

Rational of Newer Teaching Techniques to Enhance Teaching - Learning in Kriya Shareer

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Abstract: To plan and organize, teaching of syllabus of subject Kriya Shareer in time-based educational system one must plan the teaching methods with latest techniques. In teaching Methodology, teaching can be done by two different ways i.e. Didactic and Non – Didactic Method. The Didactic method is basically instructive and mostly one way teaching. It can be Conventional or Non-Conventional. The Conventional method is the oldest form of teaching - learning method and commonly referred as black board-chalk method. The Non- Conventional method is through the use of Audio- Visual aids or LCD or e-learning techniques etc. The Non-Didactic Method is basically for practical and applied aspect of theoretical knowledge which includes two way teaching methods in which both teacher & learners participated actively. It can be through Lecture with Demonstration, Practical, Case studies, Tutorials, Seminars, Community based learning models, Problem based learning (PBL), Integrated Teaching Program (ITP) etc. 33% of Syllabus should be covered by Didactic method and remaining 67% should be covered by Non-Didactic method to achieve educational objectives.

Keywords: Didactic and Non – Didactic, Conventional and Non- Conventional, PBL, ITP, Tutorials, Seminars

1. Introduction

In recent decade the trend of education system has been changed from teacher centered to student centered. Learning relates to change in behavior [1]. When we as a teacher expect the change, that should reflects in gain in competency of students. For the said purpose we have to adopt different teaching strategies to teach them. To become a teacher and to be a teacher both are different things. If one should want to be teacher he must adopt a way to make learners to reach to the depth of knowledge & expert in competency [2].

Competency should reflect in terms of all the three domains: Cognitive, Psychomotor and affective. 'Knowledge' refers to the 'Cognitive domain', Skills refers to the 'Psychomotor domain' and behavior refers to the 'affective domain'. Also while assessing the student we assess the students in all the three domains. According to Bloom's Taxonomy cognitive domain has six levels viz. Knowledge, Comprehension, Application, Analysis, Evaluation and Synthesis [3]. Depending upon the levels of learning objectives we should change the strategy of teaching techniques.

In teaching Methodology, teaching can be done by two different ways i.e. **Didactic** and **Non – Didactic** Method. The Didactic method is basically instructive and mostly one way teaching. The Non- Didactic Method is basically for practical and applied aspect of theoretical knowledge & it is two way teaching method in which both teacher & learners get involved actively [4].

a) Didactic Method

1) Lectures

It is most common teaching method. It is the presentation of factual material in direct, logical manner. It includes basic information, concepts, introduction of any term, necessities of learning things i.e. purely theoretical knowledge is included in it. As per Bloom's Taxonomy the levels of cognitive domain as basic level of knowledge is been addressed by this method.

Advantages – It is useful for large group. It is very economical way of using time. It contains experience which inspires, motivate & sensitize the students in their pursuit of learning objectives. Hence it is good for introducing a new subject & topic. It stimulates thinking of the students to open discussion. It can provide up to date summary of topic from several sources other than text books, hence save learners time. It can clarify concepts and stress the main points means concepts like 'Why the Panchamahabhutas are only five?' 'What is the logic behind their sequence?' (Akash-Vayu-Teja-Jala-Prithvi is the only sequence. Why so?) These types of basic ideas clarify with in lectures only. As it is informative it is useful for higher level & lower level learners. But potential learners and under achievers required tutorials along with lectures.

Disadvantages (limitations)- The main focused limitation is passive nature of audience. It has limited feedback during lectures that lead to low receptivity. Hence relatively it is ineffective to judge problem solving abilities and skill of learners. It has one way communication. Teacher needs lecturing skill of high caliber to engage attention of learners for 45-60 minutes.

2) Method of Presentation

Begin by arousing interest, so that learners get involved into the theme. While proceeding for the concept of Prakriti one should have to start 'What is Prakriti?', 'What dose it means?' 'प्रकृति: तु स्वभावः' it means that 'स्वयं भावः' means it is our self identity. Prakriti is the information, coded on our genes at the time of formation. If one should try to tell them on the basis of today's science learners curiosity regarding subject increases.

Before starting lecture we should mention our aim and objectives. What is our aim to learn Prakriti analysis. What we achieve by this that we have to explain. While delivering the lecture we have to keep in mind the limitation of time. Lecture should not be too fast or too slow i.e. 100 words/minute is an average. We have to vary pace and loudness where ever required and avoid monotony. Lecture

should include examples so that its effect remains for a long time. Presentation should move from know to unknown i.e. from simple to complex. It should simulate learner to think. Intermittently try to get arousal feedback.

Scope as Teaching – Learning Method

Basic Principles of Ayurved, Introduction to concept of Dosha, Dhatu, Updhatu and Mala, as Doshas are invisible, we have to explain their functions as well as qualities on the basis of God Sun, Moon and wind by the principle of Lok - Purush Samya Siddhant, Concepts of Prakriti, Agni, Koshta, Awasthapak and Vipak, Aharvidhivisheshayatan, Dhatu Poshan Nyaya, Concepts of Mana, Atma, Buddhi, Concept of Indriya, Srotovigyan all this conceptual part one should have to explain by lectures.

By giving various examples one should explain. So that learners curiously get involved in it. One should take help of Modern Science where ever require, as this science is known to XII science students. Ayurved Physiology is totally new for learners.

3) Symposium

It consists of series of prepared talk (2 to 5 experts for 10 to 25 minutes.) There is no discussion among speakers. Audiences have to remain passive up to Q-A session [5].

Advantages – It has logical presentation of new ideas. Two or three department may involve in this activity at a time. Same topic can be explained by different departments with respect to their departmental area of teaching. Short speeches and change speakers maintain interest of learners.

Disadvantages – Formal atmosphere and Passive audiences are two main disadvantages of it.

Scope as Teaching – Learning Method

Involvement of all departments covers all the information regarding the same topic in short period of time. For ex. Prakriti is the topic. Samhita department gives references in Samhita regarding Prakriti. Shari Rachana department covers the topic like formation of Prakriti and how other factors affect on prakriti while formation. Sharir Kriya department will explain how prakriti is reflected by doshas and by Satwa Raja Tama gunas.

‘Hriday and Vascular System’ is the topic, then Samhita department gives references in Samhitas regarding the topic. Sharir Rachana department explains structure of Heart & related Arterial & Venous system. Sharir Kriya department elaborate the Properties of cardiac muscles, Conduction system of heart, Cardiac Cycle, Heart Sounds & murmurs, Heart rate & its control, Concept of Rasa Rakta Samhavan. It means all departments cover their departmental syllabus by different faculties within 4-5 days.

b) Non-Didactic Method [6]

1) Lecture with Demonstration

This is the introduction by the teacher of the topic by demonstrating some model, chart or performing a skill (clinically) or phenomenon (lab practical), while students watch.

Advantages – It involves learners for discussion actively. Learners can ask the questions. Clarification of the queries, doubts can be resolve at the same time. It is challengeable concept.

Disadvantages – Quality is limited to the quality of questions and learners.

Scope as Teaching – Learning Method –

It requires material which raises questions and along with its clarification. Theory and demonstration should go hand in hand. Dosha-Dhatu-Mala Vriddhi Kshaya Lakshan, Qualities of Dhatusarata, Explaining characteristics of Prakriti one should have to demonstrate these systems on various persons. Functioning mechanism of all systems like Respiratory, Circulatory, Digestive, Excretory, Reproductive, Nervous, Endocrine Glands should have to explain with demonstrating charts, models, on some visual aids. ECG, Nadi parikshan, Semen analysis, Stool examination, PCV, ESR all these practical one should explain with lecture cum practical demonstration. Demonstration helps us to understand the things clearly.

2) Practical

When we study, we forget; when we discuss, we remember

When we see, we understand; when we Do, we know

This is the very important aspect of practicals.

Advantages – It is active learning process allotted for limited groups of learners as per batch. It permits evaluation of skill of learners. It bridges gap between theoretical knowledge and practical. The reality of application of knowledge can be overcome. It develops qualities of scientific thoughts. For e.g. While doing Hematological practical one starts to analyze his readings on the basis of his knowledge and any variations of the reading from normal value leads to think causative pathology behind it.

Disadvantages – High personal costs are required.

Scope as Teaching – Learning Method –

All Lab practicals like Hematological Practical and Urine analysis, Bala Parikshan, Sharir – Anguli Praman Parikshan, Sharir Tapman Parikshan etc. should studied by this method.

3) Case studies

Advantages – It develops analytical skills. It allows for thinking practically over theoretical knowledge. It provides chance to the students to early clinical exposure.

Disadvantages – Insufficient information can lead to inappropriate results.

Scope as Teaching – Learning Method

General Physiological Observations like Prakriti analysis, Dhatusarata Parikshan, Agni Parikshan, Koshtha Parikshan etc. should studied by this method.

4) Tutorial

Small group of learners are guided by teacher to clear doubts and improve understanding and enhance knowledge of subject.

Advantages – It is Active learning procedure. Concept of tuitions is the developed concept of this. Ideal teacher – student relations maintain in this method of teaching. This method provides opportunity to correct mistakes and find out extent of learning of students.

Disadvantages – Poor preparations by the students makes it less effective.

Scope as Teaching – Learning Method

Characteristics of different Prakriti, Applicability of analysis of Prakriti The specific seat / sites of dosha, Shatkriyakaal, Homeostasis, Hemopoiesis, mechanism, Hemostasis Agni and Pitta, Dhatupaak, Liver and Gall Bladder, Bile Formation, Awastapak: Lakshan / Bhed, Dhatu poshan Nyaya, Dhatusarata and its applicability, Applied aspect of Mrudu, Maddhya and krura koshta, Properties of Cardiac Muscle, Heart Rate and Regulation, Functions of Vyana Vayu, GFR, Spermatogenesis: Stages, Artavachakra, Dnyangrahan process by Indrias, Shat – Chakra, Autonomous Nervous System, while discussing these topics learners can enjoy co-operative learning.

5) Seminar

It consists the deep study of learner with respect to topic under the direction of a teacher. Then that presentation will be presented in front of a group.

Advantages – To study the topic in depth learner go through number of Samhitas, wherever he get references, under authoritative guidance. It develops skill in seeking and sorting out information given in literature.

Disadvantages – Participants or presenters do not spend enough time for its preparation in depth and of good quality.

6) Videotapes

Advantages – It is entertaining way of teaching content and raising curiosity. It helps to keep group's attention. It stimulates discussion.

Disadvantages – It can raise other issues to have focused discussion other than required.

Scope as Teaching – Learning Method –

Mechanism of respiration, Circulation of blood, Conduction system of heart, Excitation – Contraction coupling mechanism of muscles these topics can be explained by using videotapes.

7) Workshop

A meeting during which experienced persons come together with experience to find solution of problems.

Advantages – Active involvement by each participant. Many different Teaching – Learning Methods can be incorporated in a workshop.

Disadvantages – A lot of ground work and initial preparation is needed to make it effective and successful.

8) Individual Task / Assignment

Provides active learning. It involves all learners. It develops problem solving ability. While applying all these methods

one should take frequent (means weekly or daily) or immediate (during same class / in next class) feedback. In two mid terms or final term feedback is not sufficient. With in terms taking feedback and assessing students, their grading system must be adopted. As when the students feel, they are learning something significant, that must reflect in gradation.

9) Problem Based Learning

“The principal idea behind PBL is that the starting point for learning should be a problem, a query, or a puzzle that the learner wishes to solve. [8, 9, 10]” It is a student centered teaching technique that emphasizes meaningful learning through the solution of open-ended problems. It is the method of teaching to bridge gap in between basic sciences & clinical sciences. Using clinical problem as a trigger and then helping the students acquire the basic sciences knowledge in the context of that problem is the plinth of Problem-Based Learning (PBL). Problems/scenarios are used to cover learning objectives & are presented at the beginning of a teaching module.

Advantages – This method emphasis on meaning, not the Facts. By replacing lectures with discussion forums, faculty mentoring, and collaborative research, students become actively engaged in meaningful learning. It increases Self Direction.

As students pursue solutions to their classroom problem, they tend to assume increased responsibility for their learning. This methodology promotes student interaction. It improve interpersonal Skills and Teamwork. It helps for higher Comprehension and Better Skill Development. Students are able to practice the knowledge and skills in a functional context, thereby to better imagine what it will be like using the knowledge and skills on the job. Learning with this method develops Self-Motivated Attitude in students.

Students think problem based learning is a more interesting, stimulating, and enjoyable learning method, and that it offers a more flexible and nurturing way to learn. It helps to develop a Facilitator-Student Relationship. Faculties also consider problem based learning a more nurturing and enjoyable curriculum, and believe the increased student contact is beneficial to the cognitive growth of the student (Albanese & Mitchell, 1993). Problem based learning medical students score better than traditional students with respect to learning skills, problem-solving, self-evaluation techniques, data gathering, behavioral science, and their relation to the social-emotional problems of patients. Albanese, M. and Mitchell, S. (1993)

Disadvantages - If lecture & PBL materials are overlapping, student may just use lecture material during the PBL session. It defeats the purpose of PBL. Faculty may also slip back into their 'comfort zone' of being information provider rather than facilitator. Finding enough tutors - 1 for each 6 students is very difficult. The range of topics which can be discussed is a limiting factor - quality control is difficult. It requires heavy library, computer resources, support. Objective evaluation of PBL is very difficult. Inherent conflict occurs with lectures as it is waste of time.

Difficulties to conduct

Poor participation & difficulty in getting student involved in discussion. Not having enough confidence to seek information independently.

It also found very time-consuming to seek information themselves.

Scope as Teaching – Learning Method

Vridhhi Kshaya Lakshanas of Dosha, Dhatu & Mala. Applicability of Samanya Vishesh Sidhant, Panchabhautik Siddhant.

10) Integrated Teaching Program (ITP)

Integration in medical education is one of the major educational reforms required. The word “Integrate” is derived from “make whole”. Integration in education can be defined as the coordination of different teaching-learning activities to ensure the harmonious functioning of the educational process for more effective learning by students. It can be conducted with co-operation & co-ordination among teachers of various subjects. The mind of a medical student is a real place for integration of knowledge acquired from different teachers. The learners face a challenge of making whole of this piecemeal knowledge into a meaningful whole by themselves. Hence, it is highly desirable that teachers of different subjects try to facilitate integrated teaching.

Advantages – It facilitates deep learning, meaningful learning, last for a longer time. It helps to learn application of knowledge. It is very good to retain & recall knowledge when it is required. It has interdisciplinary approach & ensures continuity of learning. It avoids duplication and redundancy.

Different types of ITP

- 1) Intradepartmental integration
- 2) Horizontal integration
- 3) Vertical integration
- 4) Systematic integration

Scope as Teaching – Learning Method –

Any system physiology, endocrine physiology as well can be taught by this method.

2. Conclusion

Use of different teaching methodologies creates interest in teaching learning process. It helps to enhance learning process with active participation of students.

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