

## SHORT COMMUNICATION

## TEACHING STRATEGIES: HOW CAN A MODULAR INTEGRATED SYSTEM BECOME A REAL SUCCESS IN MEDICAL SCHOOLS?

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In modular teaching, spirals involve both the horizontal and vertical integration by uniting them across time and across disciplines.<sup>1</sup> Bandiera *et al*<sup>2</sup> described it, in terms of curriculum, involving learning of basic and clinical sciences across both time and subject matter. Such modular teachings expose the students for professional thinking right from the beginning of their academics. While in conventional teaching, the student remains professionally away from clinical aspects during first two years of schooling. Although, there is no doubt about the validity and reliability of modular teaching but, this teaching system is yet not equivocally advocated for the best outcomes in different institutions. The critics are more vocal for a sound basic knowledge of Anatomy, Physiology and Biochemistry in the first two years instead of amalgamation with the Pharmacology, Pathology and Community Medicine or pure clinical ones. The bases for this un-equivocality to advocate modular integrated teaching is actually based on some odds in the planning and execution of this system. These are:

- i) Un-organized and enormous teaching of Pharmacology, Pathology and clinical subjects at the expense of Anatomy, Physiology and Biochemistry.
- ii) Shortcomings in pre-schooling render the students to take more time for the understanding to integrate Anatomy, Physiology and Biochemistry with the Pharmacology, Pathology and Community Medicine as well as behavioral sciences. They are also not well adjusted for problem based/case based learning.
- iii) A huge burden of Pathology and Pharmacology in first two years is difficult to understand and thus even good students get just passing marks in some of the continuous assessment tests, which are not spaced appropriately between the end of one module and the start of next one.
- iv) Non-availability of funds restricts laboratory experiments by replacing them with simulation/demonstrations only, instead of performance. Consequently, understanding of basic mechanisms suffers at both the cellular or systemic levels leading to deficiencies in the understanding of disease mechanism.
- v) Unawareness of the faculty to handle the modular integrated system of teaching in its true spirit.
- vi) Unsuccessful integration among contents of a lecture and across the subjects.

Recently, the Australian Medical Council included the traditional domain along with the domains of science-scholarship and clinical-practice by relating them with the domains of health-society and professionalism-leadership.<sup>3</sup> This Australian strategy that advocate starting with the traditional domains can remove the criticism on modular integrated system, based upon reduction in the input from basic science subjects of Anatomy, Physiology and Biochemistry.

In order to get the desired outcomes from the modular integrated teaching strategy a thorough planning is needed that should consider the following especially by the institutions that are not getting the desired outcomes from such teaching strategy:

- i) Appropriate modular contents with integration within a subject and across subjects.
- ii) Excellent mapping Edmondson<sup>4</sup> for both the vertical and horizontal integration with a comprehensive teaching and exam timetable.
- iii) Comprehensive merit admission policy to recruit students of roughly uniform caliber.
- iv) Training to the faculty to impart modular integrated teaching.<sup>5</sup>

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