

Journal of Contemporary Medical Education

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Editorial

A new journal of medical education: opportunities in an evolving field of science

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“You cannot teach a man anything, you can only help him find it within himself.”
(Galileo Galilei)

In many cultures teaching is considered to be guidance and advice in the process of learning by mentoring students how to obtain new knowledge by themselves rather than solely presenting facts and instructing students to memorize them. Teaching and learning are considered dynamic instruments of sharing and obtaining wisdom with the aim to enable the generation of new ideas. This view can be traced back to Plato. In his Socratic dialogue, “The Republic”, he defined teaching as “....the art of orientation.” [1] As Plato’s masterwork has his teacher, Socrates, as a central figure, it can be assumed that the latitudinarian teaching methods of Socrates influenced Plato’s definition of teaching as a direction giving process. In “The Republic” Plato furthermore proposed that “Educators should devise the simplest and most effective methods of turning minds around. It shouldn’t be the art of implanting sight in the organ, but should proceed on the understanding that the organ already has the capacity, but is improperly aligned and isn’t facing the right way.” [1]. Here, Plato postulates that teaching should always strengthen the student’s pre-existing capabilities. He emphasizes that this requires creating effective innovative learning techniques.

During the past decades, we have been facing an immensely rapid development in science and technology including constant improvement in communication and information technology. In this context of globalization and

technological advancements, medical science is rapidly evolving with increasing international collaborations in both, patient care and clinical research. Therefore it might be postulated, that methods of scientific education, including medical education, should improve at equal speed and efficiency in order to meet the needs of a rapidly developing, globalized and networked modern society. In fact, medical education is evolving through globalization and development of multimodal concepts that include innovative and interactive techniques such as web-based learning, case-based learning, technology-based simulation learning and collaborative learning. Some papers on these new learning techniques and their effect on students’ performance and examination outcomes have been published. However, evidence that these new collaborative learning techniques have a significant effect on the perception and motivation of the students these techniques are applied to is still limited. In this spirit, we provide a new journal that is devoted to all fields of medical education focusing on international collaborative learning techniques and strategies to support the teacher-student interaction as well as the student-student interaction through individual and multi-modal approaches. As, in our belief, the interaction is a vital aspect of medical learning we aim to publish papers that introduce novel ways of interactive learning in various fields of medicine and create an ongoing discussion on the improvement of both collaboration and interaction in the field of medical education. We desire to foster the improvement of

international medical education and thus support health care professionals and medical students all over the world.

With the second issue of "Journal of Contemporary Medical Education" we publish original research papers on novel learning techniques applied in different phases of medical education with a focus on students' point of view.

Löffler et al. investigated the effects of examination techniques on students' perception and success in anatomical teaching. Their findings demonstrate that both transparency and fairness in the process of evaluating students is considered more important by students than the formal features of the examination such as the examinees' group size. However, the average performance of the anatomy exam was higher for students taking the exam in small groups compared to students taking the exam in larger groups. In conclusion, fairness and transparency as well as individual student-centered examination in small groups appear to contribute to improvement in medical education.

Takayama et al. performed a retrospective analysis of existent data on the participation of medical students in a continuing health sciences education event. Their data indicate that learning techniques of active knowledge gaining are beneficial when compared to passive learning techniques. This reflects the current trend in medical education in many countries where a shift from the standard teacher-centered learning techniques towards novel multimodal techniques of active collaborative learning can be observed [2-4]. In less developed countries however, participation in active-learning courses is not common, which leads to the authors' recommendation that active-learning techniques should be promoted in those countries to improve development in both science and education. The beneficial effects of active and collaborative learning are also highlighted in the article by Gupta et al. Their study demonstrates that interactive quiz-based learning improves the gain of knowledge. They suggest that interactive learning by means of medical audiovisual quizzes should be performed at scientific conferences to create an entertaining competitive environment for the younger conference participants that would engage, motivate and educate them.

In contrast to these positive effects of new learning techniques in medical education, the paper of Wachholtz et al. addresses an alarming aspect of medical education: "burnout" among medical students and trainees due to information oversaturation and stress overload. This is an equally interesting and controversial paper as there has been a worldwide discussion on the of the diagnosis "burnout syndrome" that describes a state of long-term exhaustion and loss of interest. Despite the inflational use of the term, "burnout syndrome" is not a recognized disorder in the Diagnostic and Statistical Manual of Mental Disorders (DSM), the standard psychiatric disease classification system used in the United States. By contrast, the International Statistical Classification of Diseases and Related Health Problems (ICD-10), which is the international counterpart of the DSM and published by the World Health Organization, does include the diagnosis "state of vital exhaustion" (Z73.0) that is also referred to as "burnout

syndrome". The paper of Wachholtz et al. raises a new aspect regarding this controversial condition by showing a negative correlation with spirituality. Survey analysis of different measures assessing spirituality and psychological distress/burnout was performed and showed correlation coefficients ranging from -0.62 to -0.14. Their data suggest that spirituality might prevent the development of "burnout" in medical students. Due to the high variability of the results these findings should be interpreted with caution as correctly stated by the authors. These survey-derived findings might form a basis for further prospective studies that contribute to the elucidation of the pathogenesis of "burnout syndrome" and its amelioration or prevention in medical students and trainees.

A novel model to elucidate the effects of non-technical learning in the field of medical education is introduced by the paper of Morris et al. Their SECTORS model, a theoretically grounded framework, differentiates between three key elements of non-technical learning: 1.) knowledge and skills as contributing factors to successful learning with regard to error awareness and teamwork, 2.) the capacity of observation and simulation, and 3.) risk assessment and situational awareness. This interesting model might be the basis for further investigations that provide new insights into the effects of different learning techniques in medical education.

In summary, this second issue of our journal constitutes another step towards providing a discerning platform for research in this rapidly evolving field of medical education. The papers published in this issue deliver new evidence that collaboration and innovation in medical learning is important and elucidate some effects of novel learning techniques on students' perception and performance. We are looking forward to a continued discussion of these, in part controversial, aspects of medical education with the goal to promote evidence-based learning. We want to encourage our colleagues from all over the world to contribute to this important dialogue.

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