



# INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY HEALTH SCIENCES

ISSN: 2394 9406

## “INTEGRATED TEACHING: A CRITICAL REVIEW”

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### ABSTRACT:

Teaching is an art and is acquired by skills over years. The method of teaching is getting changed with the advances of time. The time need based teaching is always a needed change to teach the given curriculum and its completion within the time. Various teaching learning methods are put forward which make the process of teaching and learning simple and comfortable for the students as well as teachers. The medical teaching requires various teaching learning modes to be executed as the students should acquire the theoretical as well as practical procedures and the skilled hands too. The integrated teaching is one of the techniques of teaching. The integrated teaching is comprehensively studied in the presented study and the regarding literature is critically reviewed.

Integrated teaching is one of the useful techniques of teaching methods as far as medical teaching learning is concerned. Moreover, it has so many advantages that the various faculties of health sciences should make use of it.

**Key words:** Integrated teaching, Medical teaching, curriculum, Teaching-learning methods.

**INTRODUCTION:**

It has been observed that students learn better when engaged by different materials of learning. So for an effective teaching the student centered approach should be adopted. There are preexisting nonintegrated teaching methods like lecture, (fully teacher centered process), Tutorials, Group Discussions. But in these types of teaching, the students are compulsorily the passive learners. Each subject restricted to one part of the course. Students are not given the exposure to critical thinking. Inadequate correlation of per clinical subjects and application to clinical practice happens with non-integrated teaching methods. Non-integrated teaching is subject centered, passive and noncritical. Newer techniques of teaching involves Self Directed Learning, Problem Based Learning (case studies), Integrated Teaching (bridging the disciplines), Community Orientation (large group learning) etc. Learning is more powerful when curricula are integrated such that the connections are established between subject areas. SPICES model<sup>1</sup> of education strategies is now a day's an innovative and current trend in the educational technologies.

S- Student centered teaching

P- Problem based teaching

I – Integrated teaching

C- Community based teaching

E – Elective teaching

S - Systematic teaching

Integrated teaching is more towards student centered approach, makes learning a pleasure and for good use of knowledge base in an effective manner in clinical practice. The presented study is critical review of integrated teaching. As per Kolb's experiential theory of learning process, integration improves the cognitive and psychomotor domains, enhance their skills to correlate clinically, improve their diagnostic skills, removes subject phobia. These are some proficiencies of integrated teaching over existing system.

**AIMS AND OBJECTIVES:**

1. To review the concept of integrated teaching critically.
2. To review various teaching learning methods in association with integrated teaching.
3. To understand the various theories put forward with respect to teaching learning advances.

**MATERIALS AND METHODS:**

Classical textbooks regarding the concept of integrated teaching as well as digital media, internet, Google scholar documents, PubMed etc. regarding the subject were used as source material in the study.

## PROFICIENCIES OF THE EXISTING SYSTEM:

No doubt, existing system is a best teaching learning mode in the medical education and various courses health sciences. The advantages and disadvantages of the current system are considered as under:

- Cognitive skill development (knowledge and problem solving abilities): effective to some extent
- No psychomotor skills and capabilities
- Verbal information without active learning
- Learning is not based on concrete experience (no discussions and feedback approach to teaching)
- Students are receptive and just receive whatever is delivered to them
- Students are not involved in knowing new experiences – (there are no reflective observations)
- Students are not made to think logically so that they arrive to some conclusion applying the knowledge they know
- No scope for abstract conceptualization
- No active experimentation
- No feedback approach or discussions

## INTEGRATED TEACHING:

To integrate- to form, to coordinate or to blend a functioning or unified whole. It

also means the coordination of different activities to ensure harmonious functioning.

## INTEGRATED TEACHING: DEFINITION

The way of connecting skills and knowledge from multiple sources and experiences or applying skills and practice in various settings.

It is defined as organization of teaching matter to interrelate or unify the subjects which are frequently taught in separate academic courses or departments<sup>2</sup>. It simply means bridging connections between academic knowledge and practical's.

## TYPES OF INTEGRATION:

- **Horizontal Integration:** means that two or more departments teaching concurrently merge their educational identities. E.g. combined teaching learning of renal structure and function by *kriya sharir* and *Rachana sharir*
- **Vertical Integration:** is integration between disciplines traditionally taught in the different phases of curriculum. E.g. combined teaching learning of renal failure by *Rognidana* and *Kayachikitsa* Dept.
- **Both:** combined teaching learning of renal failure by the departments of *Kriya Sharir*, *Rachana Sharir*, *Rognidana* and *Kayachikitsa*

## HARDEN'S 11 POINT INTEGRATION LADDER<sup>3</sup>:

Harden described 11 steps to achieve a nice integration of teaching, each step of which can be used as one of the integration type of teaching. Integration ladder can be used for curriculum planning and evaluation<sup>4</sup>.

### 1. ISOLATION

It is 1<sup>st</sup> step in which departments or subject specialists organize their teaching without considering the other subjects or disciplines. No attention is paid to the other or related subjects who contribute to the curriculum. The content is taught by specialists in the discipline. The chief objective of isolation is mastery in the concerned subject. Afterwards, subject based assessment of student's knowledge and understanding of the subject is carried out. Related topics from two disciplines are not intentionally correlated. Isolation approach is traditional medical curriculum

E.g. students attend a lecture on *Rachana Sharir* and then, move on to a lecture in *Kriya Sharir*.

### 2.AWARENESS

As with the isolation, the teaching is subject-based. Some mechanisms are in place, however, whereby **the teacher in one subject is made aware** of what is covered in other subjects in the

curriculum. The teacher is made aware **through documentation and communication** about the aims and objectives of each course and other teaching sessions. **Lecture notes or handouts** may be circulated to other course teachers. Teacher can take an account of **what colleagues cover** in other parts of teaching avoiding unnecessary duplication. No attempt is made to help the students to take an integrated view of the subject.

### 3.HARMONIZATION (CONSULTATION)

In harmonization, teachers responsible for different courses **consult each other and communicate about their courses**. Consultation is through **informal discussions or through formal curricular planning committees and meetings**. Process of consultation is overseen by a member of staff who has responsibility of curriculum development. It encourages the teachers to adopt their programs so that each course makes an appropriate contribution to the curriculum and the overall curriculum objectives can be achieved.

### 4. NESTING

Teacher **targets skills relating to other subjects**, within a subject based course. Content drawn from one subject in the curriculum may be used to enrich the

teaching of one subject. Teachers analyze the separate subject's goals and identify ways in which these generic skills can be refined into existing subjects. E.g. Course in *Rognidana* which introduces aspects of *Kayachikitsa* to demonstrate the application of pathological principles and where students develop problem solving skills

### 5. TEMPORAL COORDINATION

Here each subject remains responsible for own teaching programme. The **timing of teaching** is adjusted in consultation with other disciplines. Topics related to various disciplines are **scheduled** at same time. Similar topics are taught on **same day**. Physiologists address the subject of function of the heart, at the same time anatomists look at the structure of the heart. This coordination is also called integrated teaching program (I.T.P.)

### 6. SHARING

Two disciplines **agree to plan and jointly implement a teaching programme**. Two disciplines are usually **complimentary subjects**. Here concepts, skills and attitudes are shared. E.g. shared programs: a course on behavioral sciences run jointly by dept. of psychiatry and dept. of public health.

### 7. CORRELATION

Disciplines or subjects with subject-based courses taking up most of the curricular time are correlated in this type of

integration. An integrated teaching session or course is introduced in addition to subject-based teaching. This session brings together **areas of interest common to each of the subjects**.

### 8. COMPLEMENTARY PROGRAMME/MIXED PROGRAMMES

The focus for the teaching may be a **theme or topic to which the disciplines can contribute**. Here approach for assessment is important. Examinations need to reflect the emphasis on both integration and subjects or disciplines

### 9. MULTIDISCIPLINARY

It is bringing together a number of areas in a single course with themes, problems, topics or issues for the student's learning. Themes are selected from an area in which practical decisions have to be made and which serve as a focal point of interdisciplinary thinking

E.g. in the thyroid module of the endocrine system, *kriya sharir* may contribute to thyroid hormone synthesis and its regulation, *Rognidana* to the underlying disease process, *Dravya-guna Vigyana* to the action of anti-thyroid drugs, *Shalya Tantra* to the management of Goiter, and *Kayachikitsa* to the clinical manifestations and investigations of thyroid disease.

### 10. INTERDISCIPLINARY

In the Interdisciplinary program there may be no reference to individual disciplines or subjects, and subjects are not identified as such in the time table.

### 11. TRANS-DISCIPLINARY

Curriculum transcends the individual disciplines. Focus is not on a topic or theme but on knowledge. Thus in trans-disciplinary approach the disciplines become a part of the learner's real world experience and through these they filter the broader aims and goals of integrated curriculum.

#### ADVANTAGES OF INTEGRATION:

- Objectives stated in terms of learner's behavior
- Due consideration given to Cognitive, Affective, psychomotor domains
- Learners are more active
- Systemic teaching, easy learning
- Integration + case oriented approach
- Student centered
- All aspects of the concepts are getting covered
- Theory with demonstration subsequently makes the student more clear
- Inter-departmental collaboration
- Learn to apply their knowledge to clinics
- Combination of subjects
- Sources go beyond the textbooks
- Relationship among the concepts

- An emphasis on projects
- Flexible schedules
- Flexible student grouping
- The higher the level of integration....The less prominence will be given to disciplines.
- Informative and interactive at the same time<sup>5</sup>.

#### HURDLES OF INTEGRATION:

- Needs cooperation from involving departments.
- Needs good coordination.
- Plan of action and needed arrangements should be made before actual execution.
- Bringing faculty together is difficult sometimes.

#### DEVELOPMENT OF INTEGRATED TEACHING PLAN/ MODULE:

Following are the steps to develop an integrated teaching plan or structured teaching module. Teachers may develop different types of integrated teaching plans by their own as per the disciplines, content and the feasibility.

- Choose the topic, problem or task
- Identify the participating departments
- State the learning objectives
- Plan evaluation
- Choose alternative teaching –learning methods
- Identify learning resources and T-L Methods

- Plan time table
- Trial implementation
- Revise by feedback
- Different approaches and methods
- **A thousand teachers.....a thousand approaches.....**

#### DISCUSSION AND CONCLUSION:

Integrated teaching is the way of connecting skills and knowledge from multiple sources and experiences or applying skills and practice in various settings. It is the organization of teaching matter to interrelate or unify the subjects which are frequently taught in separate academic courses or departments. It is the establishment of connections between academic knowledge and practical's.

Various advantages of integrated teaching have been proved over teacher-centric methods. The enforcement of the integrated teaching in the *Ayurveda* is the need of time as *ayurvedic* concepts are very much interconnected and may be taught as per integrated teaching plans. Many advantages regarding the student's knowledge, skill development and affective domains are put forwarded by various other disciplines of health sciences.

Many institutes have included the various newer advancements of teaching learning methods in to their curricula and the results are analyzed with respect to the

cognitive, affective and psychomotor skill development in the students.

The effectiveness of specially designed various special integrated plans required for various curricula should be analyzed after proper execution.

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