



Curricular Change and the Learning Approaches of Medical Students

Navin Rajaratnam¹, Suzanne Maria D'cruz²

¹Department of Physiology, Saveetha Medical College, Thandalam, Chennai, India. ²Department of Physiology, Sri Muthukumaran Medical College Hospital and Research Institute, Chikkarayapuram, Mangadu, Chennai, India

ARTICLE INFO

Received : 31/03/2015

Accepted : 20/04/2015

Published : 15/09/2015

KEYWORD

Curricular change

Learning approaches

Medical students

Problem-based learning

Revised Two-Factor Study

Process Questionnaire

© Medical Education Department, School of Medical Sciences, Universiti Sains Malaysia. All rights reserved.

CORRESPONDING AUTHOR: Dr. Navin Rajaratnam, M.D (Physiology), Professor and Head of the Department of Physiology, Saveetha Medical College, Thandalam, Chennai, India. Email: drnavinr@gmail.com

We read with great interest the recent article in your journal by Mogre and Amalba about the learning approaches of Ghanian students who followed a problem-based learning, Community-based education and service-based (PBL-COBES) medical curriculum [1]. Determining students' preferred, ongoing and contextual approaches to learning can provide a good idea about the presage, process and product levels of Bigg's "Presage-Process-Product (3P) model" of the learning process [2]. Learning approaches should therefore not be viewed as stable characteristics of students; rather their value in reflecting the learning environment should be recognized and utilized. The authors have rightly determined their students' learning approaches to judge the impact of the new curriculum.

We had studied the learning approaches of first year medical students belonging to medical colleges in South India following a discipline based, non-PBL curriculum [3, 4]. The majority of our medical students had a deep learning approach and there was a positive correlation between deep approach scores and the marks obtained in a Multiple Choice Question (MCQ) examination containing questions that tested understanding, application and recall [3] and between surface learning approach scores and the Perceived Stress Scale scores [4]. To us, this reiterated the importance of students adopting a deep learning approach that focuses on understanding and relating new information to prior knowledge.

We also relate to the authors' situation of curricular change as in India too, the Medical Council of India has recently proposed many curricular reforms [5]. Generally, medical students in India encounter patients only in their second year during their clinical posting. However, with one such curricular reform of early clinical exposure, even first year medical students get exposed to patients (not necessarily actual patients, but paper cases, patient videos, standardised patients, etc.) to demonstrate the clinical relevance of basic science subjects. We are at present following students exposed to the early clinical exposure and determining the changes if any, that occur in their learning approaches as they progress through subsequent years in which they are exposed to actual patients and we intend using a mixed approach involving qualitative methods also.

The authors only postulate that it was likely that the PBL curriculum might have resulted in their students' higher deep approach scores, since there was no control group and they rightly conclude that a longitudinal study would have been better. However, we feel that their suggestion of a study with groups following the traditional vs. the PBL curriculum may not be feasible now that the new curriculum has been adopted. Instead, the baseline learning approach scores of students at the beginning and the end of the first year (a traditional teaching) could be obtained and compared with their subsequent scores in preclinical and clinical years (PBL curriculum). However the effect of age would also have to be considered.

The authors are fortunate that their students had high deep approach scores because while a PBL curriculum does generally foster a deep learning approach, Reid et al however, found little significant change (other than a tendency for the surface approach to lessen) [6] and Balasooriya et al found that students moved in the opposite direction and adopted a more surface approach (although some students changed towards a deep approach) [7] after reforms intended to promote a deep approach. The authors and their institution deserve praise for successfully implementing the new curriculum and for

choosing to study their students' learning approaches for judging its impact.

Reference

1. Mogre V, Amalba A. Approaches to learning among Ghanaian students following a PBL-based medical curriculum. *Education in Medicine Journal* 2015; 7(1): e38-e44.
2. Biggs J. What do inventories of students' learning processes really measure? A theoretical review and clarification. *Br J Educ Psychol.*1993; 63:3-19.
3. Rajaratnam N, D'cruz SM, Chandrasekhar M. Correlation between the learning approaches of first year medical students and their performance in multiple choice questions in physiology. *National Journal of Integrated Research in Medicine* 2013; 4(5): 43-48.
4. Rajaratnam N, Suganthi V, D'cruz SM. Correlation between the learning approaches and perceived stress of first year medical students. *South East Asian Journal of Case Report and Review* 2013; 2(5): 289-299
5. Medical Council of India (homepage on the internet).Vision 2015. Available from http://www.mciindia.org/tools/announcement/MCI_booklet.pdf. Accessed on 26th March 2014
6. Reid WA, Evans P, & Duvall E. Medical students' approaches to learning over a full degree programme. *Med Educ Online* 2012; 17: 10.3402/meo.v17i0.17205.
7. Balasooriya CD, Hughes C, Toohey S. Impact of a new integrated medicine program on students' approaches to learning. *Higher Education Research & Development* 2009; 28(3): 289-302