Challenges and Opportunities in Integrated Curriculum of Health Professions Education – A Critical View

Peraman Ramalingam[1*], Ramprasad Muthukrishnan[2], Subish Palaian[3], Subramani Parasuraman[4] and Zakirul Islam Md[5]

[1]Centre for Pharmaceutical Research (CPR), Raghavendra institute of Pharmaceutical Education and Research (RIPER), Anantapur, AP, INDIA.
[2]College of Allied Health Sciences, Gulf Medical University, Ajman, UNITED ARAB EMIRATES.
[3]College of Pharmacy, Gulf Medical University, Ajman, UNITED ARAB EMIRATES.
[4]Faculty of Pharmacy, AIMST University, MALAYSIA.
[5]Department of Pharmacology and therapeutics, Eastern Medical College & Hospital, Camilla, BANGLADESH.

Dear Editor,

Integrative learning is a well known learning theory that describes a movement toward integrated lessons, that mean the concept of 'brought together in to a whole' and thus helping students make connections across curricula. The integrated curriculum, a dimension of teaching and learning processin developed countries, and is defined as 'an education system that interlinks different area of learning with a definite line across subject-matter requirement on unifying concept.[1] The concepts of integrated curriculum had traced back in 1960 among educators, but introduced increasingly into health professions education in recent years particularly in the developing countries.

It has been agreed upon that the integrated curriculum possess several advantages such as, reduced duplication of skills and concepts in different subject areas; increase relevance for the learner, given a real-life context; allow for the learner to see the big picture, rather than just the fragmented parts; allow for teaching interdisciplinary life skills for the 21st century; and focus on skills that can be transferred to other disciplines and to life.[2] Though integration of curriculum, allows learner to engage in relevant and meaningful activities of real life, still it is not exempted from drawbacks and criticism. Hence, there is an absolute need for refinement on existing structure, principle of integration and implementation owing to pitfalls[2] and make it more suitable to developing countries.

In this letter we identify the current challenges and opportunities associated with integrated curriculum particularly in the aspects of diminishing basic science courses, need of improvised implementation strategies and gaps in clinical practice of first and second year program of medical or allied health science program.[3,4] In addition, we also provide brief information on pros and cons associated with integrated teaching. In our view, the most common disadvantage associated with integrated curriculum is diminished basic science coursesin curriculum of health sciences programs like anatomy, physiology, biochemistry, microbiology (for medical and allied program), and organic chemistry, physical chemistry, professionalism, social sciences etc. (for pharmacy and other life sciences programs). The knowledge of basic sciences is mandatory for a complete and thorough understanding of the fundamental concepts and scientific principles governing any given discipline.

In brief, the overall challenges and pitfalls of integrated curriculum that are needed to be resolved with warrant discussion are enlisted below,

1. Due to reduced focus of basic sciences in curriculum design, there may pose a challenge for post graduate program

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Correspondence:
Peraman Ramalingam,
Centre for Pharmaceutical Research (CPR), Raghavendra Institute of Pharmaceutical Education and Research (RIPER), Anantapur, AP, INDIA.
E-mail: drramalingamp@gmail.com

www.ijper.org

that demands additional learning such as pre-requites courses.
2. In purview of Instructors, contents of basic sciences are defined with limitations.
3. It is true challenge for students to integrate a narrow content of basic science, across the discipline.
4. Integrated learning in bed side teaching (clinical), demands different specialist around one patient i.e., warrants infrastructure refinement in teaching hospitals.
5. The depletion of basic sciences knowledge exerts significant impact on trans-disciplinary and inter-disciplinary learning process of integrated curriculum itself.
6. Though, integrated curriculum develops critical thinking among students, but is fenced by isolated contents; this leads to the problem i.e., course contents.
7. Overall fundamental knowledge and self -development competency provided by integrated curriculum is quite debatable though terminal competencies are achieved.
8. An insecurity is developed when a student undertaken integrated curriculum practice eg: Problem Based Learning (PBL), Case Based Learning (CBL) and Task Based Learning (TBL), as these learning methods are still nascent stages in developing countries.
9. When one teacher instructs more than one subject as integration, expertise of knowledge may not be unified in all dimensions.
10. This integration reduces faculty position as compared to traditional curriculum, which is quite contradictory for availability of intellectual resources in developing countries.

Though, teaming and blocking schedule principle of integrated curriculum,[5] offering advantages on learning environment, the following outcomes in medical as well as allied health professions. Local societal needs, compact basic as well as professional content matters and learner's needs in developing countries are not yet addressed with evidence. Hence,

1. Overall performance of graduates from integrated curriculum on standardized achievement tests compared to traditional curriculum.
2. Organization of teacher in teaching and learning process towards career development.
3. Overall psychological burden of the students.
4. Self-development and career development potential of graduates.
5. Better approach to link the integration of one unit of course to entire program i.e. applying basic science principles in all aspects of patient care.
6. Gap analysis for missing links in course content and remedial options.
7. Comparative Strength Weakness Opportunities and Threats (SWOT) analysis between integrated and traditional curriculum are needed to be updated.

In addition, integrated curriculum is also not free of certain 'pros' and 'cons'. For example, Rafiq demonstrated that 'vertically integrated teaching approach' to be superior to'traditional non case based teaching' since it creates interest among and facilitates deep learning.[6] On contrary, it has been documented that 'traditional medical curriculum' students develop a peak of knowledge in basic sciences over the period of time and overtake the 'PBL based curriculum' trained students. Moreover, they perform better in the final semester examinations and had no significant difference in outcome among the traditional and PBL courses.[7]

Thus, it is evident that the implementation of integrated programs requires case by case analysis, based on international and national health focus, institutional and faculty readiness and learners needs. A generic way of integrating curricula without an in-depth analysis may pave way for discrepancies and leads to pitfalls in the curriculum on a longitudinal evaluation and thus needs a meticulous analysis and a thorough discussion among the active partners.

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