

## Faculty Development for Competency Based Medical Education : Global, National and Regional Perspectives :

Payal Bansal\*, Avinash Supe\*\*, Soumendra Sahoo\*\*\*, Rashmi Vyas\*\*\*\*

\*Professor & Head, Institute of Medical Education Technology & Teachers Training, Maharashtra University of Health Sciences, Nashik

\*\*Professor of Surgical Gastroenterology & Director of Medical Education, Municipal Corporation of Greater Mumbai \*\*\* Professor & Head, Ophthalmology, Melaka Manipal Medical College, Malaysia \*\*\*\*Assistant Vice President, FAIMER Education, Foundation for Advancement of International Medical Education and Research, Philadelphia, USA

**Abstract:** Medical Education is experiencing a global shift towards competency based medical education (CBME), an outcome-based framework that requires integration of knowledge, skills, values and attitudes into observable, measurable competencies. Faculty development in CBME is crucial to its successful implementation due to differences from the traditional approach. The global, national and regional perspectives with regard to CBME and its implementation and what faculty development must focus on in the CBME context are presented. The experiences from Southeast Asia while implementing CBME are shared. The developments in India at national and regional level, specifically, the National Faculty Development Programme initiative of the Medical Council of India and regional initiatives at the level of health science universities and related perspectives are presented. The elements of faculty development critical to successful CBME implementation are highlighted. The challenges and strategies in order to maximize the possibility of successful implementation of CBME are discussed. A well planned faculty development strategy can address the deficiencies in training of health professionals towards improved health outcomes through CBME. [Payal B NJIRM 2017; 8(5):89-95]

**Key Words:** Faculty development, Competency based medical education, inter-professional education.

**Author for correspondence:** Payal Bansal, Institute of Medical Education Technology and Teachers' Training, Maharashtra University of Health Sciences, Vani Dindori Road, Mhasrul, Nashik. E- Mail: payalkbansal@gmail.com  
M :9850266705

**Introduction:** Medical education worldwide is experiencing a paradigm shift to competency based medical education (CBME). "CBME is an approach to preparing physicians for practice that is oriented to graduate outcome abilities and organized around competencies derived from an analysis of societal and patient needs. It de emphasizes time based training and promises greater accountability, flexibility and learner centeredness"<sup>1</sup>. "Competency is described as observable ability of a health professional that integrates knowledge, skills, values and ability"<sup>2</sup>. CBME emphasizes domains beyond medical knowledge and clinical skills such as communication, professionalism and a focus on health systems to make curricula need-focused in order to meet healthcare challenges<sup>3</sup>. The competency based framework for education is not new. However, the inadequacy of prevailing educational approaches in achieving the expected student outcome of competent practitioners, providing safe and compassionate patient care has led to a renewed focus on competencies and the CBME curricular approach<sup>4,5</sup>. In recent years, considerable literature has been generated on CBME, its implementation across the educational continuum and related challenges<sup>6,7,8</sup>.

Curriculum development in CBME must be in alignment with healthcare needs. The document must clearly state outcome - focused competencies and elaborate a frame work for implementation that includes teaching-learning, assessment, faculty development and an evaluation plan. The learning and assessment should include the students' performance and its observation.

The traditional educational approach is teacher centered, with a knowledge acquisition focus and assessments are usually single-time, summative and norm-referenced. To achieve its intended goal of improved student competence and performance, CBME endeavors to shift the educational approach to a learner centered one, with knowledge application-focused student learning and frequent, formative, criterion referenced assessments<sup>9</sup>.

Faculty development in CBME is integral to the context of CBME. The emphasis on learner engagement and using assessment as a learning tool with new performance assessment methods, formal teaching of communication and professionalism means a significant shift in a teacher's role. It requires them to learn new competencies which they were never taught during their own training and therefore necessitates faculty development for effective

implementation<sup>9</sup>. Anticipated barriers to implementation need to be identified and addressed out at the planning stage itself.

Implementing a new educational approach also require faculty preparation to give them coping skills and strategies for change require leadership skills. Thus faculty development is an “essential element” for successful implementation of CBME<sup>10</sup>.

Faculty development is crucial to the success of all changes in curriculum. Recognising the need in preparation for adoption of CBME in India, this paper shares the Southeast Asian perspectives in implementing CBME and related faculty development, the Indian national and regional level faculty development initiatives and their likely effects on preparedness for CBME. It builds on the views shared in a panel discussion that the authors participated in at the National Conference on Health Professions Education 2017 at Jorhat Medical College, Jorhat, Assam, India.

#### **Faculty development for a CBME curriculum implementation: International Perspective:**

Considering faculty development for CBME, the perspectives of two South-East Asian countries, Malaysia & Singapore are elaborated. Malaysia largely acknowledges the world-wide movement for quality assurance programmes for medical education by the World Federation for Medical Education (WFME)<sup>11</sup> & continues its mission to achieve this through the participation of the Director-General of Health, Malaysia<sup>12,13</sup>. Each of its medical schools are programmatically evaluated for meeting the standards as laid down by Malaysia Medical Council & Malaysian Qualification Agency (MQA). Most of the medical schools are practicing outcome based curriculum for their undergraduate courses. The goal as stated by MQA “The general objectives of a degree course in Medicine is to produce graduates with the knowledge and skills fundamental to the practice of medicine, who are instilled with values and attitudes of dedication to service, professional conduct consistent with a compassionate profession and habits of lifelong learning which provide an appropriate foundation for them to undertake further training that enables competent and ethical practice in the different specialties of medicine “ depicts the essence of CBME<sup>12</sup>.

The MQA has clearly stated that the medical teachers must contribute to the advancement of knowledge and to the intellectual growth of their students through the scholarly activity of research and continuing education, which puts the onus on each faculty member to update themselves by participating in various Faculty Development Programs (FDP) either happening nationally or internationally. The MQA requires each medical school to have medical education unit with continuum of FDPs to update teaching skills of medical teachers. In a qualitative studies done from Malaysia the authors concluded that the learning process never stops for medical specialists & stated that vehicles such as CBME, continued professional education(CPE) & continuing medical education (CME) could ensure a safe, confident and trustworthy services provided by the doctors to their patients<sup>14</sup>. The guidelines developed for the two-year internship for all graduates clearly focus towards abilities as defined in a CBME curriculum & further stress on continuous personal & professional development , not only by the trainees but also the preceptors at hospitals<sup>15</sup>.

In Singapore, many schools are in transition to CBME curriculum. One study highlighted the reactions to a the competency-based model from a very different part of the world, specifically its merits over the traditional model and feasibility, and how it was dealt with that led to effective consolidation and transformation which went beyond just conflict resolution<sup>16</sup>. The dual strategy of enhancing learning of individual domains through CBME & opportunistic workplace based learning through traditional model could be the ideal approach before engulfing a pure form of CBME.

Regarding faculty development, apart from regular FDP workshops organised by National University of Singapore, the Academic Medicine Education Institute (AMEI), a joint effort by Singapore Health and Duke-NUS brings together educational expertise from these two institutions to form a community of educators and leaders in education, committed to excellence in teaching and learning, and scholarly endeavours<sup>17</sup>.

At institutional level, the approach is to start by blending elements of CBME such as development of an outcomes based model and introduction of new assessment methods at the workplace. For example at Melaka Manipal University the final 10th semester of

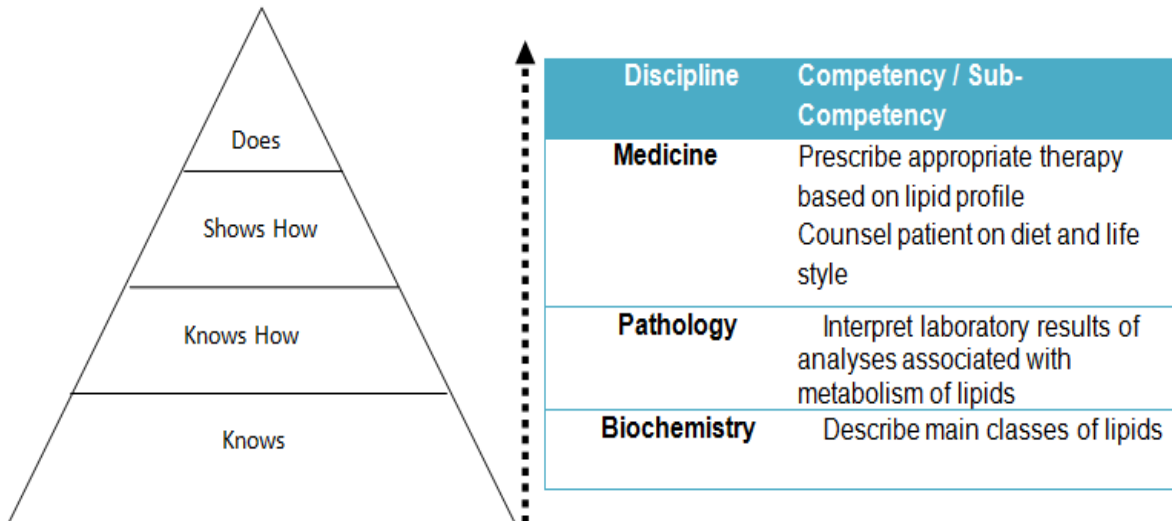
graduate training has been devoted to workplace clinical attachments with formative assessment tools such as Mini Clinical Evaluation Exercise (Mini CEX), DOPS(Direct Observation of Procedural Skills (DOPS) & Multi-source feedback (MSF) to better prepare the graduates for subsequent two years compulsory internship training. Regular faculty development programmes and collaborative educational research have helped to bring the faculty together.

**Move towards CBME in India: National Faculty Development Initiatives :** In the Indian context, the need for a CBME curriculum has been formally and informally expressed<sup>18,19</sup>. Recent articles on CBME in Indian journals<sup>20,21</sup> are indicative of rolling out of a competency based curriculum for medical undergraduates in the near future<sup>22</sup>.

Therefore, it is the right time to gauge the preparedness for implementation and bringing about the curricular change successfully.

The Medical Council of India has prepared revised Regulations on Graduate Medical Education and competency based UG curricula, accompanied by guidelines for its implementation. The traditional undergraduate curriculum in India is discipline based. Therefore, in view of feasibility and practicality, a competency driven approach is proposed, that retains the existing discipline-based format with integration, both horizontal and vertical. Medical Council of India along with subject experts across the country have prepared a list of competencies for every discipline. At the pre-clinical and para-clinical level the foundational sub-competencies will converge to attain the desired clinical competencies. (Figure 1)

**Figure 1: Ascendency of Competence – Diagnose and Manage Lipid Profile Abnormalities**



Faculty development has been seen to play a key role in implementation and sustenance of any curricular reform. While the formal regulations were in preparation, recognizing that every medical college needs to develop the capacity to adapt to the requirements of the new guidelines, Medical Council of India mandated each medical college to establish a curriculum committee for implementation and monitoring of the CBME curriculum. It also revised the format of its existing faculty development programme to orient it towards preparing faculty for CBME implementation. An Attitude and Communication Skills Module forms a part of this new faculty development curriculum. Each of the curriculum committee members is required to undergo this training as they will lead the change and implement the competency driven curriculum. This

capacity building work is in progress at this point in time.

For successful implementation, faculty must have an understanding of competencies, and be able to frame competencies for their own disciplines. They also require training for skills teaching, be able to use new workplace assessment methods and give student feedback. The revised curriculum of the National Faculty Development Programme has been prepared considering these learning needs of faculty.

Medical Council of India has established a National Faculty Development Programme consisting of a functional network of regional and nodal centres (10 Nodal Centres and 10 Regional Centres across the country) for faculty development which runs courses

in medical education successfully since last 8 years. Over 30000 faculty have trained through the Basic Course and Revised Basic Course (including Attitude and Communication Skills) and the Advanced Course in Medical Education<sup>23,24,25,26</sup>. Earlier experience with implementation of curricular changes suggests that a carefully managed, sustainable approach is necessary to ensure that every college has access to these new skills and knowledge.

**Implementation of MCI Mandate and Faculty Development at University Level: Regional Initiatives:** Faculty development at regional level is occurring in two ways. First, as outlined above, in most parts of India, the MCI National Faculty Development Programme in medical education, expanded across the country is the main programme available to faculty. Implementation occurs through the team trained at the regional and nodal centres, which in turn organises and conducts training for the institutional faculty.

In many states in India, Health Science Universities affiliate institutions from all health science faculties such as Dentistry, Ayurved, Homeopathy, Nursing, Physiotherapy, Occupational Therapy, etc. There are thirteen state health science universities in India at present. Some health science universities have established departments of health professions education to train teachers through continuing professional development programmes, courses in educational methodology, research methodology, etc. The Maharashtra University of Health Sciences (MUHS)<sup>27</sup>, India affiliates over 300 health professions institutions. The Institute of Medical Education Technology and Teachers' Training, MUHS was established in 2007 and has since been conducting faculty development in programmes in educational methodology. These were developed based on a needs assessment study<sup>28</sup>.

In the University system, based on the regulatory guidelines of respective councils, the various faculties develop their curricula under their respective Boards of Studies, which are then reviewed by the faculty and require academic council approval for implementation.

A state health science university has tremendous potential to implement faculty development in

alignment with CBME needs. A needs assessment that takes into account learner needs is a must to implement a curriculum that is evidence based. This can be undertaken by the University. A study conducted for the surgery undergraduate competencies has demonstrated gaps in emergency management skills, communication skills and procedural skills<sup>29</sup>. This information will inform the development of competencies when CBME is introduced. The faculty development workshops are inter-professional in nature and the faculty learn together about educational principles and practices. This setting of faculty development provides the unique opportunity to teach the new competencies in the CBME curriculum, such as team skills, interpersonal and trans-disciplinary communication for patient management, counselling skills and systems based approach. At MUHS, over 35,000 faculty have trained so far through various faculty programmes which also include capacity building in research methodology, communication skills and continuing professional development activities.

Elements of faculty development Programmes at MUHS that support CBME Implementation Faculty from all health professions learn together in an inter-professional setting. The programme design emphasise student-centeredness and focus on development of teacher competencies in alignment with a student centred approach.

The high learner engagement and project based program design enables faculty to make a shift to learner centred processes, which they replicate in their own environment in educational practices as well as through hands on educational innovation projects. These include teaching - learning innovations (case- based learning, interactive lecturing), assessment innovations (mini—CEX and OSCE based formative assessment), student support and curriculum projects.

The programmes prepare teachers to become facilitators, by encouraging them to adopt active learning principles, giving opportunity for more interaction with learners and addressing their needs, more responsibility to their learners and overall, using learner centred strategies in planning and implementation of teaching as shown in Table 1

**Table 1: Faculty competencies emphasised in design and conduct of education workshops**

S.No.	Objectives of Training	Expected Outcomes
1	Facilitation Skills	Learner Engagement
2	Active Learning Strategies	Shifting Responsibility of Learning on the Learners
3	Design Skills Development – curriculum and assessment	Ability to participate in and nurture course development, performance assessment tools
4	New performance methods to observe a structured assessment and give feedback.	Develop assessment skills and feedback skills
5	Project Based Faculty development	Project implementation skills Project related new content areas development – communication, professionalism, feedback , new assessment methods

A mixed methods study has demonstrated a significant and sustained shift towards learner centeredness amongst the faculty who participated in this programme, with educational projects and process design playing a role<sup>30</sup>. The national and regional perspectives reflect that the design and implementation of current faculty development programmes and the skills thus being nurtured are in alignment with the faculty competencies necessary for the implementation of CBME. The Southeast Asian perspective is a valuable resource to learn from in terms of both successes and challenges.

#### **Implementation at Institutional Level: Expected Challenges and possible solutions**

The curricular implementation involves the institutions, teachers and students. All of these stakeholders need to understand the outcomes/ goals focus and the emphasis on skills and performance over acquisition of knowledge alone. Implementation demands more manpower and resources for skills development infrastructure and training, frequent performance assessment and timely feedback. Both time and financial constraints will be a challenge. Institutions and policy makers must recognise that implementation will be gradual, and requires their long term commitment and support.

At the faculty level, resistance to change is expected. In the Malaysian experience, making faculty understand the underpinnings of competency and graduate abilities in CBME remains a major challenge. Coordination between departments for integration, charting of milestones, development of assessments, etc. require time, efforts and training.

Implementing the new curriculum will involve considerable new learning and some unlearning for the faculty. Further, teaching other faculty and

preparing them for implementation will be an added responsibility. Additional skills required include ability to work collaboratively, willingness for change and ability to negotiate resistance. Faculty require considerable leadership skills to navigate the complexities of the entire process, including time and resource constraints.

Motivating students will also not be easy. Multiple Choice Questions (MCQ) entrance examination for postgraduate admissions which has strongly skewed the learning efforts of students towards knowledge rather than skills<sup>29,31</sup>. Overcoming this detractor can be a major obstacle in implementing a CBME curriculum which requires redirecting the students' focus towards performance. Faculty must demonstrate commitment, willingness to learn and motivate the students. They should be able to collaborate, deal with diverse viewpoints and build consensus.

Last but not the least, the ongoing faculty development efforts need to be evaluated for their overall effectiveness in terms of strengths and their areas of improvement. From the capacity building perspective, the different institutions can share experiences and learn by reviewing and reflecting on what is working well elsewhere to make improvements in their own context.

**Conclusion:** The potential of CBME to address the deficiencies that have arisen in the current training of health professionals has led to its adoption in many parts of the world, including Asia. In the Southeast Asian experience, the regulators have played a major role for its implementation including emphasis on faculty development. Likewise, the MCI initiatives of developing the CBME curriculum is a step in the right direction. The revised faculty development

programme of the MCI for CBME implementation coupled with regional level initiatives by Health Science Universities is preparing the faculty and thereby laying a strong foundation in advance. A well planned faculty development effort that carefully addresses student and faculty needs and prepares for anticipated challenges holds the promise of successful implementation of CBME leading to better educational outcomes that will improve and positively impact healthcare.

**Acknowledgement:** The idea of this paper arose from the panel discussion “Moving from Global to local : What’s working in our part of the world in equipping faculty for curricular change towards competency driven medical/health professions education? “ in which all the authors participated at the National Conference on Health Professions Education 2017, 10<sup>th</sup> and 11<sup>th</sup> November at Jorhat Medical College Jorhat, Assam, India. The opportunity to participate in the panel is gratefully acknowledged.

#### References:

1. Frank JR, Mungroo R, Ahmad Y, Wang M, De Rossi S, Horsley T. Toward a definition of competency-based education in medicine: a systematic review of published definitions. *Medical Teacher*. 2010; 32(8):631-7.
2. Frank JR, Snell LS, Cate OT, Holmboe ES, Carraccio C, Swing SR, Harris P., Glasgow NJ, Campbell C, Dath D, Harden RM. Competency-based medical education: theory to practice. *Medical teacher*. 2010; 32(8):638-45.
3. Gruppen LD, Mangrulkar RS, Kolars JC. The promise of competency-based education in the health professions for improving global health. *Human Resources for Health*. 2012; 10(1):43.
4. Carraccio C, Wolfsthal SD, Englander R, Ferentz K, Martin C. Shifting paradigms: from Flexner to competencies. *Academic Medicine*. 2002; 77(5):361-7.
5. Snell LS, Frank JR. Competencies, the tea bag model, and the end of time. *Medical Teacher*. 2010 Aug 1;32(8):629-30.
6. Harris P, Snell L, Talbot M, Harden RM, International CBME Collaborators. Competency-based medical education: implications for undergraduate programs. *Medical Teacher*. 2010 Aug 1;32(8):646-50.
7. Iobst WF, Sherbino J, Cate OT, Richardson DL, Dath D, Swing SR, Harris P, Mungroo R, Holmboe ES, Frank JR, International CBME Collaborators. Competency-based medical education in postgraduate medical education. *Medical teacher*. 2010 Aug 1;32(8):651-6.
8. Campbell C, Silver I, Sherbino J, Cate OT, Holmboe ES, International CBME Collaborators. Competency-based continuing professional development. *Medical Teacher*. 2010 ;32(8):657-62.
9. Carraccio C, Englander R, Van Melle E, Ten Cate O, Lockyer J, Chan MK, Frank JR, Snell LS. Advancing competency-based medical education: a charter for clinician–educators. *Academic Medicine*. 2016;91(5):645-9.
10. Dath D, Iobst W, International CBME Collaborators. The importance of faculty development in the transition to competency-based medical education. *Medical Teacher*. 2010;32(8):683-6.
11. World Federation for Medical Education | Enhancing Quality Worldwide [Internet]. The World Federation for Medical Education. 2017 [cited 25 November 2017]. Available from: <http://wfme.org/>.
12. Malaysian Medical Council. Guidelines for Accreditation of the Malaysian Undergraduate Medical Education Programme [Internet]. 2015. Official Portal of Malaysian Medical Council. [cited 25 November 2017] Available from: <http://www.mmc.gov.my/images/contents/downloadable/Accreditation%20Guidelines%202016.pdf>
13. Wong RS, Kadir SY. Medical education in Malaysia: quality versus quantity. *Perspect Med Educ*. 2017; 6:10–11. DOI 10.1007/s40037-016-0319-8
14. Tukiman NF, Abiddin NZ. Exploring Competency-Based Medical Education Among Specialist Doctors in Malaysia. *International Journal of Education and Learning Systems*. 2017; 2:156-166
15. Malaysian Medical Council. A guidebook for house officers [Internet]. 2008. Official Portal of Malaysian Medical Council. [cited 25 November 2017] Available from: <http://www.mmc.gov.my/images/contents/ethicall/A-Guidebook.pdf>
16. Khoo SM, Lahiri M, Huggan PJ, Archuleta S, Olszyna DP, Goh WP, Chua GS, Ho KY. When traditional model meets competencies in Singapore: beyond conflict resolution. *Ann Acad Med Singapore*. 2014;43:544-9.
17. Academic Medicine Education Institute [SG]. Faculty Development Overview

- [Internet]. Academic-medicine.edu.sg. 2017 [cited 25 November 2017]. Available from: <https://www.academic-medicine.edu.sg/amei/faculty-development/overview>
18. Medical Council of India. Vision 2015 [Internet]. 2011. Medical Council of India. [cited 25 November 2017] :New Delhi Available from: [https://old.mciindia.org/tools/announcement/MCI\\_booklet.pdf](https://old.mciindia.org/tools/announcement/MCI_booklet.pdf)
  19. Medical Council of India. Revised-GME-2012 [cited 25 November 2017] Available from: <http://iafmonline.in/data/circular-notifications/Revised-GME-2012.pdf>
  20. Modi JN, Gupta P, Singh T. Competency-based medical education, entrustment and assessment. *Indian Pediatr.* 2015 ;52(5):413-20.
  21. Chacko, TV. Moving toward competency-based education: Challenges and the way forward. *Archives of Medicine and Health Sciences.* 2014;2(2): 247 - 253.
  22. Patel V, Patel VR. MCI regulations on graduate medical education, 2012-Are we ready for paradigm shift. *NHL J Med Sci.* 2012 Jul;1:5-6.
  23. Medical Council of India. National Faculty Development Programme [Internet]. 2017. Summary of Teachers trained. Available from: <https://www.mciindia.org/documents/informationDesk/2.%20Summary%20of%20teachers%20trained.pdf>
  24. Medical Council of India. National Faculty Development Programme [Internet] 2015. MCI Decisions on MET. 2015. [cited 25 November 2017] Available from: [https://www.mciindia.org/documents/informationDesk/3.%20MCI\\_decisions\\_on\\_MET.pdf](https://www.mciindia.org/documents/informationDesk/3.%20MCI_decisions_on_MET.pdf)
  25. Medical Council of India. National Faculty Development Programme [Internet] 2015. Programme of the revised Basic Course Workshop w.e.f August 2015. [cited 25 November 2017] Available from: <https://old.mciindia.org/fdp/8.%20Three%20day%20revised%20BCW%20programme.pdf>
  26. Medical Council of India. National Faculty Development Programme [Internet] 2015. One-day Sensitization programme on Attitude and Communication (AT-COM) module for Resource Faculty of Nodal & Regional Centres, MEU coordinators/Co-coordinators, MEU faculty, Faculty Curriculum Committee members. [cited 25 November 2017] Available from: <https://old.mciindia.org/fdp/8.%20Three%20day%20revised%20BCW%20programme.pdf>
  27. Maharashtra University of Health Sciences. <https://www.muhs.ac.in/> [Cited: 25 November 2017]
  28. Bansal PK, Marathe S, Shere PM, Phadke MA. Needs assessment as a strategic planning tool. *Medical education.* 2010 May 1;44(5):515."
  29. Jamkar A, Bansal P, Patrikar S, Baxi G. Expected surgical competencies of an Indian medical graduate: A gap analysis using a cross-sectional survey. *Educ Health.* 2015;28(1):4-10.
  30. Bansal P. Measuring self-perceptions regarding student-centeredness in health professions educators following a faculty development intervention: a cross-sectional study [[Thesis]. [Maastricht]: Maastricht University; 2016.
  31. Dhamangaonkar AC. Why are students keeping away from wards?. *J Postgrad Med* 2008;54:331

Conflict of interest: None
----------------------------

Funding: None
---------------

Cite this Article as: Payal B, Avinash S, Soumendra S, Rashmi V. Faculty Development for Competency Based Medical Education. <i>Natl J Integr Res Med</i> 2017; 8(5):89-95
--