

EDITORIAL

**Curriculum for Undergraduate Medical Sciences: Traditional, Integrated or Both**

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The traditional curriculum for undergraduate medical students ensures discipline-based learning. In a traditional curriculum, students get ample time to get a detailed understanding and undergraduate-level knowledge which is elaborative and sufficient for each subject. Although the students gain ample knowledge of the subject, they lack in correlating the gained information with other subjects. This is not the students' fault; instead, it is due to the lack of scope of correlation in the traditional curriculum. In this curriculum, students are not taught about the applicability of the gained information. Consequently, basic science or pre-clinical subjects seem irrelevant to the students as if the clinical subjects are independent of these subjects, whereas the reality is the opposite (Watmough et al., 2009). The knowledge of the basic subjects serves as the targeted goal of clinical manoeuvre. Traditional curriculum receives criticism for demotivating students to learn basic subjects to practice as a doctor. Moreover, the traditional curriculum is a more lecture-dependent one-way teaching method devoid of a student-oriented approach (Christianson et al., 2007). There is no scope for problem-solving or critical thinking rather than pedagogical learning. Another disadvantage of the traditional curriculum is that students need to wait until clinical years to have experience with patients. Therefore, there is no opportunity for clinical skill development earlier in this curriculum (Rahman, 2022).

However, to improve the situation of the traditional curriculum, the integrated system is introduced where there are interconnections within the disciplines and has no bars between the subjects. Today's education is outcome-based. To fulfil those requirements, reasonable and systematic learning is a crucial concept. Therefore, teaching methods and strategies hold a significant part of the curriculum. Through integrated learning, the autonomy of the learning by the students, experiencing experiential learning, early and systemic exposure to clinical cases, learning collaboration, and continuous learning, build professionalism and skills and correlate the essential science importance in clinical practice (Hassan, 2013). There are three planes of an integrated curriculum, horizontal, vertical, and spiral. Horizontal integration is the connections and correlations between the disciplines or subjects in the same phase, which means basic sciences subjects are related and clinical sciences subjects are interconnected. However, vertical integration connects basic and clinical sciences across the phase. So, basic sciences application in clinical practice experience by the students. Therefore, horizontal and vertical integrations allow students to learn meaningful and relevant learning for effective clinical practice (Patel & Shah, 2020). In the spiral integration, basic science subject is revisited into different phases and steps of the curriculum with increasing complexity. So, there is an opportunity to correlate basic science subjects with clinical subjects, and critical thinking and problem-solving are emphasised (Fraser et al., 2019).

For example, medical colleges of Bangladesh have a traditional curriculum where in phase one, students learn about anatomy, physiology and biochemistry in detail. Furthermore, in phase two, other para-clinical subjects like pathology, microbiology, pharmacology, community medicine and forensic medicine teach, and phase three is the clinical phase. There is detailed learning about each subject, but within the curriculum, there

is no scope for correlation between the pre- or para-clinical subjects and clinical subjects. Therefore, students need to correlate by themselves. However, the Faculty of Medicine and Health Sciences, Universiti Malaysia Sabah, has horizontal, vertical, and spiral integration in the curriculum. Therefore, students learn the basic sciences and are exposed to clinical skills from year one, so horizontal and vertical integration is experienced. Furthermore, in year five, there is a revisit of basic subjects and discuss the cases so that it facilitates students to learn the correlation between basic and clinical subjects and clear the overall conception through spiral integration. However, there is a lack of details knowledge and learning about each subject. Therefore, students face difficulties in correlating basic science with clinical subjects.

From the experience of teaching traditional and integrated curricula, it is better to follow a curriculum which combines both traditional and integrated curricula. This is because the base of the students will be concrete which would facilitate the correlation even better. This can be achieved through teaching the subjects individually and mentioning the application of the learnt knowledge. Moreover, it combines knowledge through problem-based learning, small group discussion, case discussion, seminar presentation, etc. Therefore, there will be a balance between the traditional and integrated curricula that help the students gain sufficient undergraduate knowledge and apply and integrate basic science knowledge with clinical subjects.

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