GUEST EDITORIAL: MEDICAL CURRICULA TRANSFORMATIONS – EPBLNET

Guest Editors

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The process of training medical students to acquire suitable skills for clinical or community decision making. The transition from medical school to clinical/community practice is a challenge both for junior doctors and medical schools. Key contributors to this challenge are associated with the significant differences and gaps between the actual requirements of clinical or community practice and the ways traditional medical schools provide skills and preparation to their students during the studies [1].

Many medical schools provide students with extensive clinical clerkship in order to experience real work situations. However, there is no guarantee that students will serendipitously experience the whole range of clinical problems. Populating curricula with electronic resources of interactive character has been typical for many Institution's modernisation strategy. Quite innovatively though, some Medical Schools use the notion of Virtual Patients (VPs) [2] to maximise the value of decision-making and clinical management through scenario based learning activities (SBL), as a teaching/pedagogic method of choice, that provides students with the opportunity to work, think, and take decisions collaboratively.

The aim of this special issue was to bring together education experts, medical teachers, medical informaticians and engineers, academics and health professionals and results stemming from their research and practice on curricula transformations so as to provide a contemporary snapshot of emerging themes. Emphasis is placed upon how new methods of evolving pedagogies like scenario based learning and problem based learning and virtual patients may be used as vehicles to drive curricular changes in medical teaching institutions.

Centred around these concepts was the ePBLnet project [3], the main objective of which was to modernize the medical course curricula in 6 Partner Countries Medical Universities (PCMUs), by implementing Problem-Based Learning (PBL) cases and Virtual Patient cases, which offer rich and memorable settings for learning, as they are built around decision making and enquiry-based collaborative approaches.

The first task in ePBLnet was to review and analyse medical curricula of PCMUs. The comparison revealed some similarities of curriculum structures overall, in particular, for years 1-3, and considered some differences in design, as well as the high number of hours of teaching per week in the lecture-based curriculum. Each PCMU was able to plan their new curricula using the PBL model and the required number of teaching hours per week, based on the coherent sequence of PBL sessions organised into a series of learning weeks, and then the organisation of teaching sessions to fit into those weeks. The outcomes of these steps are new timetables for each partner institution. Where necessary, each of the PCMUs have contacted their local Health and Education Ministries for approval of the change of learning style within their curriculum.

The PBL course implementation included several activities: a. Previewing and reviewing PBL cases provided by SGUL, b. Modelling, c. Adaptation of cases, d. Scheduling, e. Selection of tutors and tutor training, f. Delivery of PBL training in 1st year for testing, g. Delivery of PBL training in 1st year, h. Delivery of PBL training in 2nd year, i. Delivery of PBL training in 3rd year, j. Evaluation

Thus, one of the papers [4] included in this special issue is focused on the evaluation of student and tutor response to the simultaneous implementation of a new PBL curriculum in Georgia, Kazakhstan and Ukraine,

based on the medical curriculum of St George's, University of London. This paper's results show that the ePBLnet project has created a solid foundation for the tutors, as well as for the students for successful implementation of PBL and that PBL increases the engagement of the students.

Continuing on this discussion, Shavlakadze et al [5] wonder whether the application of a mixed PBL curriculum in Medicine as a new educational program named "Medicine + PBL" was simply a requirement of time or an innovation. They then explain how PBL was implemented on the faculty of Medicine at Akaki Tsereteli State University (ATSU) in Georgia during the ePBLnet project, with the innovations being the basic medical and clinical disciplines became integrated into the program with other supporting courses and social disciplines.

In a third article of this special issue, Karasmani et al [6] explore the reasons for which VP authors do not use their own VP cases in usual curricula activities. Under what circumstance and for which reasons VP authors avoid VPs' exploitation thereby abandoning their own efforts made through the rigorous process of VPs' creation? Undoubtedly, the embracement of VPs can ptentially upgrade medical education practice. However, according to this study, infrastructural and organizational problems may in fact subvert VPs' utilization during the pedagogic process. Thus, it is important for institutions to strive and resolve such problems in order to facilitate medical education modernization and complete future curriculum transformation.

A final article of this special issue looks at the very important issue embracing the above whole concept of curricula modernisation using PBL and VPs, that is the concept of standardisation in medical education. Vaitsis et al [7] review, collect and select different available standards to address technical and educational aspects in outcome-based medical education. It is proposed that standardisation by means of applied technical standards, the availability of compliant systems and standardized vocabularies should be used for the description of medical and healthcare curricula so that a detailed picture of a curriculum's structure can emerge thereby addressing different technical and educational aspects of Healthcare Education, that may be beneficial for faculty, policy and decision makers. All the latter actors will then be able to better evaluate and measure teaching against the required outcomes, and therefore, institutions will be able to perform structured analyses, compare their curricula with those of other Institutions, while students can better understand their intended learning.

The emerging picture of this special issue lies with the modernisation of medical education. It is evident that classic approaches are no more valid and Institutions should move along well planned transformations. PBL and VPs could be a contemporary way forward, but Institutions should be aware of the need to always evaluate the impact of such modernisations, but also the inherent risks in this prospect, as well as, the potential benefits offered by systems and standards to mitigate such risks. This special issue provides some record for systematic approaches towards curricula transformations, which in the long term will be undoubtedly very useful.

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