERTHALKUPPAM,  
PUDUCHERRY-605 107



## Department of Biochemistry

<b>Name of the Method</b>	<b>Chart based learning</b>
<b>Objectives of the method</b>	To enhance the knowledge of the students in applied biochemistry As a part of revising the clinical biochemistry for university exam preparation
<b>Competencies / Topics addressed by the method</b>	BI11.17
<b>Short description of the method</b>	Charts are prepared for various disorders and applied aspects of biochemistry All the charts will be taught by the faculty in large groups, only in the beginning. Thereafter, students will be made into small groups and each chart will be discussed among them, where faculty will act as facilitator.
<b>Any kind of assessment done with the use of the method (Pretest / Posttest)</b>	No
<b>Feedback obtained from the students and Faculty regarding the method (Mention the key points, upto 5)</b>	Feedback obtained. Students felt easy to crack the answers for applied/clinical questions asked during the university / internal exams. Enhanced their confidence on clinical biochemistry

An edematous baby with puffiness of face, distended abdomen and leg swelling was brought with the history of recurrent respiratory tract infection. His investigations revealed

### In Blood

Total protein : 5.0 gm/dl  
Albumin : 2.5 gm/dl  
Total Cholesterol : 350 mg/dl

### In Urine

Protein : 3.8 gm/day  
RBCs : 1 to 2 cells/ HPF  
WBCs : 2 to 3 cells/ HPF

- What is the diagnosis for this baby?
- Mention the type of proteinuria present in this case
- What is the cause for hypoproteinemia?
- What is the reason for High cholesterol level in this patient?

Read the following parameters and answer the questions

**Blood:** Total bilirubin : 0.6 mg/dl  
Direct bilirubin : 0.1 mg/dl  
Indirect bilirubin : 0.5 mg/dl  
**Urine:** Bilirubin : Negative  
Urobilinogen : Normal color compared to control  
Bile salts : Negative

- Interpret the chart
- Mention the test to detect Urine Bilirubin.
- Name the test to estimate serum bilirubin levels?
- Name the protein which on break down forms bilirubin.

**Dr. KAGNE. R.N**

DEAN

SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSPITAL  
KODITHIYERTHAKUPPAM,  
POOJICHERRY-605107.

*Department of Obstetrics & Gynecology*



<b>Name of the method</b>	<b><i>Capsule presentation</i></b>
<b>Objectives of the method</b>	<ol style="list-style-type: none"> <li>1. To improve the Knowledge about common medical procedures done on daily basis</li> <li>2. Use of drugs in Obstetric Emergencies.</li> </ol>
<b>Competencies/Topics addressed by the method</b>	<p>Antihypertensives</p> <p>Eclampsia management</p> <p>Post Exposure prophylaxis</p> <p>Bladder catheterisation, Ryles tube insertion,</p> <p>Bowel Preparation</p> <p>PPH management</p>
<b>Short description of the method</b>	<p>CRRI's were made to present short capsule talks on the above mentioned topics and the procedure elaborated by the faculty for better understanding. Drug dosage calculation, Contraindications, Side effects, precaution to be followed were discussed in detail</p>
<b>Any kind of assessment done</b>	Nil
<b>Feedback obtained from the students and Faculty regarding the method</b>	CRRI's found the capsule discussion helpful for routine patient care.



Dr. KAGNE. R.N  
DEAN  
SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSPITAL  
KALTHEERTHALKUPPAM,  
PUDUCHERRY-605107.



*Department of General Medicine*

<b>Name of the method</b>	<b><i>Buzz group- 'Ace this case'</i></b>
<b>Objectives of the method</b>	<ul style="list-style-type: none"> <li>• To nurture higher order thinking</li> <li>• To facilitate group interactions, develop problem-solving skills, encourage team work and develop a healthy learning atmosphere.</li> </ul>
<b>Competencies/topics addressed by this method</b>	Student should be able to analyze the given scenario /case study and discuss with his/her peers and present in a forum confidently.
<b>Short description of the method</b>	<ul style="list-style-type: none"> <li>• A case study complex enough to kindle deep learning will be prepared by a senior level faculty. This will be provided to groups consisting of 5 students 48 hours prior to the day of discussion. The members of each group will present their approach and discuss.</li> <li>• At each level investigations, imaging and further information will be provided to the group on the spot and new discussions will happen.</li> <li>• This will be moderated by the senior faculty.</li> <li>• Final diagnosis will be arrived and other faculty will give their inputs. .</li> </ul>
<b>Any kind of assessment was done with the use of this method.</b>	Yes –Each discussion is assessed as a group.
<b>Feedback obtained from students and faculty regarding the method? Mention the key points up to 5.</b>	<ul style="list-style-type: none"> <li>• Feedback from students obtained.</li> <li>• We learnt to approach a case in a systematic manner and differentials.</li> <li>• We were able to have active discussions.</li> <li>• Provoked our team spirit.</li> <li>• We were made to read in depth and parallel learning happened.</li> <li>• We would like to have such discussions with other specialty postgraduate and faculty.</li> </ul>
	



## Department of Dermatology

<b>Name of the Method</b>	<b><i>Virtual grand rounds</i></b>
<b>Objectives of the Method</b>	To interpret and analyze the findings in the case sheets
<b>Competencies/ Topics addressed by the method</b>	To present common cases from case sheets in COVID era.
<b>Short description of the method</b>	Every week, or Thursday, one resident is asked to present a case to faculty through old case - record. They are given a schedule well in advance. Faculty read about approach to me case, differential discussion, management.
<b>Any kind of assessment done with the use of the method (Ex: Pretest/ Posttest)</b>	--
<b>Feedback obtained from the students and Faculty regarding the method (Mention the key points, up to 5)</b>	Details discussion of a case Helpful in university exam preparation

### Letter to the Editor Metamorphosis of "Traditional Grand Rounds" to "Virtual Grand Rounds" Amidst the COVID-19 Pandemic: A Cross-Sectional Survey among the Dermatology Postgraduates

Grand rounds (GRs) are considered to be a time-honored tradition, conducted as a weekly educational activity in many teaching institutions.<sup>1-3</sup> "Traditional" (face-to-face) GRs have been the backbone of medical education for more than a century, allowing clinicians to learn from interesting cases presented by their colleagues.<sup>4</sup> Before the pandemic, GRs were conducted in the bedside of ward rounds, in a one-to-one session in one department. However, during the COVID-19 pandemic, many of the beds in our institution have been converted into COVID isolation wards. This unprecedented scenario has led us to conduct a regular seminar where most of the dermatological ailments are managed in the outpatient clinic or via tele-conferencing. Through certain dermatological emergencies are admitted in the ward, the current social distancing norms restrict the ability of all residents and consultants to gather around the patient and discuss the case. This warranted us to introduce the virtual grand rounds (VGRs), and we would like to describe the experience of it in this article.

The maintenance of important records in the Medical Records Department (MRD) enables easy retrieval of old case records for academic purposes. In our department, it is customary to take serial clinical photographs of the admitted patients every day to monitor their clinical status. Care is taken to conceal the patients' identity, and the photographs are stored in a departmental folder in our departmental database with password restrictions providing access only to faculty and residents.

In VGR, a senior faculty member handpicked the cases to be discussed during the VGR for next 3 months from the MRD, ensuring accordance to the prescribed curriculum for postgraduate education. The residents were given the list of cases in advance. We have conducted VGRs for a total of 24 once-weekly sessions. One case was discussed in every session. The residents and the faculty assembled in a well-ventilated dissection hall following the social distancing norms. The VGRs were divided into many small sessions, with due time allotment for each. During all clinical aspects were covered. One member of the faculty was assigned as a moderator for each session. They all prepared the case history in detail from the selected old case record and the corresponding clinical images of the patient during their course of stay were displayed on a projector screen. The differential diagnosis, clinical and laboratory approach to the case, and therapeutic options were discussed in detail.

With the first year postgraduates, discussions were primarily about history taking, clinical examination, and bedside procedures. The second year residents were trained to enhance their knowledge in clinical features and differential diagnosis of the disease. First year students were trained primarily for their disease management skills. During the VGR, faculty members shared some fine nuances of clinical diagnosis, their valuable experience of managing similar cases, and cleared the participants' doubts. Feedback was received from the residents and faculty at the end of meeting.

A cross-sectional survey was conducted with a self-administered feedback questionnaire among the 12 postgraduates. It included 11 questions, and the responses were recorded using a 5-point Likert scale. The questionnaire had a good reliability (Cronbach's alpha = 0.72). The data was entered into the Statistical Package for the Social Sciences (SPSS) version 23.0 (SPSS Inc., Chicago, Illinois, USA). The results were expressed as percentage responses.

All the residents who had attended the GRs sessions completed the questionnaire (response rate = 100%). The mean attendance recorded over the 24 sessions was 81%. The details of the response from students are tabulated in Table 1. The students gave high mean scores for many of the attributes of VGR, including ease of presentation, opportunity to provide variety of cases, and adequacy of time for discussion.

According to National Medical Commission, postgraduate curricula consist of two types of ward rounds, namely, service rounds and teaching rounds. Service rounds involve providing daily care to the patients. Teaching rounds are conducted as "GRs" for teaching the postgraduate residents. The details of these rounds are to be entered and maintained in a log book.<sup>5</sup> The difference between the ward rounds and GRs are shown in Table 2.<sup>6,7</sup>

The benefits of GRs have been extensively demonstrated, and they remain a vital tool for imparting medical knowledge.<sup>8-10</sup> GRs educate the trainees of all levels; provide recent updates in diagnosis, treatment, and research; promote collegiality among various specialists; and provide a chance to acquire new knowledge and skills. However, there is even a threat that GRs may be at risk of completely vanishing in the future.<sup>11</sup>

In our survey, we received welcoming feedbacks to the major attributes of the VGR. The limitations of the survey include

Dr. KAGNE. R.N  
DEAN  
SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSPITAL  
KALITHAKKAL KUPPAM,  
PUDUCHERRY-605107



<b>Name of the Method</b>	<b><i>Problem based learning</i></b>
<b>Objectives of the Method</b>	To analyze and interpret the case scenarios
<b>Competencies/ Topics addressed by the method</b>	Difficult case scenarios
<b>Short description of the method</b>	Every month residents are given 4 – 5 case scenario and are made to solve it. They are asked to write prescription for that scenario. Their management skills are assessed
<b>Any kind of assessment done with the use of the method (Ex: Pretest/ Posttest)</b>	Each resident is encouraged to solve a different scenario
<b>Feedback obtained from the students and Faculty regarding the method (Mention the key points, up to 5)</b>	<ul style="list-style-type: none"> <li>- Helps in imaging different case scenario</li> <li>- Sharing of experience by the faculty of difficult cases</li> </ul>

<b>Name of the Method</b>	<b><i>Clinicopathological Case Discussion</i></b>
<b>Objectives of the Method</b>	To discuss the challenging clinicopathological cases
<b>Competencies/ Topics addressed by the method</b>	<p>To acquire basic knowledge in diagnosis of dermato pathological cases.</p> <p>Approach towards difficult to diagnose dermato pathological slides.</p>
<b>Short description of the method</b>	Every month, dermatology and pathology department faculty are resident assemble and discuss about 8 to 10 cases which are interesting and rare. Exchange of knowledge takes Place between two departments.
<b>Any kind of assessment done with the use of the method (Ex: Pretest/ Posttest)</b>	-
<b>Feedback obtained from the students and Faculty regarding the method (Mention the key points, up to 5)</b>	<p>Helps the resident to familiarize common and rare dermatology cases.</p> <p>Aids in approaching various reaction patterns</p>


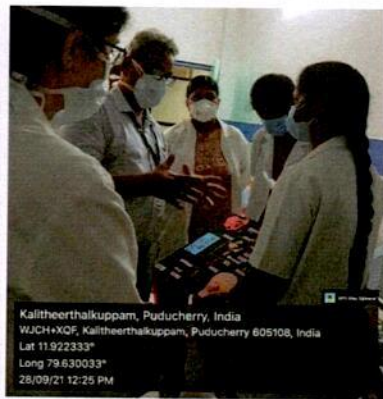
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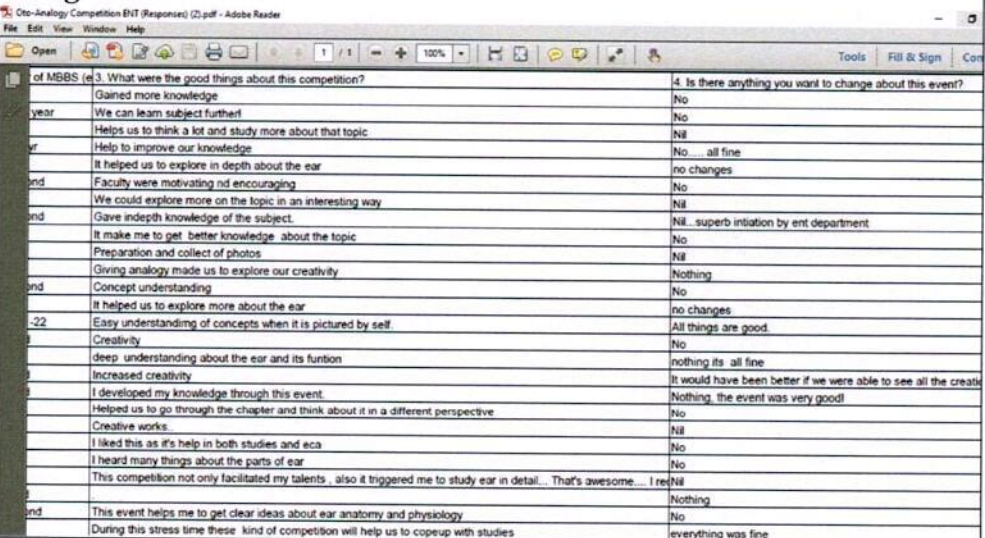
## Teaching Learning Methods for Undergraduates that nurtures creativity

### Department of Otorhinolaryngology

<b>Name of the Method</b>	<b><i>Model Preparation and Demonstration</i></b>
<b>Objectives of the Method</b>	<ul style="list-style-type: none"> <li>- To nurture creativity among the students</li> <li>- To impart better understanding of the difficult concepts</li> <li>- To promote learning from Peers</li> <li>- To improve presentation skills among students</li> <li>- To enhance team-work capacity among students</li> </ul>
<b>Competencies/Topics addressed by the method</b>	Various ENT topics including anatomy, physiology, diseases, clinical examination
<b>Short description of the method</b>	<ul style="list-style-type: none"> <li>- During the clinical postings, students were encouraged to prepare and present Models on Various ENT topics, using easily available materials</li> <li>- Students presented and explained the Models to their peers, and faculties</li> <li>- Discussions were held on each topic and queries were answered</li> <li>- Suggestions for improvement of models were given</li> </ul> <div style="display: flex; justify-content: space-around; align-items: center;">   </div>
<b>Any kind of assessment done with the use of the method (Ex: Pretest/ Posttest)</b>	<ul style="list-style-type: none"> <li>- Models were presented to the senior faculties; the positive and to-be-improved aspects were discussed with each student</li> </ul>
<b>Feedback obtained from the students and Faculty regarding the method (Mention the key points, up to 5)</b>	<p>Google forms</p> <ul style="list-style-type: none"> <li>- Students were very actively involved and were very enthusiastic about model preparation</li> <li>- Gave in depth understanding of topic</li> <li>- Helped identify their creativity side!</li> </ul>

Dr. KAGNE. R.N  
 DEAN  
 SRI MANAKULA VINAYAGAR  
 MEDICAL COLLEGE & HOSPITAL  
 KALITHEERTHAKUPPAM,  
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<b>Name of the Method</b>	<b>Online- Analogy creation</b>																																																						
<b>Objectives of the Method</b>	<ul style="list-style-type: none"> <li>- To encourage creativity among students</li> <li>- To promote understanding and active learning of difficult concepts</li> <li>- To enhance students' interest in ENT subject</li> </ul>																																																						
<b>Competencies/Topics addressed by the method</b>	<ul style="list-style-type: none"> <li>- Anatomy, physiology and diseases of ENT</li> </ul>																																																						
<b>Short description of the method</b>	<ul style="list-style-type: none"> <li>- This was an Online "Oto-Analogy competition" held on 20<sup>th</sup> May 2021, for the UG students, to encourage their creativity. Students were asked to create analogies related to the EAR anatomy/physiology/diseases using images/ collages/ Poetry/ Videos</li> </ul>  <p><b>15<sup>th</sup> YEAR ANNIVERSARY</b> Sri MANAKULA VINAYAGAR Medical college and Hospital Kalitheerthalkuppam, Madagadipet, Puducherry-605107</p> <p><b>Department of ENT</b> <b>OTO-Analogy</b> <b>Online Competition</b></p> <p><b>Instructions:</b></p> <ul style="list-style-type: none"> <li>- Open for all the UG students of SMVMCH only</li> <li>- Any <b>ANALOGIES</b> related to <b>EAR</b> Anatomy or Physiology:- Drawings, Sketches, Images, Collages, Graphics, or Poetry</li> <li>- Unlimited entries allowed per student!</li> <li>- Last date: May 20<sup>th</sup> 2021</li> <li>- Submit as image/pdf through Whatsapp to: 7867834401</li> <li>- Full Name, Phase, Email ID to be mentioned separately</li> <li>- Best Three Creative ideas will receive attractive prizes!!</li> <li>- Participation E-Certificates for all the entries!</li> </ul>																																																						
<b>Any kind of assessment done with the use of the method (Ex: Pretest/ Posttest)</b>	<p>More than 150 analogies were received.</p> <p>They were analyzed and 3 best entries were selected in each section by the subject experts.</p> <p>E-Certificates were given to all students and winners. The compilations of the analogies were shared on Social media platform(Facebook)</p>																																																						
<b>Feedback obtained from the students and Faculty regarding the method (Mention the key points, up to 5)</b>	<p><b>Google forms</b></p>  <p>Oto-Analogy Competition ENT (Responses) (2).pdf - Adobe Reader</p> <table border="1"> <thead> <tr> <th>Q. What were the good things about this competition?</th> <th>4. Is there anything you want to change about this event?</th> </tr> </thead> <tbody> <tr><td>Gained more knowledge</td><td>No</td></tr> <tr><td>We can learn subject further</td><td>No</td></tr> <tr><td>Helps us to think a lot and study more about that topic</td><td>Nil</td></tr> <tr><td>Help to improve our knowledge</td><td>No... all fine</td></tr> <tr><td>It helped us to explore in depth about the ear</td><td>no changes</td></tr> <tr><td>Faculty were motivating and encouraging</td><td>No</td></tr> <tr><td>We could explore more on the topic in an interesting way</td><td>Nil</td></tr> <tr><td>Gave indepth knowledge of the subject.</td><td>Nil... superb initiation by ent department</td></tr> <tr><td>It make me to get better knowledge about the topic</td><td>No</td></tr> <tr><td>Preparation and collect of photos</td><td>Nil</td></tr> <tr><td>Giving analogy made us to explore our creativity</td><td>Nothing</td></tr> <tr><td>Concept understanding</td><td>No</td></tr> <tr><td>It helped us to explore more about the ear</td><td>no changes</td></tr> <tr><td>Easy understanding of concepts when it is pictured by self</td><td>All things are good</td></tr> <tr><td>Creativity</td><td>No</td></tr> <tr><td>deep understanding about the ear and its function</td><td>nothing its all fine</td></tr> <tr><td>Increased creativity</td><td>It would have been better if we were able to see all the creat</td></tr> <tr><td>I developed my knowledge through this event.</td><td>Nothing, the event was very good!</td></tr> <tr><td>Helped us to go through the chapter and think about it in a different perspective</td><td>No</td></tr> <tr><td>Creative works</td><td>Nil</td></tr> <tr><td>I liked this as it's help in both studies and eca</td><td>No</td></tr> <tr><td>I heard many things about the parts of ear</td><td>No</td></tr> <tr><td>This competition not only facilitated my talents, also it triggered me to study ear in detail... That's awesome... I re</td><td>Nil</td></tr> <tr><td></td><td>Nothing</td></tr> <tr><td>This event helps me to get clear ideas about ear anatomy and physiology</td><td>No</td></tr> <tr><td>During this stress time these kind of competition will help us to copeup with studies</td><td>everything was fine</td></tr> </tbody> </table>	Q. What were the good things about this competition?	4. Is there anything you want to change about this event?	Gained more knowledge	No	We can learn subject further	No	Helps us to think a lot and study more about that topic	Nil	Help to improve our knowledge	No... all fine	It helped us to explore in depth about the ear	no changes	Faculty were motivating and encouraging	No	We could explore more on the topic in an interesting way	Nil	Gave indepth knowledge of the subject.	Nil... superb initiation by ent department	It make me to get better knowledge about the topic	No	Preparation and collect of photos	Nil	Giving analogy made us to explore our creativity	Nothing	Concept understanding	No	It helped us to explore more about the ear	no changes	Easy understanding of concepts when it is pictured by self	All things are good	Creativity	No	deep understanding about the ear and its function	nothing its all fine	Increased creativity	It would have been better if we were able to see all the creat	I developed my knowledge through this event.	Nothing, the event was very good!	Helped us to go through the chapter and think about it in a different perspective	No	Creative works	Nil	I liked this as it's help in both studies and eca	No	I heard many things about the parts of ear	No	This competition not only facilitated my talents, also it triggered me to study ear in detail... That's awesome... I re	Nil		Nothing	This event helps me to get clear ideas about ear anatomy and physiology	No	During this stress time these kind of competition will help us to copeup with studies	everything was fine
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**Dr. KAGNE, R.N**

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MEDICAL COLLEGE & HOSPITAL  
KALITHEERTHALKUPPAM,  
PUDUCHERRY-605107.



## *Department of Community Medicine*

### *World Rabies Day Photo contest – 2022*

On behalf of World rabies day, Department of Community Medicine conducted a photo contest for MBBS student from first year to final year based on various categories for rabies in our college. Students submitted their photos through soft and hard copy. All the photographs along with description were displayed on 28<sup>th</sup> of September marking the World Rabies Day. Best photographs were selected by Dr.Karthikeyan (Dean academic and HOD of dermatology, Dr.Suryakumari (HOD of Anatomy department), and Dr.Sanjay (HOD, Department of Dermatology). Winners were awarded with cash prize as First prize -Rs.1500, Second prize-Rs.1000 and Third prize-Rs.500 by Dr.Kagne (Dean) and Dr.Kalaiselvan (HOD of community medicine) on the same day at 4.00pm. E-certificate was distributed to all the participants.

Photos that were displayed in the exhibition



Students enthusiastically seeing the exhibition



Dr. KAGNE. R.N  
DEAN  
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*Department of Biochemistry*

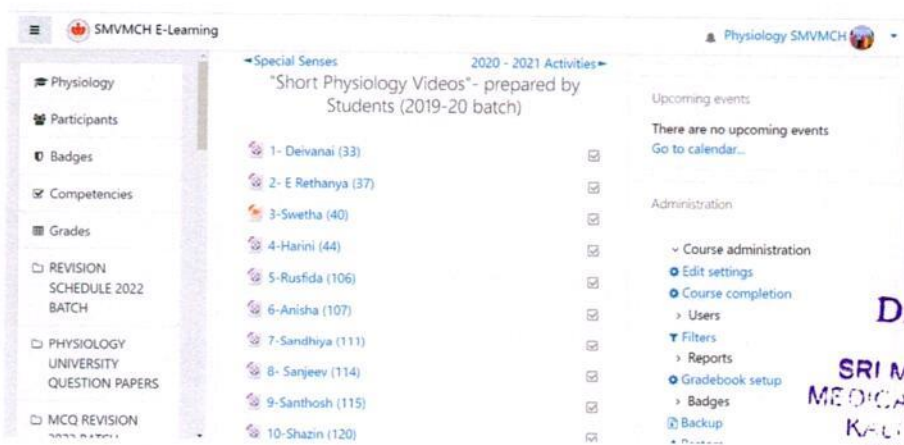
<b>Name of the Method</b>	<b><i>PLAKAT</i></b>
<b>Objectives of the method</b>	To help students to develop broad knowledge on inborn errors of metabolism
<b>Competencies / Topics addressed by the method</b>	Inborn errors of metabolism and disorders related to Vitamins
<b>Short description of the method</b>	<p>All 150 students will be sorted into groups and topics on inborn errors of metabolism will be allotted to the groups in a random manner.</p> <p>Each group will be allotted faculties as facilitators.</p> <p>Students should prepare charts on their given topics and should display on the competition day.</p> <p>Top three groups will be selected based on their content, creativity and their answers to the topic related questions asked and prizes distributed.</p>
<b>Any kind of assessment done with the use of the method (Pretest / Posttest)</b>	No
<b>Feedback obtained from the students and Faculty regarding the method (Mention the key points, upto 5)</b>	<p>It created interest and developed broad knowledge on in born errors of metabolism among the students</p> <p>Students learned to work as a team</p> <p>Got chance to interact with experienced doctors (Judges) and to learn from them.</p>



Dr. KAGNE. R.N  
 DEAN  
 SRI MANAKULA VINAYAGAR  
 MEDICAL COLLEGE & HOSPITAL  
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## Department of Physiology

<b>Name of the Method</b>	<b><i>Short video presentation by students</i></b>
Objectives of the method	To enhance concept understanding in Physiology
Competencies / Topics addressed by the method	PY6.1 to PY 6.10 (Respiratory Physiology)
Short description of the method	All 150 students of the batch were divided into 5 groups with one faculty as an instructor. Students were required to develop e-content in the form of a video that was later posted in the Learning Management System. Feedback and experiences were collected through a pre-designed Likert scale questionnaire, Kirkpatrick model 1. Open-ended questions were also administered. The quantitative data were analyzed using open Epi info version 7.0. The manual content analysis was done for the open-ended questions.
Any kind of assessment done with the use of the method (Pretest / Posttest)	No
Feedback obtained from the students and Faculty regarding the method (Mention the key points, upto 5)	Increased my conceptual learning Improved my confidence levels New experience Refer more books and internet Improves presentation skills



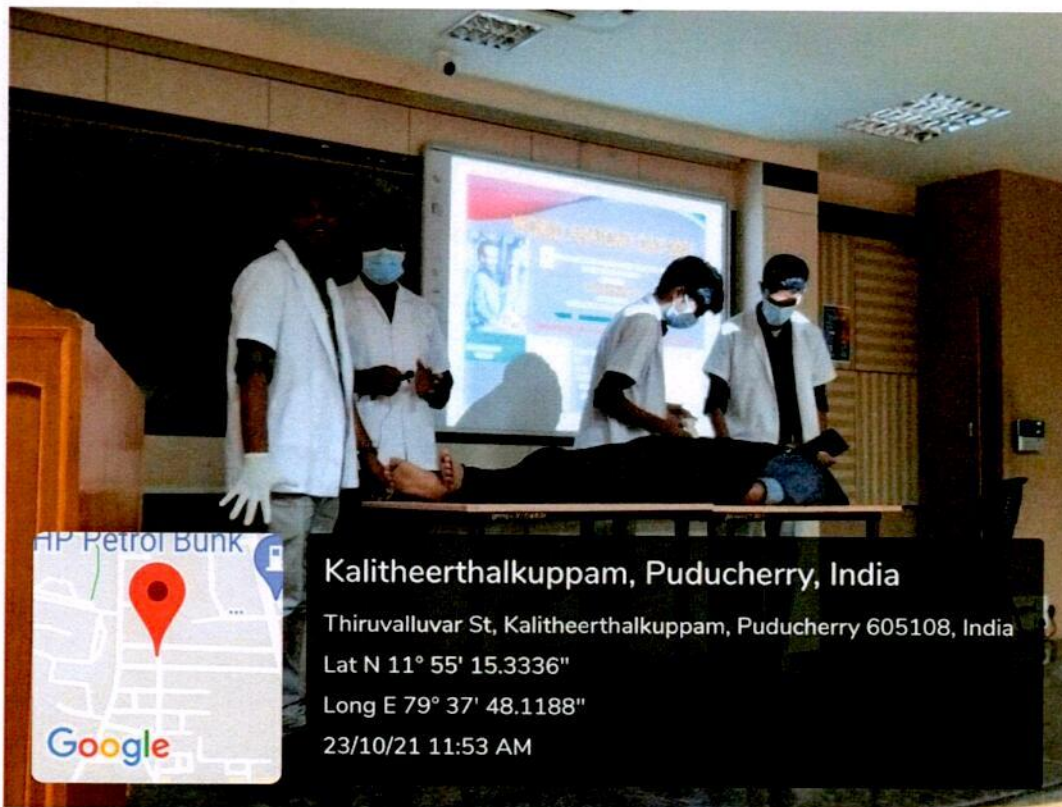
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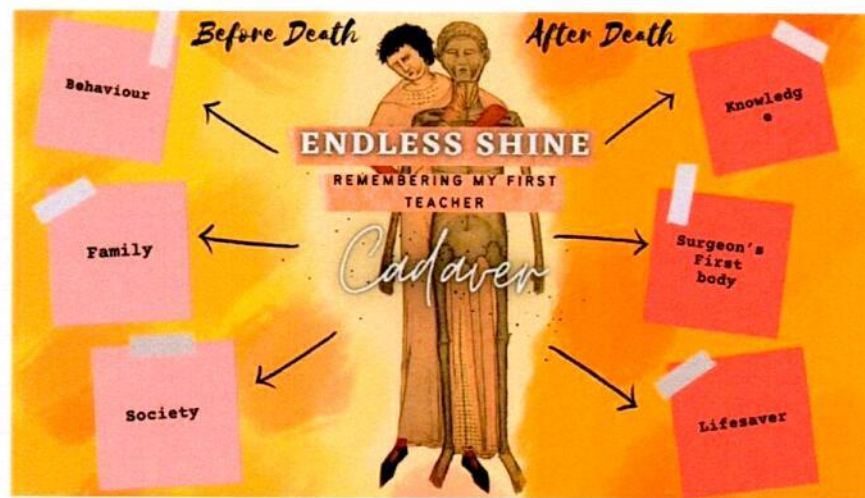
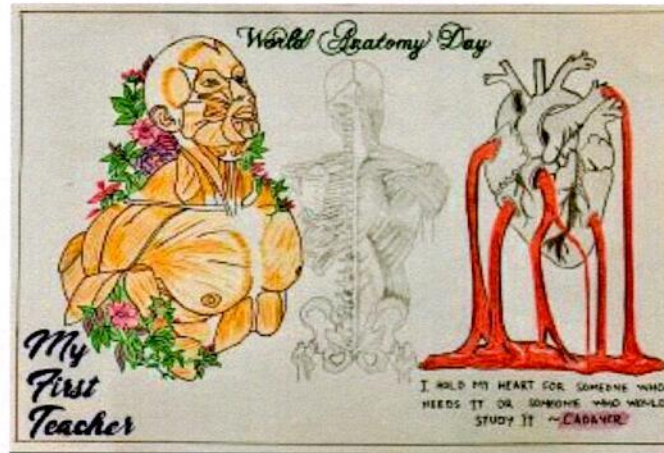
## *Department of Anatomy*

### *Learning through Art*

Department of Anatomy, SMVMCH organized world Anatomy Day celebration on 23<sup>rd</sup> October 2021. The theme was: Remembering my first teacher. The students presented their idea on importance of their first teacher - cadaver through their skills like Elocution, Painting, Role play, Rangoli, Poetry. Dr.A.Arul selvan ,Assistant professor of surgery delivered guest lecture on importance of cadaveric Dissection . The skills of the participants were assessed and the winners were awarded. Dr.Arul selvan and Mrs.Senthamizh Selvi were the assessors. Miss. Jennifer John and Mr. Hani Abdul Rasheed & team won the first and second prize.



Dr. KAGNE. R.N  
DEAN  
SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSP.  
KALITHEERTHALKUPPAM,  
PUDUCHERRY-605107.



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DEAN  
SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSPITAL  
KALITHEERTHAKUPPAM,  
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### Topics for Jigsaw technique

Choose any one topic among the following to be learnt through Jigsaw technique

#### ✓ 1. Transport Across the Cell Membrane

- ✓ a. Introduction to cell membrane, need for transport mechanisms, classification
- ✓ b. Simple diffusion and facilitated diffusion
- ✓ c. Osmosis
- ✓ d. Filtration
- ✓ e. Primary active transport
- ✓ f. Secondary active transport

#### 2. Immunity

- Nishantha. Definition, classification of immunity with examples B<sub>1</sub>  
Nisha b. Introduction to lymphoid organs B<sub>2</sub>  
Nithish c. Cell mediated immunity B<sub>3</sub>  
Aashish d. Humoral Immunity B<sub>4</sub>  
Rikhi e. Role of immunity in organ transplantation B<sub>5</sub>  
Deepika f. Applied B<sub>6</sub>

#### 3. Hemostasis

- a. Definition, Importance and steps in hemostasis
- b. Primary hemostasis
- c. Secondary hemostasis
- d. Fibrinolytic system
- e. Drugs
- f. Applied

#### 4. Nerve physiology

- a. Structure of a neuron and their functions
- b. Classification of nerve fibers
- c. Excitability and conductivity in a nerve fiber
- d. All or none law, refractory period, infatiguability and accommodation
- e. Compound action potential and its clinical uses
- f. Nerve degeneration and regeneration

#### ✓ 5. Structure of skeletal muscle

- a. Light microscopic feature
- b. Electron microscopic feature
- ✓ c. Sarco-tubular system
- d. Types of skeletal muscle fibers
- e. Motor unit
- ✓ f. Differences between skeletal, smooth and cardiac muscle fibres.

#### 6. Neuromuscular junction

- a. Structure
- b. Motor unit
- c. Events in NMJ
- d. Drugs acting at NMJ
- e. Applied aspects

TRUE COPY ATTESTED Electromyography

**7. Mechanism of skeletal muscle contraction and relaxation**

- a. Role of sarco-tubular system in excitation contraction coupling
- b. Molecular basis of contraction
- c. Molecular basis of relaxation
- d. Isometric and Isotonic contraction
- e. Rigor Mortis
- f. Electromyography

**8. Cardiac cycle**

- a. Definition, duration, phases
- b. Ventricular pressure changes
- c. Phlebogram and sphygmogram
- d. Volume changes
- e. ECG and phonocardiogram
- f. Overview with diagram

**9. Cardiac output**

- a. Definition ,normal values, terminologies
- b. Distribution and factors affecting cardiac output
- c. Heterometric regulation I
- d. Heterometric regulation II
- e. Homometric regulation
- f. Influence of HR and peripheral resistance

**10. Blood pressure**

- a. Definition, normal values, terminologies
- b. Factors affecting BP
- c. Short term regulation
- d. Intermediate mechanisms of regulation
- e. Long term regulation
- f. Applied

**✓ 11. Mechanics of Respiration**

- a. Introduction to respiratory system and Phases of respiration
- b. Mechanics of Inspiration
- c. Mechanics of Expiration
- d. Pressure and Volume changes during the phases of Respiration
- e. Work of Breathing
- f. Pulmonary Surfactant

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Jigsaw Technique as an Active learning strategy in Physiology for I MBBS students

Checklist

Kindly consider the following points for content analysis of the student's presentation in their respective topics

1. Introduction, Classification of Immunity with examples

Name of the student: *Mr. Arunachalam*

- 3/5
- ☒ Definition and the importance of Immunity
  - ☒ Classification of Immunity
  - ☒ Illustration of each type with suitable examples
  - ☐ Introduction to different terminologies related to Immunity
  - ☐ Role of Inflammation in Immunity

2. Introduction to Lymphoid Organs

Name of the student: *Ms. S. Nandana*

- 4/5
- ☒ Introduction and role of lymphoid organs in Immunity
  - ☒ Classification of Lymphoid Organs
  - ☒ Functional anatomy of Lymphoid Organs
  - ☒ Functions of individual lymphoid organs
  - ☐ Clinical significance of lymphoid organs

3. Cell Mediated Immunity

Name of the student: *Mr. A. Manojkumar*

- 2/5
- ☒ Types of T cells
  - ☒ Functions of each type of T cell (Including NK cells)
  - ☐ Pre Processing of T lymphocytes
  - ☐ Mechanism of Cell Mediated Immunity
  - ☐ Clinical Significance

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Jigsaw Technique as an active learning strategy in Physiology for I MBBS students

Group Activity Assessment Scale

Name of the Student: UMAR LATHIF (E1)


Title : INTRODUCTION TO IMMUNITY

Coordinator : DR. M. SENTHILVELDU

Please rate the items in the scale below from (1- Strongly disagree to 5 – Strongly agree) to show your agreement or disagreement with items about the student's performance in group activity.

(1 – Strongly disagree, 2- Disagree, 3 – Neutral, 4 – Agree, 5- Strongly agree)

- |   |           |
|---|-----------|
| 1. Takes Initiative                                       | ① 2 3 4 5 |
| 2. Listened to and showed respect for opinion from others | 1 ② 3 4 5 |
| 3. Communicated his/her ideas clearly                     | 1 ② 3 4 5 |
| 4. Provided information relevant to the context           | 1 2 ③ 4 5 |
| 5. Used multiple resources for gaining information        | 1 2 3 4 5 |
| 6. Participated actively in the group task                | 1 ② 3 4 5 |

  
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### Topics for Jigsaw technique

Choose any one topic among the following to be learnt through Jigsaw technique

1. Transport Across the Cell Membrane

- Introduction to cell membrane, need for transport mechanisms, classification
- Simple diffusion and facilitated diffusion
- Osmosis
- Filtration
- Primary active transport
- Secondary active transport

2. Immunity

- Definition, classification of immunity with examples - *Arunachalam, K A1*
- Introduction to lymphoid organs - *G. Nandhana, S A2*
- Cell mediated immunity - *A. Manoj Kumar A3*
- Humoral Immunity - *R. Manoj Arvind A4*
- Role of immunity in organ transplantation - *R. Ashwarya A5*
- Applied *Aspara, S A6*

3. Hemostasis

- Definition, Importance and steps in hemostasis
- Primary hemostasis
- Secondary hemostasis
- Fibrinolytic system
- Drugs
- Applied

4. Nerve physiology

- Structure of a neuron and their functions
- Classification of nerve fibers
- Excitability and conductivity in a nerve fiber
- All or none law, refractory period, infatiguability and accommodation
- Compound action potential and its clinical uses
- Nerve degeneration and regeneration

5. Structure of skeletal muscle

- Light microscopic feature
- Electron microscopic feature
- Sarco-tubular system
- Types of skeletal muscle fibers
- Motor unit
- Differences between skeletal, smooth and cardiac muscle fibres.

6. Neuromuscular junction

- Structure
- Motor unit
- Events in NMJ
- Drugs acting at NMJ
- Applied aspects
- Electromyography

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4. Humoral Immunity

Name of the student: Mr. Manoj Aravind

Pre ☒ Processing of B lymphocytes

- 3/5
- ☒ Mechanism of Humoral Immunity
  - ☒ Types of antibodies and their significance
  - ☐ Mechanism of action of antibodies
  - ☐ Clinical Significance

5. Role of Immunity in Organ Transplantation

Name of the student: Ms. R. Aiswarya.

Intro ☒ Introduction and role of immunity in organ transplantation

- 5/5
- ☒ Types of Transplants
  - ☒ Mechanism of transplant rejection
  - ☒ Prevention of transplant rejection
  - ☒ Note on Immunological tolerance/Surveillance

6. Applied Aspects

Name of the student: Ms. Aspama J.

- 4/5
- ☒ Allergy/ Hypersensitivity disorders
  - ☒ Immunodeficiency states
  - ☒ Autoimmune disorders
  - ☐ Drugs for Immune enhancement
  - ☒ Drugs for Immunosuppression

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Jigsaw Technique as an active learning strategy in Physiology for I MBBS students

Group Activity Assessment Scale

Name of the Student: B. JAYA VISHNWA (DI)


Title : INTRODUCTION TO IMMUNITY

Coordinator : DR. M. SENTHILVELOU

Please rate the items in the scale below from (1- Strongly disagree to 5 - Strongly agree) to show your agreement or disagreement with items about the student's performance in group activity.

(1 - Strongly disagree, 2- Disagree, 3 - Neutral, 4 - Agree, 5- Strongly agree)

- |   |             |
|---|-------------|
| 1. Takes Initiative                                       | 1 2 (3) 4 5 |
| 2. Listened to and showed respect for opinion from others | 1 2 (3) 4 5 |
| 3. Communicated his/her ideas clearly                     | 1 2 3 (4) 5 |
| 4. Provided information relevant to the context           | 1 2 3 (4) 5 |
| 5. Used multiple resources for gaining information        | 1 2 3 4 5   |
| 6. Participated actively in the group task                | 1 2 (3) 4 5 |

  
Signature of the Coordinator

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Jigsaw Technique as an active learning strategy in Physiology for I MBBS students

Group Activity Assessment Scale

Name of the Student: N. SARVESHWARA RAD GUPTA (C1)

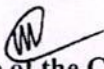
Title : INTRODUCTION TO IMMUNITY

Coordinator : DR. M. SENTHILVELDU

Please rate the items in the scale below from (1- Strongly disagree to 5 – Strongly agree) to show your agreement or disagreement with items about the student's performance in group activity.

(1 – Strongly disagree, 2- Disagree, 3 – Neutral, 4 – Agree, 5- Strongly agree)

- |   |             |
|---|-------------|
| 1. Takes Initiative                                       | 1 2 3 4 (5) |
| 2. Listened to and showed respect for opinion from others | 1 2 3 4 (5) |
| 3. Communicated his/her ideas clearly                     | 1 2 3 4 (5) |
| 4. Provided information relevant to the context           | 1 2 3 (4) 5 |
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| 6. Participated actively in the group task                | 1 2 3 (4) 5 |

  
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Jigsaw Technique as an active learning strategy in Physiology for I MBBS students

Group Activity Assessment Scale

Name of the Student: K. ARUNACHALAM (A1)


Title : INTRODUCTION TO IMMUNITY

Coordinator : DR. SENTHILVELOU

Please rate the items in the scale below from (1- Strongly disagree to 5 - Strongly agree) to show your agreement or disagreement with items about the student's performance in group activity.

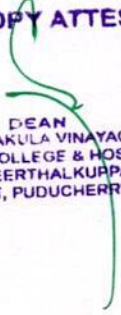
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- |   |             |
|---|-------------|
| 1. Takes Initiative                                       | 1 2 3 4 (5) |
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Jigsaw Technique as an active learning strategy in Physiology for I MBBS students

Group Activity Assessment Scale

Name of the Student: B. NISHANTH (B1)


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Coordinator : DY. M. Senthilvelou

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## Topics for Jigsaw technique

Choose any one topic among the following to be learnt through Jigsaw technique

### 1. Transport Across the Cell Membrane

- Introduction to cell membrane, need for transport mechanisms, classification
- Simple diffusion and facilitated diffusion
- Osmosis
- Filtration
- Primary active transport
- Secondary active transport

Soundarya Madan  
Batch

### 2. Immunity

- Definition, classification of immunity with examples - Saranya C<sub>2</sub>
- Introduction to lymphoid organs - Saranya C<sub>2</sub>
- Cell mediated immunity - Greetanali C<sub>3</sub>
- Humoral Immunity - Jayajani C<sub>4</sub>
- Role of immunity in organ transplantation - Swikuma C<sub>5</sub>
- Applied - Hemachand C<sub>6</sub>

(C).

### 3. Hemostasis

- Definition, Importance and steps in hemostasis
- Primary hemostasis
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- Fibrinolytic system
- Drugs
- Applied

### ④. Nerve physiology

- Structure of a neuron and their functions
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- Electron microscopic feature
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- Motor unit
- Differences between skeletal, smooth and cardiac muscle fibres.

### 6. Neuromuscular junction

- Structure
- Motor unit
- Events in NMJ
- Drugs acting at NMJ
- Applied aspects
- Electromyography

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**7. Mechanism of skeletal muscle contraction and relaxation**

- a. Role of sarco-tubular system in excitation contraction coupling
- b. Molecular basis of contraction
- c. Molecular basis of relaxation
- d. Isometric and Isotonic contraction
- e. Rigor Mortis
- f. Electromyography

✓ **8. Cardiac cycle**

- a. Definition, duration, phases
- b. Ventricular pressure changes
- c. Phlebogram and sphygmogram
- d. Volume changes
- e. ECG and phonocardiogram
- f. Overview with diagram

✓ **9. Cardiac output**

- a. Definition ,normal values, terminologies
- b. Distribution and factors affecting cardiac output
- c. Heterometric regulation I
- d. Heterometric regulation II
- e. Homometric regulation
- f. Influence of HR and peripheral resistance

**10. Blood pressure**

- a. Definition, normal values, terminologies
- b. Factors affecting BP
- c. Short term regulation
- d. Intermediate mechanisms of regulation
- e. Long term regulation
- f. Applied

**11. Mechanics of Respiration**

- a. Introduction to respiratory system and Phases of respiration
- b. Mechanics of Inspiration
- c. Mechanics of Expiration
- d. Pressure and Volume changes during the phases of Respiration
- e. Work of Breathing
- f. Pulmonary Surfactant

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- Introduction to lymphoid organs - Subashu D2
- Cell mediated immunity - Kaviyasree D3
- Humoral Immunity - Karthika D4
- Role of immunity in organ transplantation Karthikeyan D5
- Applied Kathiravan D6

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- Motor unit
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  - c. ☒ Osmosis
  - d. Filtration
  - e. Primary active transport
  - f. Secondary active transport
2. ☒ Immunity
  - a. Definition, classification of immunity with examples *Uma Latiff E1*
  - b. Introduction to lymphoid organs - *Vizuthi E2*
  - c. Cell mediated immunity - *Kentluiga E3*
  - d. Humoral Immunity - *Lokesh Khanna E4*
  - e. Role of immunity in organ transplantation - *Keshika Shree E5*
  - f. Applied - *Vasanth E6*
3. Hemostasis
  - a. Definition, Importance and steps in hemostasis
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**Feedback for Jigsaw Technique**

1. Kindly comment on the impact of Jigsaw technique over the learning habits of the study participants

2. What were the merits and demerits of this Jigsaw technique?

S.No	Merits	Demerits

3. Kindly comment on the feasibility of applying this “Jigsaw technique” during the routine academic sessions

4. What do you think could be the possible suggestions/solutions to overcome the difficulty in implementing the “Jigsaw technique” ?

5. Any other comments...

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✓ **Mechanism of skeletal muscle contraction and relaxation**

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	RESPONSES
<b>Learning experience &amp; its implications</b>	<p>Enhanced deeper understanding of the topic and its basic concepts</p> <p>Motivated intensive study/ extensive research on a topic</p> <p>Improved working skills</p> <p>Enhanced problem solving capability</p> <p>Learnt to sort out things and frame a plan</p> <p>Enhanced referral of books</p> <p>Learnt to arise questions and framing answers</p> <p>Learnt patience, confidence</p> <p>Increased creativity</p> <p>Understood the difficulty behind a model preparation</p> <p>Demands beforehand preparation and thorough understanding of the subject</p> <p>How to present in a simple, easily understandable manner</p> <p>Learnt electrical, technical, craft work</p> <p>Learnt many other topics to understand a particular topic</p> <p>Helps to gather points during revision</p> <p>Learnt to prepare seminars in the concerned topic</p> <p>Learnt how to be specific in selection of topics/preparation</p> <p>Enhanced long term memory</p> <p>Increased practical application, and also application of knowledge in exams</p> <p>Improved Visual learning/ A visual treat</p> <p>Helped to understand terminologies</p> <p>Increases concentration and zeal of research</p>
<b>Experience working as group</b>	<p>Improved understanding of team members</p> <p>Improved relationship with team members</p> <p>Increased communication skills</p> <p>Learnt hardwork with smart work</p> <p>Learnt to express own thoughts</p> <p>Learnt to co-operate, self-acceptance of each other</p> <p>Understood individual responsibility</p> <p>Sharing of ideas, Knowledge</p> <p>Time management</p> <p>Learnt to obtain guidance</p> <p>Learnt to guide</p> <p>Different ideas in a common platform improved creativity</p> <p>Learnt organizing a work</p> <p>Learnt segregation of work, in a group</p> <p>Fun filled learning</p> <p>Learnt to adjust with team member's mind set</p>
<b>Merits of model preparation</b>	<p>Vague concepts can be made interesting</p> <p>Identified hidden talents</p> <p>Difficult topics can be made easy</p> <p>Prizes stimulated the spirit</p> <p>Improved memory</p> <p>Learnt team work</p> <p>Added essence to the subject</p> <p>Increased creativity</p> <p>Learnt to enjoy reading</p>

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### Feedback for Jigsaw Technique

1. Kindly comment on the impact of Jigsaw technique over the learning habits of the study participants

- i) They learnt how to organize a topic before presentation  
ii) They learnt how to get involved in a group discussion  
iii) They learnt to collect information from various sources.

2. What were the merits and demerits of this Jigsaw technique?

S.No	Merits	Demerits
1	communication skills development	Time consuming.
2	Additional information about the topic.	No opportunity to relate the topic clinically.
3	Learning in a group	only few students get opportunity.
4	Depth of understanding the topic is increased.	
5	organizing the topic presentation objectively	
6	Students interest	

3. Kindly comment on the feasibility of applying this "Jigsaw technique" during the routine academic sessions

Applied topics can be given for this technique. Presentation can be in any form (e.g) Role play, skit (allows participation of all students).

4. What do you think could be the possible suggestions/solutions to overcome the difficulty in implementing the "Jigsaw technique"?

Presentation should be out of working hours (May be 2.00 - 2.30) every day (5 days for 5 topics) & one topic per day.

5. Any other comments...

The topic <sup>can</sup> ~~should~~ be related to a patient. The topic should give space for creativity of students. All students can be involved.



=

Feedback for Jigsaw Technique

1. Share your learning experience with the Jigsaw technique.

This technique was informative and helped to revise topics in a better and more interactive way.

2. What were the new qualities you acquired during this learning process?

I learnt how to better categorize the topic that was given to me.

3. In what way do you think it may be useful for your future learning?

Through this technique, I had a clearer idea of the topic and now I'm better able to understand it. It will be useful while revising the topic in the future.


4. Share your experience when working as a group.

In a group, I was surprised to find that many of us shared similar ideas on how we wanted to present the topic and the contents of the topic. It was easier to get along with everyone and we were able to finalise the contents of our topic in just one meeting.


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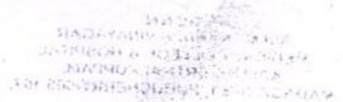
<p><b>Demerits of model preparation</b></p>	<p>More time tend to be wasted while working as a team during planning  Time consuming  Place allotted for exhibition was not appropriate  Resources for model preparation were not easily available  Practically not applicable for all concepts  Lack of cooperation from other team members  Couldn't concentrate on routinely conducted internal assessments- (3)  Participants couldn't see other models  Could be clubbed along with poster presentation also  Need to face multiple failures during preparation  Difficult to execute the imagination  Merits and demerits of each model should have been displayed  Need extensive planning/ ground work</p>
---	--

  
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PHYSIOLOGY.  
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MEDICAL COLLEGE & HOSPITAL  
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KALITHEERTHAL KUPPAM,  
MADAGADI PET, PONDICHERY-605 107.



No	Name	Email ID	Mobile No
27	M. Dhupikka	dhheepikkammbbs00@gmail.com	7550337630
95	M. Nisha	myannish08@gmail.com	9940959589 / 7708416157
21	C.H. AKHIKA	hemasriakhila7@gmail.com	9087500573
104	Prardhan Aanish. J	jashwin2003@gmail.com	9790915697
96	B. NISHANTH	nishanththedaven@gmail.com	9500660593
99	R. Nidhish Kanna	nithishsomu18@gmail.com	8200045500

B6

B2 Dr. SHIVA

B5 TEAM B"

B4

B1

B3

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SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSPITAL  
KALITHEERTHAKUPPAM,  
MADAGADIPET, PUDUCHERRY-605 107.

R. No	Name	Email ID	Mobile No
79	Manoj Kumar .A	manojkumar2251999@gmail.com	9786558662
78	Manoj Aravind .R	manoj.arvind@yahoo.com	9600571224
13	Asuranachalam .K	arunkan8101999@gmail.com	9489229252
88	Nandana .S	nandanasudheer98@gmail.com	9809034440
15	Aspama .	aspanajeba22@gmail.com	8220405246
6	Aiswarya .R	mrigyndrakumar@yahoo.com	9655284242

A3 A GROUP

A4 DR. SENTHILVELOU

A1

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KALITHEERTHALKUPPAM,  
MADAGADIPET, PUDUCHERRY-605 107.



No	Name	Email ID	Mobile No
143	VASANTHI V	vasanthivijay 12@gmail.com	9047836868
65	K.KESHIKA SRI	kkeshikasri@ gmail.com	7338944688
64	K.KEERTHIGA	keerthi nobi @ gmail.com	9655314092
140	UMARLATHIF.	umarlathif1007@ gmail.com	9043608439
68	LOKESH KHANNA.S	Lokeshkhanna007 @gmail.com	7339095689
149	VISHRUTH	vishruthgo@gmail. com	7034233920

E6

E5

E3

DEEPIKA

E1

E2

TEAM E

E2

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KALITHEERTHAKUPPAM,  
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R. No	Name	Email ID	Mobile No
48	B. JAYAVISHHWA	vishhwa11@gmail.com	7904 029944 D1 → 9486619487
55	K. Kathiravan	kathiravan994.tdk@gmail.com	8870190909 D2 SELVI MAM
54	S. Karthikeyan	karthikeyan.saravanan9299@gmail.com	9080705372 D5 TEAM "D"
58	U.P. Kariyasree	kariya.stee019@gmail.com	9442804870 D3
53	M. Karthika.	Karthika.gokul1999@gmail.com	<del>9994993388</del> D4 8754771898
130	M. Subhasen	msubhasen2000@gmail.com	8838017262. D2

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R. No	Name	Email ID	Mobile No
112	S. Saranya.	saarasiva15@gmail.com	9787890687 C2 8344992367
31	D. Djegajenanie	jananirajan67@gmail.com	9943640581 C4 9500298767
36	B. GEETHANJALI	geethulbygy@gmail.com	9597445585 C3 TEAM C
114	D. Sarvekhara Rao gupta	rocking sarvek. 30@gmail.com	7377 674 349. C1
45	Hemachand. V.S.S	hemachanddheni@gmail.com	7904429160 C6
115	S. SASIKUMAR	s. sasikummar@gmail.com 6425	8903800926. C5

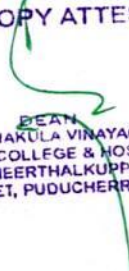
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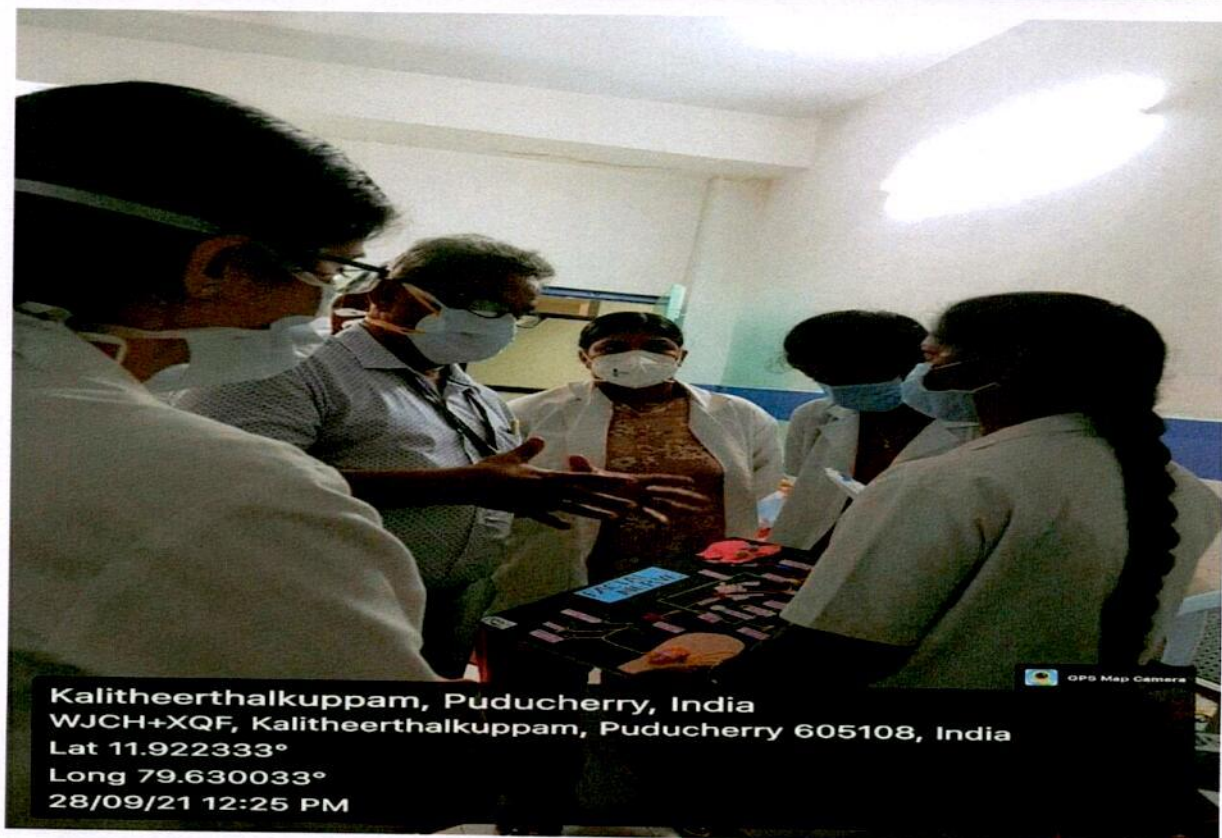
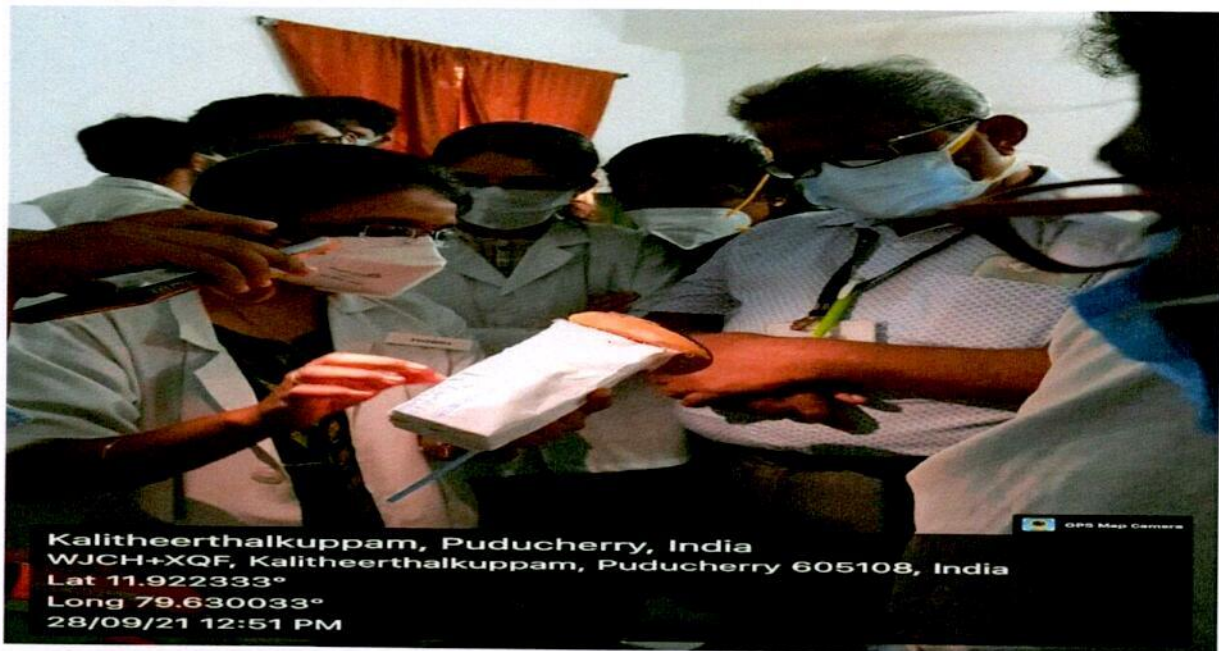
*Department of Otorhinolaryngology*

<b>Name of the Method</b>	<b>Online- Analogy creation</b>
<b>Objectives of the Method</b>	<ul style="list-style-type: none"> <li>- To encourage creativity among students</li> <li>- To promote understanding and active learning of difficult concepts</li> <li>- To enhance students' interest in ENT subject</li> </ul>
<b>Competencies/Topics addressed by the method</b>	<ul style="list-style-type: none"> <li>- Anatomy, physiology and diseases of ENT</li> </ul>
<b>Short description of the method</b>	<ul style="list-style-type: none"> <li>- This was an Online "Oto-Analogy competition" held on 20<sup>th</sup> May 2021, for the UG students, to encourage their creativity. Students were asked to create analogies related to the EAR anatomy/physiology/diseases using images/ collages/ Poetry/ Videos</li> </ul>
<b>Any kind of assessment done with the use of the method (Ex: Pretest/ Posttest)</b>	<p>More than 150 analogies were received.</p> <p>They were analyzed and 3 best entries were selected in each section by the subject experts.</p> <p>E-Certificates were given to all students and winners. The compilations of the analogies were shared on social media platform (Facebook)</p>
<b>Feedback obtained from the students and Faculty regarding the method</b>	<p>Google forms</p> <p>Enhanced creativity among the students</p> <p>Helped students learn the concepts easily</p> <p>Students enjoyed the learning process</p>

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Medical college and Hospital

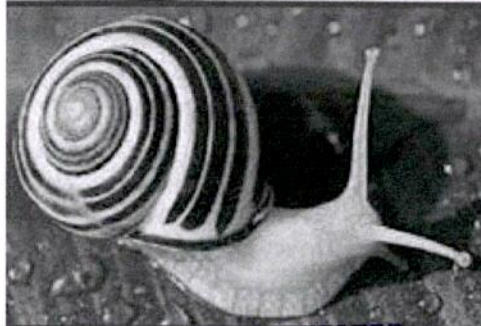
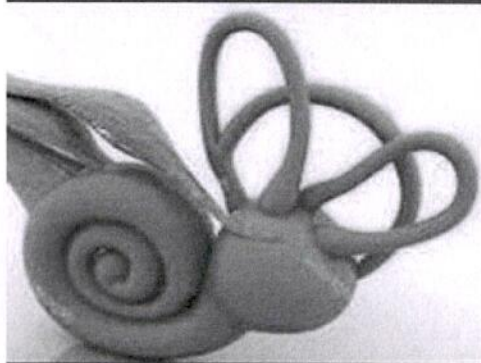
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## OTO-Analogy Online Competition



### Instructions:

- Open for all the UG students of SMVMCH only
- Any ANALOGIES related to EAR Anatomy or Physiology:-  
Drawings, Sketches, Images, Collages, Graphics, or Poetry
- Unlimited entries allowed per student!
- Last date: May 20<sup>th</sup> 2021
- Submit as image/pdf through Whatsapp to: 7867834401
- Full Name, Phase, Email ID to be mentioned separately
- Best Three Creative ideas will receive attractive prizes!!
- Participation E-Certificates for all the entries!



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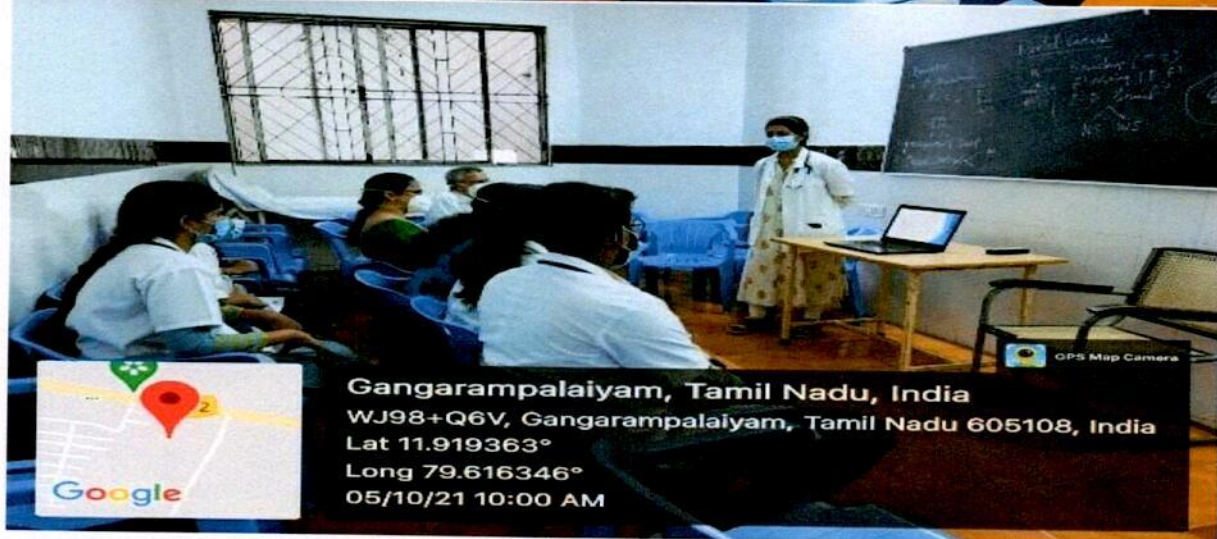
**Department of Obstetrics and Gynaecology**

**REPORT: CAPSULE PRESENTATION**

Name of the method	Capsule presentation
Objectives of the method	1. To improve the Knowledge about common medical procedures done on daily basis 2. Use of drugs in Obstetric Emergencies.
Competencies/Topics addressed by the method	Antihypertensives Eclampsia management Post Exposure prophylaxis Bladder catheterisation, Ryles tube insertion, Bowel Preparation PPH management
Short description of the method	CRRI's were made to present short capsule talks on the above mentioned topics and the procedure elaborated by the faculty for better understanding. Drug dosage calculation, Contraindications, Side effects, precaution to be followed were discussed in detail
Any kind of assessment done	Nil
Feedback obtained from the students and Faculty regarding the method	CRRI's found the capsule discussion helpful for routine patient care.  <b>TRUE COPY ATTESTED</b>

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**DEPARTMENT OF OBSTETRICS & GYNAECOLOGY  
PG TEACHING SCHEDULE FOR THE MONTH OF OCTOBER – 2021**

Date	Day	Topic	Presenter	Moderator
01.10.2021	Friday	Antihypertensives(Capsule presentation) Eclampsia management (Capsule presentation)	Dr. Preethi. N Dr. Priadharshni. R	Dr. Bupathy
04.10.2021	Monday	Lecture – Abortions	All PG's	Dr. Poomalar
05.10.2021	Tuesday	Tutorials - Bony Pelvis	All PG's	All Faculties
06.10.2021	Wednesday	Group discussion - DUB	All PG's	All Faculties
07.10.2021	Thursday	Journal club	Dr. Priadharshni. R	Dr. Jayasree
08.10.2021	Friday	Post exposure prophylaxis(Capsule presentation)	Dr. Preethi. N	Dr. Nivedita
11.10.2021	Monday	Lecture - Infertility	All PG's	Dr. Jayasree
12.10.2021	Tuesday	Scientific Society meeting	All PG's	All Faculties
13.10.2021	Wednesday	Seminar – Puberty disorders	Dr. Subhasri. S	Dr. Nivedita
15.10.2021	Friday	PPH management (Capsule presentation)	Dr. Priadharshni. R	Dr. Jayasree
18.10.2021	Monday	Lecture - CPD	All PG's	Dr. Nivedita
20.10.2021	Wednesday	Seminar – CPD in labour	Dr. Priadharshni. R	Dr. Jayasree
21.10.2021	Thursday	Journal club	Dr. Preethi. N	Dr. Bupathy
22.10.2021	Friday	Insulin dosing (Capsule presentation) Shoulder dystocia (Capsule presentation)	Dr. Subhasri. S Dr. Ashachandran. R	Dr. Poomalar
25.10.2021	Monday	Lecture - AUB	All PG's	Dr. Bupathy
26.10.2021	Tuesday	Interdepartmental meeting	All PG's	All Faculties
27.10.2021	Wednesday	Death Audit	All PG's	All Faculties
28.10.2021	Thursday	Log Book / Thesis review	All PG's	All Faculties
29.10.2021	Friday	Uterine inertia (Capsule presentation) Retained placenta (Capsule presentation)	Dr. Preethi. N Dr. Priadharshni. R	Dr. Poomalar

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**Professor & Head**

**Department of Obstetrics & Gynecology**

Dr. M.JAYASREE, D.N.B.,MRCOG

Reg. No: 61740

PROFESSOR & HEAD

Department of Obstetrics & Gynaecology  
Sri Manakula Vinayagar Medical College & Hospital  
Kalitheerthalkuppam, Madagadipet, Puducherry-605 107



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Medical College and Hospital

**DEPARTMENT OF OBSTETRICS & GYNAECOLOGY**

**Feedback Analysis Report of Capsule Presentation**

**Students feedback:**

- PG's found the capsule discussion helpful for routine patient care.
- As it is a short presentation, preparation time required is very less and presentation can be done as a part of rounds.
- Helps in developing in depth knowledge on important aspects of care.

**Areas of improvement:**

- Discussing practical points will be more useful than restricting to theory discussion.

**Suggestions:**

- PGs has to discuss with faculties before preparing for capsule presentation for fine tuning the points to be presented.

Prof. & Head  
Dept. of Obstetrics & Gynecology

**Dr. M. JAYASREE, D.N.B., MRCOG**  
Reg. No: 61746  
**PROFESSOR & HEAD**  
Department of Obstetrics & Gynaecology  
Sri Manakula Vinayagar Medical College & Hospital  
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Department of Biochemistry


I MBBS (2019 – 20)

Revised Schedule for Revision Classes (Sep – Oct 2020)

Date: 06.10.2020

Date	Day	Theory Topic	Charts
22.09.2020	Tues	Enzymes	Enzymes
23.09.2020	Wed	Fat Soluble Vitamins	Dyslipidemia
24.09.2020	Thurs	Water Soluble Vitamins	Myocardial Infarction, Gout
25.09.2020	Fri	ETC, Carbohydrate Chemistry	
26.09.2020	Sat	Carbohydrate Metabolism	Carbohydrate charts
28.09.2020	Mon	Carbohydrate Metabolism	Diabetes Mellitus
29.09.2020	Tues	<b>MCQ presentation (Enzymes, Vitamins, ETC, CHO Chem &amp; Metabolism)</b>	
30.09.2020	Wed	Viva (Enzymes, Vitamins, ETC, CHO Chem & Metabolism)	
08.10.2020	Thurs	Nucleic acid Chem & Metabolism	Thyroid disorder, pancreatitis
09.10.2020	Fri	Molecular Biology	RFT
10.10.2020	Sat	Function tests (Liver, Thyroid, Adrenal, Kidney)	
12.10.2020	Mon	Detoxification, Free Radicals and Antioxidants	Acid Base balance and imbalance
13.10.2020	Tues	<b>MCQ (NA chem. &amp; Meta + Molecular Biology &amp; Tech + Detoxification + Free radicals &amp; Antioxidants)</b>	

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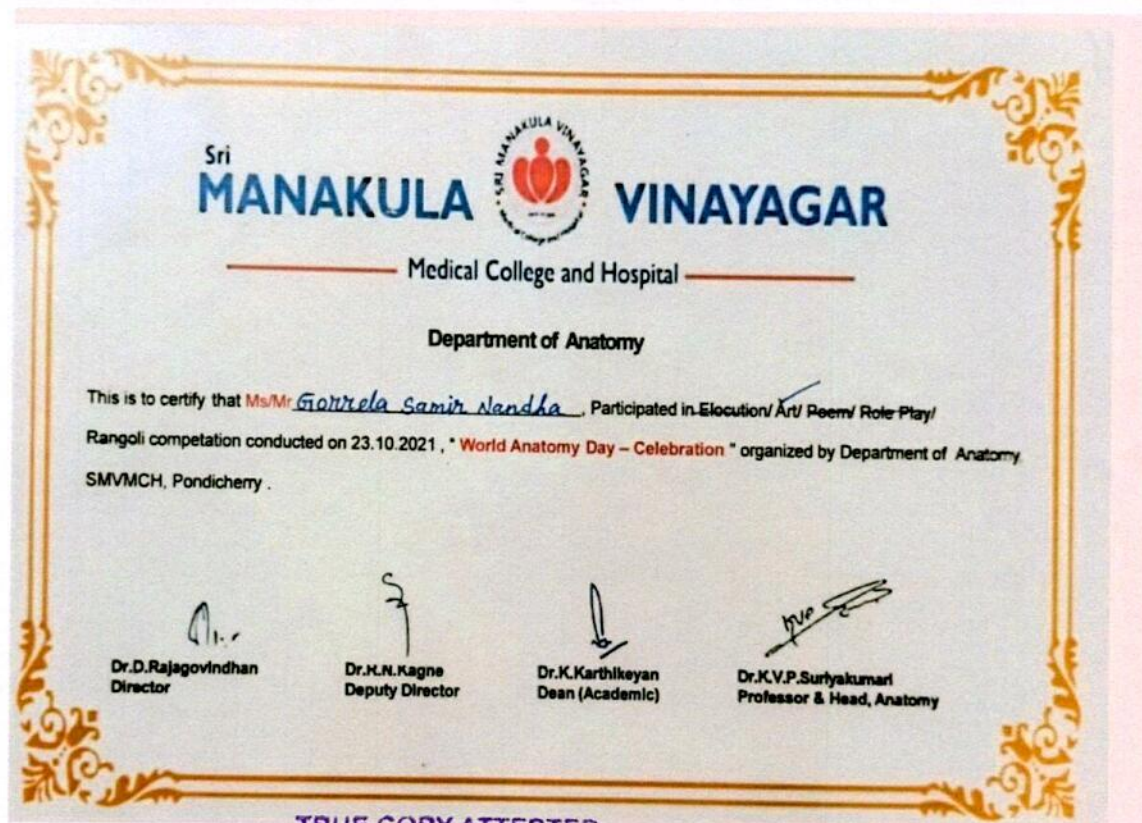
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# Department of Pathology

## Lesson plan

Name of faculty: Dr.Vimal. M

Batch: 2020 batch

Date: 18.11.2022

Time: 3.00 – 4.00 pm

Duration of session: 1 hour

Competency No & Topic: PA: 27.5 , Myocardial infarction

Teaching learning method adapted: Problem based learning

Objective: At the end of the theory session the Phase II MBBS students should be able to

- Describe about etiopathogenesis and morphology of ischemic heart disease
- Describe about diagnostic tests and complications of ischemic heart disease

Time	Content	T-L method
10 minutes	Pre test	Answer sheets
5 minutes	Case scenario of myocardial infarction	Chart
5 minutes	Introduction about ischemic heart disease	Small Group discussion
15 minutes	Etiopathogenesis and morphology of ischemic heart disease	
10minutes	Clinical features, diagnostic tests and complications of ischemic heart disease#	
10 minutes	Post test	Answer sheets
5 minutes	Summary	Orally and by interaction

*Vimal*  
Signature of Faculty

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*Kalitha*  
Signature of HOD

PROFESSOR & HEAD  
DEPARTMENT OF PATHOLOGY  
SMVMC & H  
PUDUCHERRY



Competency No & Topic: PA: 27.5 , Myocardial infarction

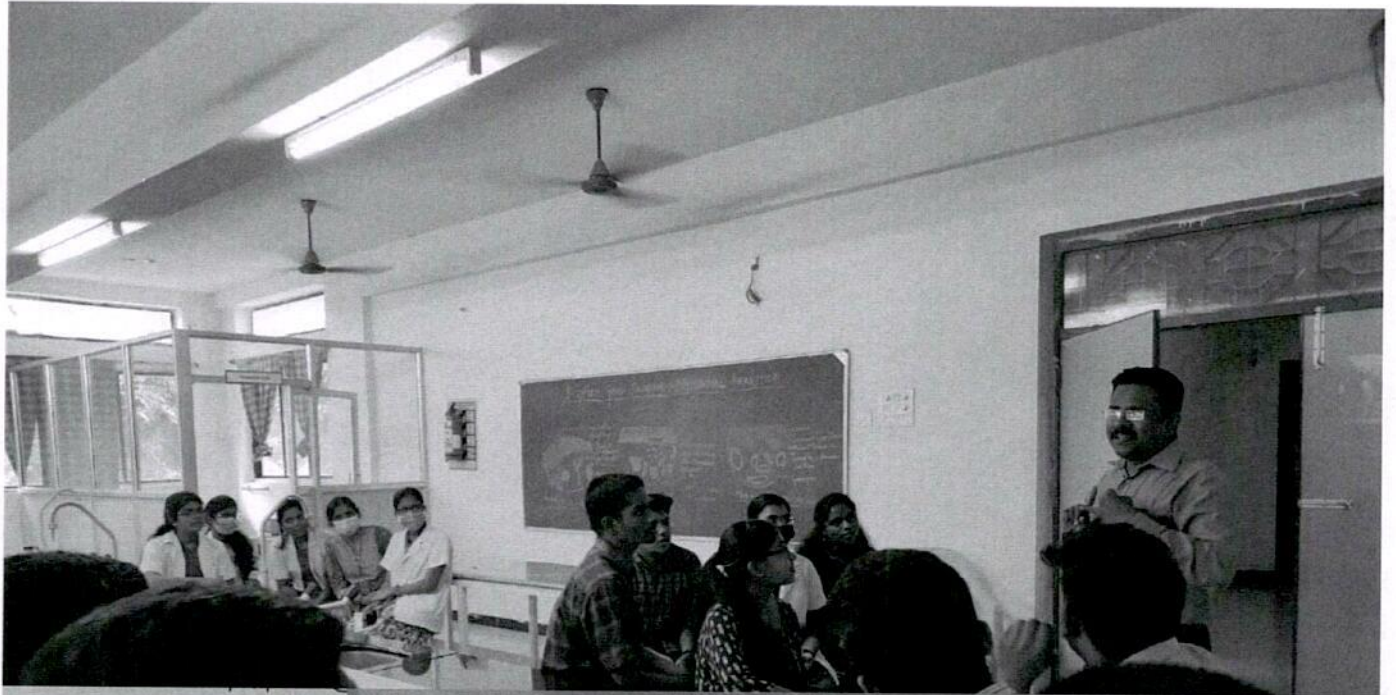
Date: 18.11.2022

R.No	Student Name	Signature
61	Kanmaniarasi S	
62	Kaviya Priya A	Kaviya A.
63	Kiruthivasan R	Kiruthi
64	Kishore R	
66	Laksha P A	Laksha
67	Lakshya M R	Lakshya M.R
70	Lokesh Balaji R	Lokesh Balaji R.
71	Madhavan H	Madhavan
73	Maragathapriya E	Maragathapriya E
74	Melanie Mariyam Nobel	Melanie Nobel
75	Menaga R	Menaga R.
76	Menagadevi B	Menagadevi B.
77	Mirudhula B	Mirudhula B.
78	Mohamad Aslam	Mohamad Aslam
80	Moulika Krishna	Moulika Krishna
81	N Nashrath Benazir	N Nashrath Benazir
82	Nambu R	Nambu R.
83	Nandhini G	Nandhini G.
84	Narun B V	Narun B V.
86	Naveen Saravana M	Naveen Saravana M.
87	Nimisha Justin	Nimisha Justin
88	Nithesh G V	Nithesh G V.
89	Piraveen Raj R	Piraveen Raj R.
90	Pooja R	Pooja R.
91	Prabhu L	Prabhu L.
92	Prithviraj R	Prithviraj R.

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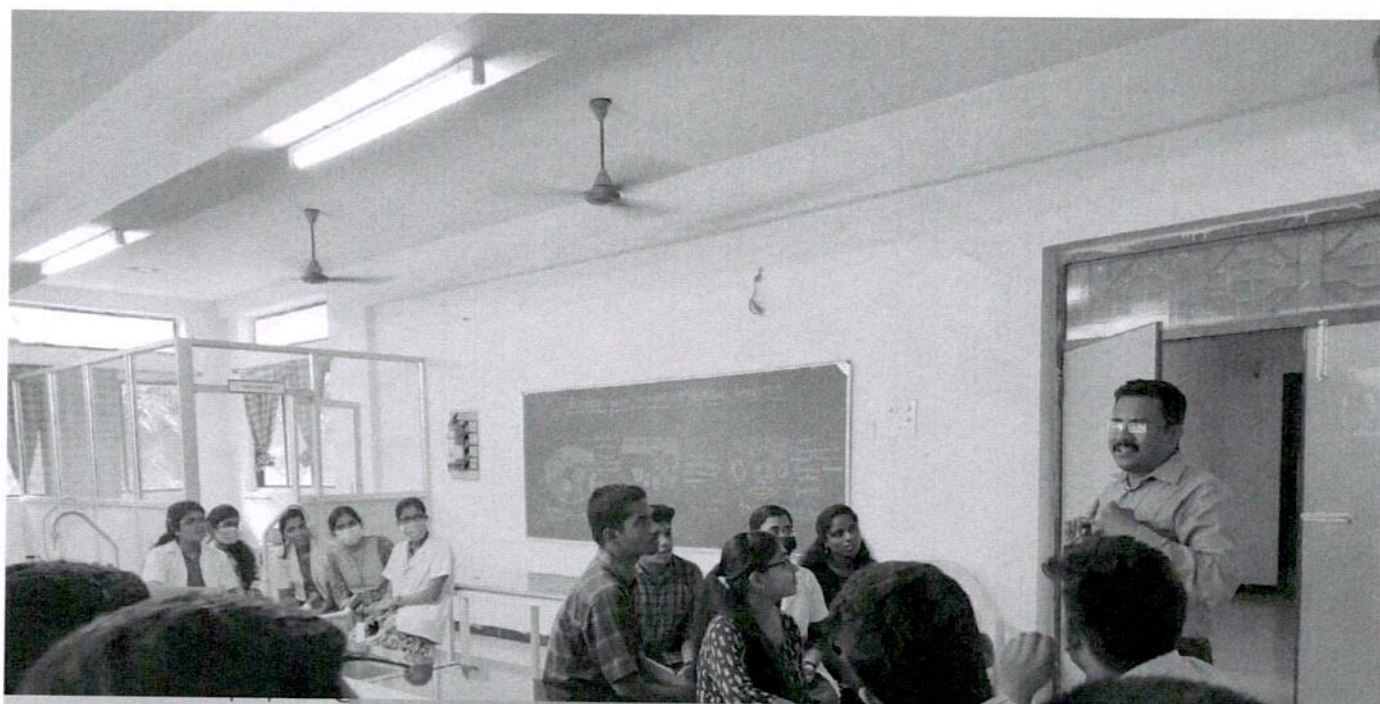
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# Student support system for medical undergraduates: A qualitative exploration of stakeholder perspectives

Mourougessine Vimal, Amol Rambhau Dongre<sup>1</sup>, Anandabaskar Nishanthi<sup>2</sup>, Rajendrakumar Nivaratirao Kagne<sup>3</sup>

## Abstract:

**BACKGROUND:** The demands and learning challenges in medical schools are not efficiently overcome by all learners. Despite the gravity of the problem, there is a dearth of studies to identify, define, and address the needs of learners. Thus, the present study was designed to do a situational analysis to identify and define the problems of learners and to develop a model for student support system in our institution.

**MATERIALS AND METHODS:** A phenomenological type of qualitative research was undertaken. One-to-one in-depth interviews (IDIs) were conducted, 10 each among undergraduate medical students, faculties and parents ( $n = 30$ ) to understand the problems of students and their suggested solutions from each one's perspective. The interviews were audio-recorded, transcribed verbatim, and manual thematic analyses were performed.

**RESULTS:** Manual thematic analysis of the transcripts yielded 16 subcategories and 7 categories. The various categories that emerged are (1) curriculum related; (2) interpersonal adjustment problems; (3) personal issues and family problems; (4) cognitive learning disabilities; (5) poor organizational skills; (6) students' lack of motivation; and (7) miscellaneous. Based on the problems and their suggested solutions, a model for the essential components of a student support system for our college was developed. It outlines the principal roles of four key stakeholders, namely students, faculties, parents, and college administration.

**CONCLUSION:** It has been found that students face various academic problems, personal, interpersonal and family level issues. We developed the support system model suitable for our context. In future, it may be implemented and evaluated to check if it achieves the desired purpose.

## Keywords:

Learners' problems, medical education, student support

## Introduction

The medical education system is framed in such a way as to impart the necessary knowledge, skills and attitude to the undergraduate students and develop them as competent doctors. These students are diverse with respect to their socio-economic and cultural backgrounds, which creates differences in their learning

abilities, especially in a country like India. Furthermore, the demands and learning challenges in the medical schools are not efficiently overcome by all learners. Majority of them face challenges like academic, personal or financial problems, which lead to undue stress among them.<sup>[1-3]</sup> However, at many institutions, there are no student welfare systems for providing support to the medical students, especially during their stressful periods and failure times.

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Departments of Pathology,

<sup>1</sup>Community Medicine,

<sup>2</sup>Pharmacology and

<sup>3</sup>Forensic Medicine,

Sri Manakula Vinayagar

Medical College and

Hospital, Puducherry, India

Address for

correspondence:

Dr. Mourougessine

Vimal,

Professor, Department of

Pathology, Sri Manakula

Vinayagar Medical College

and Hospital, Puducherry,

India.

E-mail: drvimalm@gmail.

com

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These students, if not supported at the right time gets demotivated and demoralized leading to shattering their self-confidence, and their personal and professional development gets stunted. They ultimately succumb to this vicious cycle of failures and it poses a big challenge to rebuild their self-confidence and rescue them at this stage. It can even lead to noncompletion of the course and drop out from medical college.<sup>[4]</sup>

Thus, there is a need for the development of a student support system in every medical college to identify and support the learners who face problems during their medical education. A good student support system is designed to meet the academic and personal needs of the student. The goal of the student support system is to promote a friendly learning environment for the students so that they develop personally, emotionally, intellectually, and academically and motivate them to succeed in life. This requires a thorough analysis of the problems faced by the learners of the concerned medical college (needs assessment), followed by the formulation of a student support program. Despite the gravity of the problem, there is a dearth of studies in India to identify, define, and address the needs of learners. Thus, the present study was designed to do a situational analysis to identify and define the problems of learners and to develop a model for the student support system to address these problems in our institution.

## Materials and Methods

### Study setting

This study was carried out in a private medical college, which admits 150 undergraduate medical students per year from all over India. The college currently has a structured student support system with the functioning mentorship program for undergraduates, regular parents-teachers meeting, and student's grievance cell. Currently, we are in the process of National Assessment and Accreditation Council (NAAC) accreditation and thus, are in the process of strengthening our student support system, which is one of the standards in the accreditation process.

### Study design

It was a phenomenological type of qualitative research study. Phenomenological approach was chosen because it helps to bring forth the current personal experiences of people from their own perspectives.<sup>[5]</sup>

### Sample size, sampling, and study participants

The study participants were 10 each of undergraduate medical students, faculties, and parents. Thus, a total of 30 participants were interviewed.

We have done an extreme type of purposive sampling<sup>[6]</sup> by identifying the 2<sup>nd</sup>-year MBBS students who have

been consistently performing lesser than 20% in their internal assessment examinations and with low attendance percentage in all the subjects of the 2<sup>nd</sup> year. A total of 17 such students were identified, 10 agreed to participate, 4 refused, and 3 were reluctant to participate. Thus, the overall response rate was 58.8%. Parents of the corresponding low achiever students were approached during the parent-teacher meeting for the interview. Either the father or mother of the student, whoever came for the meeting and who consented for the interview was interviewed. Faculties who were in-charge/mentors of low-achieving students in the pre and para-clinical departments were identified and those who were vocal and willing to share their perspectives on the problems of the learners were interviewed, including an administrator.


### Justification for the adequacy of sample size

The minimum size of a purposive sample needed to achieve theoretical saturation is approximated between 20 and 30.<sup>[7,8]</sup> In our study, the interviews were conducted till the point of saturation, i.e., after 8 interviews each with students, faculties, and parents, no new additional information was obtained. Thus, after 24 interviews, no new ideas or concepts emerged, and saturation occurred. However, since 30 participants consented for the study, all of them were interviewed.

### Data collection

The study was initiated after obtaining approval from our Institutional Ethics committee (IEC code: SMVMCH-ECO/AL/66/2018).

Informed consent was taken from all the study participants. One-to-one in-depth interviews (IDIs) were conducted with a semi-structured interview guide. Semi-structured in-depth interview technique is a versatile approach which enables the establishment of good rapport between the participant and interviewer, thus helping in the generation of insightful responses and high-quality data.<sup>[9]</sup> A separate interview guide consisting of broad-opened questions with situational probes was prepared for the students, faculties and parents. The contents of the interview guide were validated by the second author, who was experienced in the field of qualitative research and also holds masters in health profession education. The first author, who was trained in qualitative methods, carried out one to one interviews with the various stakeholders. Each interview lasted for about 30–45 min. The interviews with the students were conducted on evenings and holidays, with the faculties during their convenient timings, and with the parents during the parent-teacher meeting. Adequate information was provided to the participants about the study. The venue of the interview was chosen by the participants as per their convenience, and privacy was ensured during

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the interview process by making sure only the interviewer and participant were present throughout the interview process. The interviews were conducted in English except for six of the parents, who was interviewed in the Tamil language as per their convenience. In case of emotional outbursts of the participants during the interview process, comfort was ensured and their consent whether to proceed with the interview was again asked for. At the end of the interview, the key findings were summarized to the participant for their validation. All the permissions required before, during and after the conduct of the study were thus obtained.

### Data analysis and interpretation

The following stepwise approach representing the Colaizzi process for phenomenological data analysis was employed in this study. The interviews were audio-recorded and transcribed verbatim by the first author. During transcription, personal details of the participants were anonymized. The transcripts were prepared as soon as possible, preferably within 1 week of the conduct of interviews. The six interviews conducted in the Tamil language were translated to English by the first author, who was well versed in both languages. Manual thematic analyses of the transcripts were performed by the first and third authors, who were trained in qualitative data analysis. The authors together coded significant text information in the transcript. The codes belonging to similar areas were clubbed together to form subcategories of problems faced by learners and their solutions. Finally, similar sub-categories were grouped to form categories. The codes, sub-categories, and categories were reviewed by the second and the fourth author for ensuring the validity of the interpretations in our context. The statements in Italics represent the direct quote from the participants. In order to explore the patterns, the content analysis was done using the framework approach to find out the frequency of contribution by various stakeholders to various categories.<sup>[10]</sup>

Various strategies were employed to ensure the trustworthiness of the qualitative data [Annexure 1].<sup>[11,12]</sup> Credibility of the data was ensured by prolonged engagement with the participants, persistent observation, data triangulation, investigator triangulation and member check. Moreover, a detailed description of the study methodology ensured transferability; and maintenance of audit trail ensured dependability and confirmability. The study findings are reported according to the "Consolidated Criteria for Reporting Qualitative Research" guidelines.<sup>[13]</sup>

### Results

Each interview lasted about 30–45 min. Equal number of male and female undergraduate students were

interviewed (each  $n = 5$ ). However, more male participants were interviewed among the faculties (male:female = 6:4) and parents (male: female = 7:3). The participants' age ranged from 19 to 21 years for students; 29–55 years for faculties; and 45–59 years for parents. Manual thematic analysis of the transcripts yielded 16 sub-categories and 7 categories. Statements in Italics indicate direct quotes or verbatim responses from the participants.

### Category 1 – Curriculum-related problems

The students and faculties perceived that vast curriculum and noninteractive teaching methods as key problems faced by the learners. The possible solutions suggested were shown in Table 1. However, parents did not recognize any curriculum-related problems of the learners.

With reference to curriculum-related problems, a female student said *"I just can't cope with the huge syllabus and complex terms"*.

As a solution for the problem of vast curriculum, a female faculty told "Trained subject experts can be allotted for students facing problems. When an additional academic mentor takes responsibility for such students, they become more aware of the strengths and weaknesses of the students and will be in a better position to guide them."

### Category 2 - Interpersonal adjustment problems/ poor social skills

All three stakeholders were aware that maladjustment with classmates/roommates/friends/seniors/juniors contributed as obstacles to learning and they suggested counseling, conflict resolution/grievance addressal and teaching interpersonal and communication skills as some of the possible solutions [Table 1].

A female student said "My study times are not matching with that of my roommate, which is causing a lot of conflict between us. I study late at night, whereas she wants me to switch off the lights so that she can sleep and wake up early to study."

Another female student said "I feel other students are isolating me because I am not good in studies. They do not share any study-related information with me and I always feel left out."

### Category 3 - Personal issues and family problems

The students felt that maladjustment to college hostel life and food, personal health issues of the learner, distractions, language barriers for the nonnative students, family problems, and financial problems as key problems they face with respect to the theme on "personal issues

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Table 1: Categories 1 and 2-Curriculum related and interpersonal adjustment problems faced by the learners and their suggested solutions

Sub-categories	Problems of learners	Solutions for the problems
<b>Category 1-Curriculum related problems (S, F)</b>		
Vast curriculum (S, F)	Voluminous subjects (S, F)	Orientation to
	Difficult terminologies (S)	Curriculum requirements and assessment methods (S, F)
	Lack of knowledge on what and how to read (S)	Medical terminologies (S)
	Difficulty in adapting to the course and its contents (F)	Teaching faculties and teaching methods (F)
		Future career pathways (F)
		Revision classes by faculties before the exam (S)
		Teaching stress and time management (S, F)
		Inculcate self-directed learning and peer assisted learning (F)
		Faculty mentors for guidance (S, F)
		Training of faculty mentors (F)
Noninteractive teaching methods (S, F)	Some teachers teaching very fast (S)	Incorporation of student friendly teaching-learning methods (S, F)
	Some lectures not interesting (S)	Case/clinical scenario based teaching (S, F)
	Students are not attentive in classes (F)	Group activities/Small group teaching (S, F)
		Incorporation of fun in learning eg.puzzles, quizzes (S, F)
		Encouraging doubts from students (F)
		Increasing peer interaction (F)
		Increasing faculty-student interaction (F)
<b>Category 2-Interpersonal adjustment problems/poor social skills (S, F, P)</b>		
Maladjustment with classmates/roommates/friends/seniors/juniors (S, F, P)	Frequent fights with friends/roommates (S)	Counseling the students by faculties, mentors or counselors (S, F)
	Feeling of being isolated from peers (S)	Conflict resolution/grievance addressal by faculties, mentors or warden (S, F)
	Not being informed of educational information by friends (S)	Maintaining good relationship with peers (S)
	Study times of roommates does not match, causing conflicts (S)	Teaching interpersonal skills and communication skills (F)
	Friends are not trustworthy (S)	Monitoring by faculties and warden (P)
	Not able to build good rapport with friends (F)	
	Not mingling with other students (P)	
	Issues with roommates (P)	
Maladjustment with some faculties (S)	Spoiled by friends (P)	
	Some faculties are strict and non-approachable (S)	Some faculties can be more student friendly (S)
	Unable to follow lectures of some teachers (S)	

S=Students' perspective, F=Faculties' perspective, P=Parents' perspective

and family problems". Though the parents perceived the same problems, they did not realize that family problems and language barriers hindered the learning process of the students. Furthermore, the faculties did not realize that language barriers, family problems, and financial problems deterred the students from learning. The various solutions for these problems mentioned by the stakeholders are shown in Table 2.

With regard to the problem of distractions, a male student told "I forget things around me and have lost many days when I play video games". Another male student said "I am missing my home food when I am in the hostel."

As a recommendation to tackle students' problems, a male faculty said "Suggestion boxes can be kept at various places in the college and hostel to get anonymous feedbacks from students about the problems they are facing."

#### Category 4 - Cognitive learning problems

The students and faculties mentioned cognitive learning problems such as inability in comprehension and memorization, basic knowledge gaps, ineffective learning techniques, and poor language skills (both English and the Tamil language). Various solutions suggested for tackling these problems are shown in Table 3. On the contrary, parents did not recognize this domain as a potential problem of the learners.

A male student said "How much ever I read, I am not able to recall and write in the exams".

#### Category 5 - Poor organizational skills

All three stakeholders realized that poor study habits as one of the major problems faced by the learners. In contrast, only the students and faculties recognized poor exam writing skills of the students and the parents were



Table 2: Category 3-Personal issues and family problems faced by the learners and their suggested solutions

Sub-categories	Problems of learners	Solutions for the problems
Maladjustment to college hostel life and food (S, F, P)	Feeling homesick (S, F, P)	Counseling for homesickness (S, F)
	Taking time to adapt to hostel life and food (S, F, P)	Quality assurance of good food in hostel (S)
	Reading pattern different from peers/ hostel reading time (S)	Grievance addressal for problems relating to their education or stay in the campus/hostel (F)
	Lack of parental support and mentoring (F)	Strengthening of student council (F)
Health issues (S, F, P)	Suffering from acute and chronic illness (S, F)	Keeping suggestion boxes to get anonymous feedback from the students (F)
	Suffering from depression (S)	Counseling from mentors and faculties (S)
		Extra-classes for missed topics (S, P)
		Needs peer support and care (S)
Distractions (S, F, P)	Mobile phones, social media, video games and YouTube videos (S, F, P)	Routine premedical screening (F)
	Peer pressure-chatting and outings with friends (S, F)	Counseling for healthy life style (F)
	Listening to music (P)	Timely intervention-Referral to specialists (F)
		Provision of extra care by faculties, warden and college (P)
Language barriers (S)	Difficulty in coping with local language (S)	Counseling from mentors and faculties (S)
	Lack of fluency in English (S)	Student wellness enhancement programs (F)
		Organizing motivational talks by inspiring speakers (S, F)
		Health education programs regarding healthy lifestyle and work-life balance (F)
Family problems (S)	Illness/diseases in family member (s) (S)	Emphasizing on yoga, exercise, sports (F)
	Death of family member (s) (S)	Good sleeping habits (F)
	Parents facing difficulties in paying the college fees (S, P)	Emphasizing the hazards of overuse of mobile phones and videogames (F)
		Enlightening on the dangers of using social media (F)
Financial problems (S, P)		Use of mobile jammers in the hostel during study hours (F)
		Faculty and warden can monitor the students (P)
		Language support (S)
		Help from peers (S)
Language barriers (S)		Counseling from mentors, faculties and support from peers (S)
		Extra-classes for missed topics (S)
		Financial assistance and scholarship can be given (P)

S=Students' perspective, F=Faculties' perspective, P=Parents' perspective

unable to perceive it. The recommendations provided by the respondents are outlined in Table 3.

A male student said "If faculty prepares a study schedule for us, we will be able to read according to it." A female student said "Hostel warden can monitor us during our study hours so that my friends will not disturb me when I am studying."

#### Category 6 - Students' lack of motivation

All the stakeholders opined that lack of motivation of the students as a major contributing factor for learners' problems. The respondents opined that counseling, motivation, and stress management programs would pave the way for their positive attitude towards studies [Table 3].

A male student said "I was interested to join engineering. However, my parents forced me to join MBBS."

A female parent said "My son gets very angry whenever I ask him about his marks."

#### Category 7 - Miscellaneous problems

The faculties felt that the pressurizing attitude of some parents to get high marks could be detrimental to the student's learning, which can be mitigated by educating the parents regarding the nature of MBBS course and organizing frequent parent-teachers meetings. The parents were of the notion that the lack of information about their child's performance in college leads to reduced parental support for the children. They advocate that frequent and periodic updates of the child's performance from the institution would benefit them in guiding their children. They also suggested that the Hostel warden should give special care for the students staying in hostels.

Framework analysis illustrating the contribution of various stakeholders to the generation of various subcategories and categories are shown in Table 4. In short, only the students mentioned the problems of language barriers and family problems, whereas other stakeholders did not recognize this domain as a

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**Table 3: Categories 4, 5 and 6-Cognitive learning problems, poor organizational skills and lack of motivation by the learners and their suggested solutions**

Sub-categories	Problems of learners	Solutions for the problems
<b>Category 4-Cognitive learning disabilities (S, F)</b>		
Cognitive learning disabilities (S, F)	Not able to learn/comprehend information fast (S, F)	Re-emphasizing the complex concepts by faculties especially by small group teaching (S)
	Not able to memorize lots of information (S)	Teaching memorization techniques and mnemonics by faculties (S)
	Gaps in basic knowledge/fundamentals taught in school education (F)	Counseling and referral to specialists (F)
	Lacked the basic concepts in learning techniques and poor language skills (F)	Proper premedical screening (F)
<b>Category 5-Poor organizational skills (S, F, P)</b>		
Poor study habits (S, F, P)	Waited for study holidays to read (S)	Training on good study habits by faculties and mentors (S)
	Not reading well in advance of the exams (S, F, P)	Individualized study schedules for each student can be prepared by the faculty-in-charge or mentor (S)
	Lack of regular habit of reading textbooks (F)	Allotting warden monitored study hours (during evening hours) in college campus for hostellers (S)
	Lack of in-depth reading of concepts (F)	Inculcate the book reading habit among students (F)
Poor exam writing skills (S, F)	Not reading from standard textbooks (F)	Students should be emphasized the importance of studying everyday by the faculties and should be monitored (P)
	Not able to manage time during exams (S, F)	Training on exam writing skills, including time management, by faculties and mentors (S, F)
	Bad handwriting of students (F)	
	Presentation in exam papers not good (F)	
<b>Category 6 -Students' lack of motivation (S, F, P)</b>		
Students' lack of motivation (S, F, P)	Joined Medicine due to parental pressure (S)	Counseling by faculties, mentors and counselors (S, F)
	Feeling anxious before exams (S)	Motivational programs (S, P)
	Feeling depressed and stressed out (S, P)	Career counseling regarding importance of medical field and future opportunities (F)
	Feeling of not belonging to the group/mainstream (S)	Relaxation/stress management programs can be conducted (P)
	Did not take exams seriously (S)	
	Not interested in studying medicine (F)	
	Lack of self-confidence (F)	
	Lack of motivation (F)	
	Feeling irritable/aggressive/agitated when asked about studies (P)	

S=Students' perspective, F=Faculties' perspective, P=Parents' perspective

potential problem of the learners. Similarly, only the faculties mentioned the pressurizing attitude of some parents and only the parents mentioned about the Lack of information about student performance in college, causing reduced parental support. The parents were not aware of the curriculum-related problems and maladjustment with the faculty. Overall, stakeholders seemed unaware or less sensitive to mutual problems.

### Discussion

The in-depth interviews with the students, faculties, and parents showed that problems faced by the undergraduate medical students varied with the perspective of each stakeholder. It was interesting to find that all the categories were contributed by all the three stakeholders except parents who did not mention about curriculum-related problems and cognitive learning disabilities among students. Similarly, students did not contribute to the miscellaneous category.

Various solutions were suggested by the stakeholders to address the problems faced by the learners. These solutions were regrouped and reflected upon to develop the proposed model of a student support system [Table 5]. This is a team-based model, which has 4 key stakeholders (students, parents, teachers, and college administration) who form the backbone in the development and implementation of the support system in any institution. All the stakeholders should understand each others' roles and expectations for meaningful and informed decision-making for problem-solving. Thus, this model is similar to the "sounding board" approach (Rogerian approach) to mentoring and counseling.<sup>[14]</sup> It is based on students' current experience of problems, and teachers play the role of facilitators to support and help students to solve their own problem.

Although certain institutions and universities offer student support services globally, there is scanty literature on the development of student support



**Table 4: Framework analysis illustrating the contribution of various stakeholders to the generation of various sub-categories and categories (n=30)**

Category	Sub-category	Students (n=10)	Faculties (n=10)	Parents (n=10)
Curriculum related problems	Vast curriculum	10	9	0
	Non-interactive teaching methods	9	9	0
Interpersonal adjustment problems/poor social skills	Maladjustment with classmates/roommates/friends/seniors/juniors	10	9	8
	Maladjustment with faculty	8	0	0
Personal issues and family problems	Maladjustment to college hostel life and food	9	9	9
	Health issues	8	8	9
	Distractions	10	10	10
	Language barriers	8	0	0
	Family problems	9	0	0
	Financial problems	8	0	8
Cognitive learning disabilities	Cognitive learning disabilities	10	8	0
Poor structural and organizational skills	Poor study habits	10	10	9
	Poor exam writing skills	10	9	0
Students' lack of motivation	Lack of motivation in students	9	9	8
Miscellaneous	Pressurizing attitude of some parents	0	7	0
	Lack of information about student performance in college causing reduced parental support	0	0	9

**Table 5: Components of the proposed student support system emphasizing the role of various stakeholders****Faculties and College administration**

Programs: on orientation to course, mentorships, students wellness enhancement, faculty development

Training: on soft skills, counseling and conflict resolution, good study habits, exam writing skills

Support: Medical care, Scholarships

Teaching learning environment: Student friendly, additional classes for problem learners, revision classes before exam, conducive environment in hostel

Appraising parents on nature of course and regular feedback of students performance

**Students**

Counseling, peer support and care, helping in understanding local language

Help faculties or mentors in identification of students with problems

Helping peers in reading topics that they had missed since they were absent due to personal or family issues

Cordial relationship with peers and helping them during their tough times

**Parents**

Counseling for homesickness

Understanding nature of the MBBS course and prevent from putting undue pressure on students

Monitoring educational performance of their child and undertake corrective measures

Providing emotional support and care during their child's difficult times

systems for medical students in India. Moreover, the majority of the studies were focused on identifying and improving only the problem learners, unlike the present study, which aimed to propose a model for centralized student support systems and services for 1<sup>st</sup> and 2<sup>nd</sup>-year undergraduate medical students.

The results of this study were consistent with the findings of similar studies. A study by Hays *et al.* identified that immaturity, poor learning skills, poor organizational skills, transient personal crises, poor mental health, and poor English were the most prevalent issues for which students sought support.<sup>[15]</sup> A questionnaire-based study from Saudi Arabia demonstrated that peer competition, Poor English language skills, heavy curriculum, work

stress, lack of knowledge on study materials, lack of time for family and social life, and stress and anxiety were the highly ranked problems.<sup>[16]</sup>

A study by Vaughn *et al.* described four classes of problem learners among medical students (affective, cognitive, structural, and interpersonal class), which is congruent with the findings of the present study and proposed S-T-P model [specify the problem (S); desired target state (T); and procedure, plan, or path to get from S to T (P)] to provide solutions for the problem learners.<sup>[17]</sup> Similarly, Steinert has described a framework for a medical student support system for undergraduate and postgraduate problem learners, from identification and definition of their problems to addressing the same.<sup>[18]</sup>

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SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE AND HOSPITAL  
KALITHEERTHAL KUPPAM,  
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The Foundation Course of the Competency-Based Medical Education (CBME) curriculum proposed by the Medical Council of India (MCI), offers an ideal platform to implement the components of the student support system in every institution. NAAC,<sup>[19]</sup> in its Guidelines for Assessment and Accreditation, insists "Student support and Progression" as one of the seven criteria which represent the core function and activity of a higher education institution. The council warrants each institution to have well structured, organized guidance, and counseling system. NAAC suggests that each institution should identify the reasons for poor attainment of the students, and should implement remedial measures. It also lays emphasis that institutions should promote active participation of the students in leisure activities, which can foster their holistic development.

Many medical schools worldwide have student support services, with some countries requiring it as a mandate as per their regulations. However, their effectiveness and practical utility has not been widely studied. A study to evaluate the effectiveness of student support services in a university in the United Kingdom showed equivocal results on the support provided by personal tutors, and lack of usage of career and counseling services by the students.<sup>[20]</sup> The student mentorship program, which was one of the essential components of the student support system proposed in our study, was shown to be effective in a study by Robertson *et al.*<sup>[21]</sup> However, the effectiveness of other components of the student support system remains obscure and requires further investigation.

The World Federation for Medical Education (WFME),<sup>[22]</sup> in its Global standards for quality improvement in basic medical education emphasizes that every medical school should have provisions for student support systems and services. Such system should render academic counseling, which would include appointing academic mentors for individual students for their residence preparation and career guidance. The institution should also render professional support in relation to social, personal, health, and financial problems. WFME also emphasizes the need for the allocation of resources for the implementation of the student support system by the institution.

The limitation of our study was that we used purposive sampling and this could have led to the exclusion of the views of those who were not selected. Furthermore, the authors acknowledge that this proposed student support system model is just guidance for the components to be incorporated in the system and every institution has to adapt it to suit their local needs. Moreover, with regard to the transferability of the data, the authors have given a detailed description of the context so that the readers

can make decision about the suitability of study findings to their context.<sup>[11]</sup>

## Conclusion

Medical students face problems related to vast curriculum, poor social skills/interpersonal adjustments, personal issues and family problems, cognitive learning problems, poor organizational skills, students' lack of motivation, which hinders the quality of their learning. The proposed model of the student support system outlines the principal roles of four key stakeholders, namely students, faculties, parents and college administration. Further research is required on the means of implementing (pilot testing) each component of the student support system, its cost, feasibility, acceptability, sustainability, and effectiveness in improving students' learning performance. We developed the support system model suitable for our context, which is aligned to students' current problems.

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## Annexure

Annexure 1: Strategies employed to ensure the trustworthiness of the qualitative data

Criteria	Strategy	Description of the strategy
Credibility	Prolonged engagement	The researcher conducted an in-depth interview for as long as the participant was consenting to give information. The researcher used probing questions and encouraged the participants to explain their stand by giving examples.
	Persistent observation	Semi-structured audio recorded interviews were heard many times and the transcripts were read repeatedly by the first and third authors. The emerged codes, categories and themes were discussed with the other authors and recoded and revised time and again to provide the intended depth of insight
	Data triangulation	The data was gathered from purposively selected 3 types of stakeholders namely students, faculties and parents. Thus, data triangulation in terms of person was performed.
	Investigator triangulation	Manual thematic analyses of the transcripts were performed by the first and third authors, who were trained in qualitative data analysis. The codes, categories, and themes were reviewed by the second and fourth authors for ensuring validity of the interpretations in our context.
Transferability	Member check	At the end of the interview, the salient points were summarized to the participants and their consensus regarding the researcher's interpretation was sought. In case of any discrepancies, the participant's view was listened to in great detail and necessary modifications were made to the transcript by the researcher
	Detailed description	Detailed description of the study setting, design, participants, data collection, data analysis and interpretation has been provided which would help the reader to understand the context of the study. It will also aid them in judging whether the results would be applicable in their setting.
Dependability and confirmability	Audit trail	A detailed account of the interviews, their raw data, transcripts, analysis notes, coding notes, categorization and theme generation has been preserved by the researchers.

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# Sri Manakula Vinayagar Medical College and Hospital

Kalitheerthalkuppam, Madagadipet, Puducherry - 605 107.

**STUDENT BIO - DATA**

**UG: 2019 - 2024**

ENROLLMENT NO / ADMISSION NO:

NAME :

(10+2) Marks : Phy  Chem  Bio  Zoo  Eng  NEET   
Bot  Score

FATHER Name:

MOTHER Name:

Occupation :

Occupation :

Mobile number :

Mobile Number :

Email ID :

Email ID :

Date of Birth:

Age :

Sex:  MALE / FEMALE

Blood Group

Community

Religion

Mother Tongue

Adhaar No

Year of Admission

☐ CENTAC  
☐ GOVT. / ☐ MANAGEMENT

☐ NRI

Permanent Address

Communication Address

Landline Phone Number

Student Contact Number & Email ID

Local Guardian (if any)

Name :

Mobile Number :

Email ID :

Change of address/mobile number/ email ID should be intimated to office immediately.

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**DENNIS CONGO STUDY**

TEXT BOOK READING (40)	NOTE TAKING (25)	MEMORY (45)	TEST PREPARATION (65)	CONCENTRATION (50)	TIME MANAGEMENT (30)

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Dr. KAOHE. R.N  
DEAN  
SRI MANAKULA VINAYAGAR  
MEDICAL COLLEGE & HOSPITAL  
KALITHEERTHAKUPPAM,  
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INTERNAL MARKS AND ATTENDANCE PERCENTAGE

MONTH	ANATOMY			PHYSIOLOGY			BIOCHEMISTRY		
	Theory %	Practical %	Attendance %	Theory %	Practical %	Attendance %	Theory %	Practical %	Attendance %
OCTOBER									
NOVEMBER									
DECEMBER									
JANUARY									
FEBRUARY									
MARCH									
APRIL									
MAY									
JUNE									
JULY									
AUGUST									
AGGREGATE									

DR. KAGNE R.N

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PUDUCHERRY-605007.



**STUDENTS SUPPORT PROGRAMME - FEEDBACK FORM**

NAME OF THE STUDENT:

Reg. No.

Batch: 2019-24 Roll No:

Date	Perceived Strengths	Perceived Weaknesses	Student's Plan of Action	Mentor's Suggestion	Student's Signature	Mentor's Signature
October 2019						
November 2019						
December 2019						

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KALTHIEERTHAL KUPPAM,  
MADAGADI PET, PUDUCHERRY-605 107.

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Date	Perceived Strengths	Perceived Weaknesses	Student's Plan of Action	Mentor's Suggestion	Student's Signature	Mentor's Signature
January 2020						
February 2020						
March 2020						

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Date	Perceived Strengths	Perceived Weaknesses	Student's Plan of Action	Mentor's Suggestion	Student's Signature	Mentor's Signature
April 2020						
May 2020						
June 2020						

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Date	Perceived Strengths	Perceived Weaknesses	Student's Plan of Action	Mentor's Suggestion	Student's Signature	Mentor's Signature
July 2020						

Parents meeting to brief about the progress of their ward (On the last day of model theory examination afternoon session)

Date	Attendance	Performance	Strengths	Areas for improvement	Signature of Parent	Signature of Mentor

Dr. MAGNE. R.N

DEAN

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Students Support System      Parents - Mentor meeting – Attendance      Date: 20.01.2020

Roll No:      Name of the Student:  
Suggestion from the parents (with Signature)

Dr. M. S. S. S. S.  
SRI MANAKULA VINAYAGAR  
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**GOAL:**

To offer the holistic development of students and offer them support to meet their academic goals. This programme is based on **GROW model** - It is a four stage model, where mentor helps the learners to define goal, describe their current reality, consider the potential options and plan a way forward.

**OBJECTIVES:**

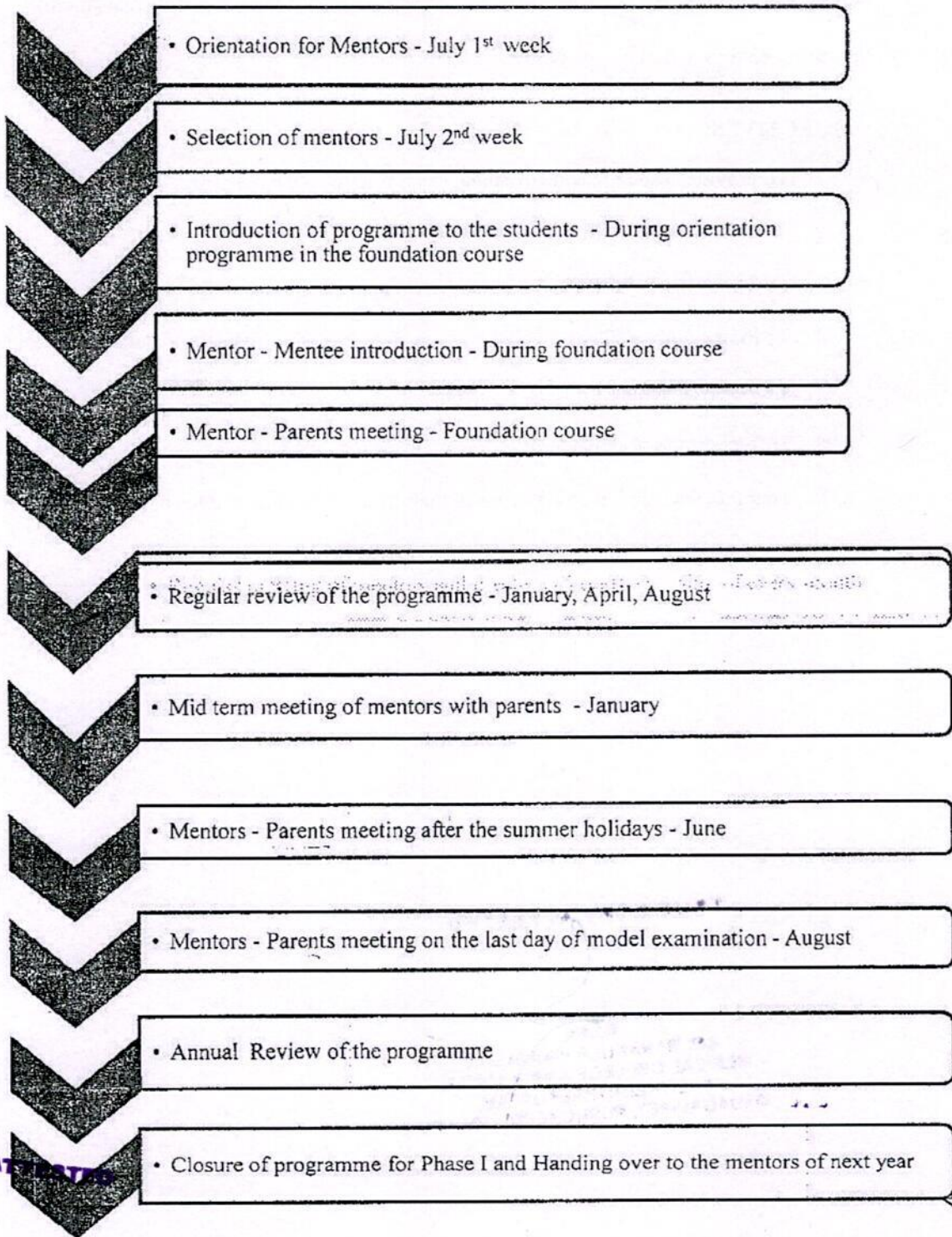
1. To provide academic and emotional support to the students
2. To help the students to identify their priorities and set their goals.
3. To facilitate the students in their career mapping.
4. To motivate the students to analyse their strengths and weaknesses and also to decide their plan of action for improvement.
5. To support the students in developing their affective skills
6. To guide the students to take care of their health problems and to solve their interpersonal issues.

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## PROGRAMME SCHEDULE



Training for mentors (July 1<sup>st</sup> week):

- ❖ All teaching faculty members will undergo an orientation about mentorship programme

Selection of mentors (July 2<sup>nd</sup> week):

- ❖ Ten faculty members of each phase who are oriented towards mentorship programme will be selected as mentors. Others will help in case of absence of any of the mentors.
- ❖ Each mentor will be assigned 15 students of his/her phase.

Introduction of programme to the students:

- ❖ This is done by the programme co-ordinator during the orientation programme in the foundation course through PowerPoint presentation. The objectives, structure and benefits of the programme and responsibilities of the mentees will be explained.

Mentor – Mentees Introduction:

- ❖ This is done at the end of foundation course. Mentees will meet their mentors personally. The mentors will start developing the rapport with mentees by making them to open up with their personal interests, apprehensions in their mind and expectations. Mentors can help their mentees to set their goals.
- ❖ The mentors will also share their experiences to motivate the students
- A proforma of personal details of the students will be obtained (Document attached)
- A guidelines document will be provided to the mentors (Document attached)

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Mentor – Parents meeting:

- ❖ The mentor will sensitize the parents about the programme and give the clear instructions

Regular meetings of mentors and mentees:

- ❖ The regular meetings between mentors and mentees have been scheduled on every fourth Saturday of each month from 2.30 to 4.30 PM.
- ❖ The academic performance and the regularity of the mentees will be discussed on the basis of their Internal Examinations mark percentage and monthly attendance percentage.
- ❖ The mentors will facilitate the mentees to perceive their weaknesses and strengths and to decide the plan of action for improvement
- ❖ The mentors will give suggestions based on the students' perception.
- ❖ Health issues and psychosocial issues of the students will also be addressed during the meetings
- ❖ A record of meetings, interactions and assessment of mentees will be maintained

➤ Documents have been attached

Review of the programme:

- ❖ Regular meetings of mentors with director and deans will be held in

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Mid term meeting of mentors with parents:

- ❖ The mentors – parents meet will be held in the month of January to notify the performance of their wards.
- ❖ Areas for improvement will be intimated to the parents

Meeting of mentors with parents after annual holidays:

- ❖ The mentors – parents meet will be held in the month of June when the mentees come back after summer holidays. The parents will be notified about their wards' current position

Mentors – parents meet at the end of the programme:

- ❖ Mentors will meet the parents again on the last day of the model examination of their wards.
- ❖ The parents will be briefed about the overall performance, regularity and behaviour of their wards which were monitored throughout the year.

Annual review of the programme:

- ❖ Feedback about the programme and mentor will be obtained from the students.

Handing over of the programme:

- ❖ The mentors will hand over the details of the mentees to the mentors allotted in the next phase.

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### DOCUMENTS ATTACHED

1. Foundation course time table
2. Guidelines to mentors
3. Students proforma of personal details
4. Students feedback form obtained during regular meetings
5. Parents meet attendance
6. Denis congo study skills score sheet
7. Monthly examination marks percentage and attendance percentage

Dr. KAGME, JLN

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# Sri Manakula Vinayagar Medical College and Hospital

Kalitheerthalkuppam, Madagadipet, Puducherry – 605 107.

**STUDENT BIO - DATA**

**UG: 2022 - 2027**

NAME :

(10+2) Marks : Phy  Chem  Bio  Zoo  Eng  NEET   
Bot  Score

FATHER Name :

MOTHER Name :

Occupation :

Occupation :

Mobile number :

Mobile Number :

Email ID :

Email ID :

Date of Birth:

Age :

Sex:  MALE / FEMALE

Blood Group :

Community :

Religion :

Mother Tongue :

Year of Admission :

☐ GOVT. / ☐ MANAGEMENT

☐ NRI

Permanent Address :

Communication Address :

Landline Phone Number :

Student Contact Number & Email ID :

Aadhaar Number :

Local Guardian (if any) :

Name :

Mobile Number:

Email ID :

Change of address/mobile number/ email ID should be intimated to office immediately.

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# Force Field Analysis

Date:

Forces favouring change	5	4	3	2	1	Goal	1	2	3	4	5	Forces resisting change	
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## **Learner's Profile**

### **Learning Style (Based on the VARK Questionnaire)**

V -                      A -                      R -                      K -

**Overall learning preference:**

### **Learning Approach (from ASSIST Questionnaire)**

Mean scores of

Deep Approach        :

Superficial Approach :

Strategic Approach    :

**Predominant Approach:**

### **Scores from Denis Congo Study Skills Inventory**

Text Book Reading    :                      (cut off : 30)

Note Taking            :                      (cut off: 20)

Memory                :                      (cut off: 30)

Test preparation       :                      (cut off : 40)

Concentration         :                      (cut off : 35)

Time Management     :                      (Cut off: 20)

### **Personality**

Johari Window        :

**Personality Type by**

**(Jung and Brigg Myer's Typology):**

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**Feedback Session (Phase I) – Parent – Mentor - Mentee Interaction**

Date of the Interaction	Student's Progress	Mentor's Suggestion	Outcome/ Progress of the Action plan	Signature of the Parent	Signature of the Mentor

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### Feedback Session (Phase I) – Mentor – Mentee Interaction

Date of the Interaction	Student's Plan of Action	Mentor's Suggestion	Outcome/ Progress of the Action plan	Signature of the Student	Signature of the Mentor

## Other Achievements

Before entering the Medical Profession

After admission into MBBS

S.No	Date of the event	Name of the Event	Nature of the Event	Venue	Details (Participation)	Details (Winner)

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