



## Electives support autonomy and autonomous motivation in undergraduate medical education

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4.7–9.7% of students were provided handouts read textbooks after lectures and before examinations. The advantages of reading are supported by a recent study showing that the percentage of expected reading is a factor involved in producing good academic results in the first pre-clinical year (Sitticharoon et al. 2014). Proper assessment drives proper learning styles. To improve reading skills, teachers should provide their students with more skill-based activities and monitor their progression with regular assessment.

It is interesting for further research to understand why, in Wongkietkachorn et al.'s work, handouts but not textbooks offer qualitative improvements to lectures. Additionally, why do students search for complete peer lecture notes instead of textbooks for topic reviewing? Detailed information for deeper comprehension of topics cannot be acquired from handouts. Indeed, their finding that GPA is not associated with any attitude towards handouts implies the existence of self-directed learning among students. Motivation may be the most important factor for learning success. A medical teacher should develop the ability to motivate students for self-directed learning, probably via intrinsic goal orientation, extrinsic goal orientation and task value.

Schedule organization may also influence learning behaviors in students. A huge amount of lecture-based teaching reduces the time for self-study and even for active-learning in class. With limited time, students would pay more attention only on the specific content their teachers talk about in class rather than seeking any content that may not be included in the examination. A recent meta-analysis of 225 studies in undergraduate science students showed that examination scores improved in active learning students, while students with traditional lecturing were more likely to fail (Freeman et al. 2014). To facilitate higher-order thinking, learning through activities with engaged students must be utilized as opposed to passively listening in class with lecture handouts.

Teaching styles change learning styles. Let us give students the opportunity to cultivate their own independent learning.

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## Electives support autonomy and autonomous motivation in undergraduate medical education

Dear Sir

In AMEE Guide 88, Lumb & Murdoch-Eaton (2014) have very clearly described how electives can be provided in a medical curriculum, and the advantages and the disadvantages of doing this. We wish to draw attention to two more advantages.

The first is that the opportunity for choosing to do a research elective or an international or “away from home institution” elective or an elective which provides the opportunity to follow courses which are not a part of the routine syllabus, introduces “autonomy-support” in the curriculum. Autonomy-support or providing choices to students in their learning is an important pillar for stimulating autonomous motivation (Kusurkar et al. 2011). Self-determination Theory (SDT) of motivation endorses autonomous motivation which comes out of true interest or perceived personal value in the activity as it leads to better learning and academic success (Ryan & Deci 2000). It is perceived by the student to originate from within himself/herself. By providing autonomy-support, electives can enhance autonomous motivation of students for their study (Kusurkar & Ten Cate 2013).

The second advantage is that it helps to cater to high-calibre students who often find the medical syllabus too restrictive and boring. They want more challenges in their study and opportunities to do things which are different from the routine study. With the provision of electives, these students can choose the challenge that they think they need and can handle. This helps to create a condition of optimal challenge which is important for stimulating autonomous motivation. If the task is too easy or too difficult, the students may lose their motivation (Kusurkar et al. 2011).

Thus, provision of electives can help foster autonomous motivation among medical students.

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## The use of mini-CEX in UK foundation training six years following its introduction: Lessons still to be learned and the benefit of formal teaching regarding its utility

Dear Sir

We read with interest the recent article that explored the experiences, opinions and attitudes of foundation year one (FY1) doctors in one foundation school towards the mini-clinical evaluation exercise (mini-CEX) (Weston & Smith 2014). Determining the value and utility of currently used learning and assessment tools is vital. However, there are a few aspects of this article that require further clarification and comment.

First, the low response rate (19.4%), female preponderance and lack of views from non-UK trained medical graduates suggest these results are unlikely to be representative of the opinion of current FY1s and thus not generalizable to other areas of the UK. As acknowledged by the authors, such a poor response rate allows significant bias to be introduced. All subsequent results and recommendations should therefore be interpreted with a degree of caution.

Second, it is reported that the majority of FY1s do not find the mini-CEX tool useful as part of their postgraduate training. However, it seems slightly erroneous to suggest that those who received training as an undergraduate had a significantly higher benefit from mini-CEX when the median Likert score was 3 (neutral). It would therefore be more accurate to say that

those who received no formal teaching found the use of mini-CEX to be significantly more unhelpful.

Third, the examination of specific barriers towards successful use of work-based assessments (WBAs) is to be commended. The use of qualitative methodology is therefore ideal to identify common themes relating to aspects of the mini-CEX process that require improvement. It would appear that time constraints and prioritization of service provision over educational assessment are key themes to emerge. However, the presentation of free text answers (qualitative) by frequency/percentage (quantitative) is misleading and lacks depth. A more detailed qualitative approach using focus groups or structured interviews would have enabled a more thorough investigation of attitudes and barriers to the successful use of the mini-CEX.

Finally, this article examines only the opinions of FY1s without examining those of the assessors. As the mini-CEX tool requires engagement from both parties, a full picture of attitudes towards and problems with this WBA cannot be fully formed. It will soon be a decade after mini-CEX were introduced for FY1 educational development and assessment. However, this article suggests that it remains poorly regarded with limited usefulness. Further detailed research to improve the utility, acceptance and benefit of such educational tools is therefore desirable.

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