

EDITORIAL

THE INTEGRATED CURRICULUM: CALL OF MODERN ERA

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Recently, in Pakistan, it has been decided to launch integrated curriculum in all public sector medical institutions. However, it has been observed that its overall standard is poor and doesn't meet the criteria of integration. I shall try to draw attention of readers towards basic parts of an integrated curriculum.

What is an integrated curriculum? What it aims for? Well, Shoemaker¹ defined it as "education that is organized in such a way that it cuts across subject matter lines, bringing together various aspects of the curriculum into meaningful association to focus upon broad areas of study." Harden defines integration as "the organization of teaching matter to interrelate or unify subjects frequently taught in separate academic courses or departments".²

The purpose of integration is to break the barrier between basic and clinical health science, to promote the retention of knowledge and acquisition of skills via effective teaching strategies, and multidisciplinary approach. An integrated system aims to stimulate the analytical thinking of students, and focuses on their augmented participation.³ It facilitates contextual meanings and is applied to learn, and can promote the development of the well-organized knowledge structures that underlie effective clinical reasoning.⁴

Since early 19's, the 2+2 pre-clinical - clinical curriculum structure of medical education was broadly acceptable. Many countries still follow this under the name of "traditional system." Despite vast evaluation in basic and clinical health sciences, the emerging disciplines like population health and robotic health technology demand that a medical undergraduate ought to possess the knowledge, and skills after a thorough understanding of basic anatomy and pathophysiology.⁵ This is best achieved by integrating the curriculum. Worldwide, it is gaining popularity and is considered as the sole and vital key in effective delivery of modern health sciences.^{6,7} We have to say farewell to the Flexner's philosophy of didactic education and embrace this system throughout the country.⁸

Secondly, only implementing a so-called integrated curriculum will never bring the desirable outcomes, because it needs to be understood to start with. It is not merely making the jig-saw of basic and clinical contents, composing the study-guides and delivering lectures. This is bad for learners. The traditional faculty who is not expert in it, develop modules and implement it. It needs such professionals who have expertise in understanding the various

methodologies of integration - the educationists. The Carnegie Foundation for the Advancement of Teaching, at centennial celebration of the "Flexner Report on medical education", reported that the problem in developing a curriculum is "not defining the appropriate content but rather incorporating it into the curriculum in a manner that emphasizes its importance relative to the traditional biomedical content and then finding and preparing faculty to teach this revised curriculum".^{7,9} Expert faculty of medical educationist is the backbone of an integrated system of education. They select the right content, integrate it into a module, know every angle and ways of delivering it; and evaluate the learners for their knowledge and skills.

Integrated curriculum model (ICM) is a source which fulfil the needs of students via a productive and fruitful way. Few models have been documented for integration of medical education. It was Beane who first introduced the integrated curriculum in 1977¹⁰ and McMaster University, Canada, successfully blended the basic and clinical subjects and implemented as "McMaster Approach" throughout the academic calendar.⁶ The most common continuums of methodologies for integration are presented by Harden - "integration ladder" for curriculum planning and evaluation.¹¹ Brauer DG emphasized upon "spiral curriculum" as an ideal model⁶ and Fogarty presented three forms of integrating the curriculum.¹²

Proudly quoting that I am a pioneer graduate of Pakistan first public sector medical college, which is based on an integration of medical education. Here, I am putting briefly my five years understanding of the such system. An integrated curriculum is built upon three pillars twisted around each other. The principal pillar is the learner him/herself, then the educator, and the facilities. The educator defines the contents or objectives and facilitate the learners to develop a better understanding of the context. It requires a large number of committed faculty members, well-equipped institution and frequent inter and intra-departmental coordination.

Firstly, developing an efficacious and constructive curriculum and secondly, implementing it effectively is the key factors for a desirable outcome. Two or three modules makeup a 'block' and three or four blocks correspond to one-year curriculum. Out of three 'phases', year-one is included in phase-1, year two and three in phase-2 and last two years fall in phase-3. Learners, in each module, are evaluated for knowledge, skills and attitude via summative assessment: multiple

choice and short essay questions, integrated objective structured practical examination, short/long cases and viva. Each summative assessment marks are added to block examination as part of internal assessment and then adjoined with external/annual block-wise assessment. The motive of this is to cook the knowledge into the student's head, compelling them to start critical

thinking with a keen desire to learn more and more. Phase-1 and 2 deliver basic health science through different mode of information transfer (MIT's). Along with these, phase-3 focuses more on clinical skills and attitude then basics knowledge. A model, so named as "Khan MJ's model of community oriented with reverse integration" is presented in figure-1.

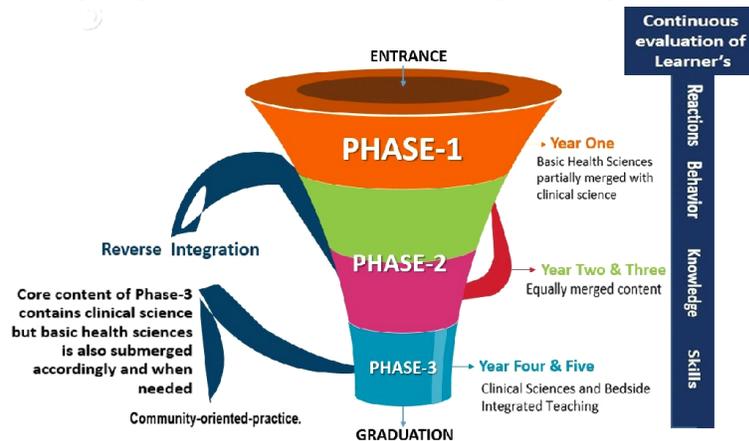


Figure-1: Khan MJ's model of community oriented with reverse integration curriculum

If the curriculum is not monitored via effective feedback, presence of unexperienced or lack of faculty development programmes, lack of facilities especially digital access to education means, and problem-based exercises, this system of education will fail and will only bring miseries to the students' lives, and decidedly counter productive. The foundation of modular system is not based on delivering lectures. Instead, based on principles of multiple intelligence and other learning theories, it is just to facilitate and prepare the learners for acquiring all the necessary knowledge, attitude and skills.

This is an experimental stage, and an experiment never succeeds without a control mechanism. Thereby, for the betterment, I present the concept of "Unified modular system with quality control system" comprising a "quality enhancement cell (QEC)" supervised by a panel of medical educationists. In this, a team consisting of PhD scholars of health professional education and medical education specialist from various recognized medical schools develop the curriculum, implement it throughout the province or country and evaluate critically for pros and cons. Only then, best doctors could be produced as its ultimate aim.

In conclusion, effective curriculum development, implementing and execution followed by proper evaluation by QEC, is emphasised. Furthermore, evaluation of learners' reaction, behaviour, knowledge and skills by continuous feedback and integrated

examination should occupy the largest part of the integration.

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