Assessment of professionalism and ethics

Adkoli B.V

Director, Centre for Health Professions Education, Sri Balaji Vidyapeeth (Deemed University), Pondicherry, India

***Corresponding Author: Adkoli B.V**
Email: bvadkoli@gmail.com

Abstract
Professionalism is the new buzz word in medical education and practice. The MCI Revised Graduate Medical Education Regulations 2017 emphasize the role of Indian Medical Graduate as a professional who is ethical, responsive, caring, compassionate, committed to excellence and accountable to patients, profession and community at large. A plan is underway to introduce Attitude Ethics and Communication (AETCOM) modules as a part and parcel of MBBS curriculum. However, how to translate this laudable plan in to action requires further deliberations.

The purpose of this article is to identify a comprehensive strategy for assessing professionalism. Teaching and assessment of professionalism are quite challenging. A combination of both objective and subjective tools is needed for giving credibility to the assessment. Continuous documentation and internal assessment coupled with portfolio approach can play a key role in assessment of these competencies.

Keywords: Professionalism, Ethics, Assessment.

Introduction
One of the most hotly debated issues in medical education is how to develop professionalism amongst medicos so as to achieve a health care delivery of high standard.[1] Accreditation Council of Graduate Medical Education (ACGME) in the US lists professionalism as a core competency.[2]

Professionalism, though rooted in technical competency, deals with humanistic aspects such as caring and compassion. There is no universally accepted list of professional behaviours, to guide teaching or fix assessment. Most of the international literature tends to agree on six major attributes, viz., Altruism, accountability, excellence, duty, honour & integrity and respect for others.[3]

Another problem is that professionalism is shaped up by observing the behaviour of role models through 'hidden curriculum'. Professionalism is also deeply influenced by the attitudes and values which a student brings from up-bringing, early school life training, and peer influence in general. Professionalism cannot be developed unless a student is immersed in a real-life situation encountered in OPDs, wards or communities. The conventional tools such as MCQs, SAQs and Short/Long cases are not adequate to observe the true behaviour of students and hence do not have much utility. How to incorporate the elements of professionalism in an over-crowded, disciplinary curriculum and assess the same in a holistic manner is extremely challenging.

Medical Council of India (MCI) Initiatives for developing Attitude, Ethics and Communication (AETCOM) Competencies for the Indian Medical Graduate
Medical Council of India (MCI), has come out with Revised Graduate Medical Education Regulations, defining the contours of an Indian Medical Graduate. To support training in professionalism, MCI has recommended a structured longitudinal modular program on Attitudes, Ethics and Communication (AETCOM).

Salient features of AETCOM Modules
1. AETCOM modules are based on Graduate Medical Education Regulations, 2017.[4] The Indian Medical Graduate (IMG), is expected to be a clinician, leader and member of health team, communicator, lifelong learner and professional. In fact, professionalism touches each of these roles, directly or indirectly.
2. A competency based model has been applied. The competencies expected for performing each role have been listed. Under the heading of attitudes, ethics and communication, 54 competencies have been identified, including 39 core competencies and 15 optional competencies.
3. AETCOM has been designed as a continuum of learning experiences right from first year to final MBBS, using case scenario based small group teaching.
4. There are in all 27 modules spread over a period of four professional years with 140 instructional hours allotted for study including self-directed learning.
5. In each module, the competency addressed is stated along with the expected level out of five levels, viz., Knows, Knows how, Shows, Shows How and Performs. This is in slight modification of Miller's pyramid with four levels.
6. The methodology recommended in the AETCOM is 'Hybrid Problem Oriented approach' utilizing mostly case scenarios. The case scenarios are based on real life or simulated cases which trigger a lot of thought process and discussion among students, facilitated by faculty in small groups or buzz sessions. They permit high level of interactivity, encourage problem solving skills and promote collaborative learning, team work, reflection and self-directed learning. Usually a case scenario involves two or more learning sessions in small groups combined with an intervening lecture session (during second week) and self-directed learning. During the first week the scenario discussion starts in small groups and the case scenario is concluded during third week.

7. Assessment scheme: The AETCOM module suggests the modality of assessment for each module in a general manner under the heads formative and summative assessments. The formative assessment suggested for most of the modules is students' active participation and presentation. Summative evaluation has been suggested in the form of a short answer question.
8. MCI has suggested a Log Book for documenting competency acquisition including the competency required vis-a-vis, achieved, the year in which it has been achieved satisfactorily as verified by the number of times the student has performed the skill, duly certified by the teacher whether it meets with expectation or below expectation.

Building on AETCOM Initiative

While the approach to the teaching of Professionalism suggested by MCI is on sound footing, there are some issues regarding its robustness of assessment component, which holds the key for learning. MCI has adopted modified version of Miller's pyramid a popular model. It will be worthwhile to look at other models of evaluation that can help in developing professionalism.

The Five-Stage Skill acquisition model of Dreyfus includes novice, advanced organizer, competence, proficiency and expertise as the key stages towards the development of competency.[5] Since we expect that many of the professional behaviours start shaping up during the undergraduate training and fruitioned during PG level, the model suggested by Dreyfus may be more appropriate for the PG level.

Bloom's Taxonomy is highly useful for cognitive domain. The model suited for attitudes and values can be borrowed from the work of Krathwohl, who suggested five steps in attitude formation - Receiving, Responding, Valuing, Organization and Characterization or Internalization.[6] Receiving means a student observes behavioural norms expected (knows), begins 'responding' when they are appropriate (knows how), values decision alternatives when confronted, and tries to organize these, over a period of time till internalizes this behaviour, the final peak of professionalism. This model reflects the manner in which attitudes and values are developed over a period of time and hence deserve attention of educators.

Kirkpatrick's model, a popular model suggests that a program intervention needs to evaluated at four levels.[7] Reaction level (satisfaction by the participants), learning level (assessed immediately after the sessions), behaviour level (demonstrated when the participants go back to their work places), and service or impact of the program (in producing learning outcome). The main strength of Kirkpatrick model is its feasibility to measure at least three levels though we can't expect the fourth level during the four years of MBBS program.

Drawing upon the recent trends in the field of evaluation, evaluation must be based on evidence coming from multiple sources, collected through multiple observers/tools, on multiple occasions. This means that we need to incorporate a large number of tools to collect assessment data, including both objective and subjective tools.[8] While the earlier focus was on targeting evaluation to what all could be assessed objectively, (reliability issue), the present focus is on capturing all competencies by using both objective and subjective tools.

Finally, evaluation should be regarded as a tool for improving learning.[9] Based on the theories of adult learning, learning is enhanced when the students are actively engaged (motivation), and immersed in a situation or a problem, (contextual learning), obtain feedback from mentor and others (collaborative learning) later reflect on their performance (feedback & reflection), and take corrective steps (practice and reinforcement) and employ a new strategy. Kolb's learning cycle which deals with doing, feeling, watching and thinking is also relevant here.

Translating theory in to practice

A robust system of evaluation can be inbuilt along with the AETCOM modules suggested by the MCI. This will involve a concerted institutional effort. Teaching and assessment of professionalism should occupy a central place in the medical curriculum planning and implementation.

Three types of evaluation are needed to provide a holistic picture of professionalism:

a) Process Evaluation: This deals with the capturing of the process of teaching learning especially the case scenario approach used in the AETCOM model. This is somewhat equivalent to 'reaction' and 'learning' level of students according to Kirkpatrick model.
b) Progress Evaluation: This deals with the monitoring of the progress throughout the course.
c) Product Evaluation: This deals with the final product at the end of clinical training and internship.

Other elements that are of crucial importance are maintenance of e-portfolio in lieu of logbook for recording, monitoring and supporting all forms of experiential learning, exposure to role models (hidden curriculum) and real-life experiences. The process will underline day today interaction with the mentor who is expected to check e-portfolio for supporting, and handholding the student in a desirable direction.

The Suggested Strategy for Evaluating Professionalism Consists of the following steps

1. Institutional level Faculty Development Program should be organized for sensitizing all faculty involved with the teaching and assessment of professionalism. The program should address all aspects such as the need for developing professionalism, methods, tools & techniques, time scheduling, assessment modalities, and role of faculty as teachers, assessors and mentors.
2. A core group should be constituted to plan, implement, and monitor the whole program.
3. The core group should prepare a consensus document on the list of professional behaviours expected at the end of UG/PG studies. This document should be widely circulated among all students and staff.

4. The next step is preparation of a curriculum and evaluation strategy. This will include detailing of the modules, finalization of case scenarios, allocating responsibilities among faculty, and working out e-portfolio books and other tools of assessment to capture learning. It is possible to make e-portfolios as a part of the learning Management System (LMS). The evaluation strategy involves multiple tools for capturing the development of professionalism.
5. Implementation of curriculum and assessment. Ideally, the curriculum should be transacted in class rooms, wards, OPDs, OTs etc along with assessment component built in to the teaching learning. The implementation involves tracking of progress, monitoring and system fine tuning.

Types of Evaluation

a. Process Evaluation

The purpose of process evaluation is to monitor the process of learning that takes place through the case scenario based modules. This can be done by designing a simple evaluation form to be administered at the end of each module. The form can have two parts. Part 1 will elicit the opinion of students regarding the session (reaction level) which they went through and their suggestions for improvement. Part 2 will assess the main learning outcome of the session, mostly the knowledge base. The form should be user-friendly and easy to analyze. Converting in to google forms or any other simple tool such as Survey monkey can be considered. An example of such form is given in the Table 1.

b. Progress Evaluation

Progress evaluation may be done by introducing a portfolio based assessment in which every student is continuously engaged in clinical or community experiences, documenting and reflecting on those experience under the guidance of a faculty member or mentor who will be responsible for tracking professional growth of the students from year one till the completion of internship.

Table 1

Process Evaluation Form (Applicable for all sessions)
To be filled by the students after the end of each session and submitted electronically (Form is anonymous, identity will not be disclosed)
Login ID…… Password ……..

Title of the session:
Date:

Q No.	Part 1: Evaluation of the session: Please put tick ✓ mark against each item	Yes	Can't Say	No
1	Were you clear about the objectives of the session in the beginning?			
2	Do you think the case scenario (or any other approach) used in the session was interesting?			
3	Do you think that the objectives of the session were realized?			
4	Do you feel that the learning resources used were adequate?			
5	Was the time management done effectively?			
6. Use the following space to tell us about what was good about the session				
7. Use the following space to tell us about what could be improved				
Note: Use Google form or any tool for submitting the response ☐				

Part 2 Learning outcome of session Example, Session on Team Building	
1	Give 2 advantages of working in a team for a health worker (2 marks)
2	Who are all members of the health team? Justify (2 marks)
3	Who is the leader of a health team? Justify(2 marks)
4	How do you go about in building a team of villagers who are needed for you in community work (2 marks)
	Submit your response ☐

Portfolios and e-portfolios

Portfolio approach consists of continuous documentation and reflection by the students, their day to day experience with patients. It is a reflective tool besides evidence tool like log book. An e-portfolio is a collection of soft data on products prepared by a student that provides evidence of learning and achievement related to a learning plan. It can be a written document, with provision for uploading text, photograph, ppt, audio/video recording. A student during the course of clinical posting is expected to write a portfolio describing and reflecting upon his/her personal experience of interaction with the patient, viz., what happened, why did it happen so, and what he/she learnt from the episode.

The supervisor examines the portfolio, interacts with the candidate and provides feedback. The information can be used for formative and/or summative assessment. Many institutions have started introducing e-portfolio as a part of their Learning Management Systems (LMS), at the PG level.[10]

An example of a portfolio page for tracking progress of professionalism has been proposed as an example. [Table 2] Please note how the instrument captures progress made in the professional behaviour at different levels of Miller's pyramid.

Table 2: Progress Evaluation - A page from the Professionalism Portfolio of a student

Student Login ID: Supervisor: Login ID	
Competency Expected at the end of MBBS: Giving respect to others: The Indian Medical Graduate shall demonstrate respect to patients, and health team colleagues in a simulated situation.	
Professional Year 1: Expected level : Knows / Knows How The student at the end of first year develops awareness about the importance of giving respect as an expected professional behaviour by writing a narrative	
Task: Think of one incident that happened to you in the recent past. A patient came to you asking for some medical help which you are not capable of giving. How did you tackle this situation? Discuss with your mentor	
Student's experience and reflection	Mentor's comment and feedback
Student reflects his/her reaction on what went well? Why?	Listens and amplifies student's comments
Student reflects his/her reaction on what did not go well? Why?	Listens and amplifies student's comments
Student suggests what he/she could have done to improve the performance	Listens and amplifies student's comments
Student suggests what he/she will do next time to improve the performance	Makes assessment: Meets Expectation/Less than expectation/ Beyond expectation Gives practical tips for improvement
Professional Year 2 : Level expected - Knows How, Shows how The student learns and demonstrates how to be respectful to the patient while communicating with him/her. Soon after completing a module on communication (Module 2.1) student will write a narrative	
Task: During your community medicine field visit, collect in-depth information from a family about their issues of health concern, facilities available to them and the problems which they are facing.	
Student's experience and reflection	Supervisors' comment and feedback
Make a bullet list of your findings	Checks the list, and comment on the findings
Student reflects his/her reaction on what went well? Why?	Listens and amplifies student's comments
Student reflects his/her reaction on what did not go well? Why?	Listens and amplifies student's comments
Student suggests what he/she could have done to improve the performance	Listens and amplifies student's comments
Student suggests what he/she will do next time to improve the performance	Makes assessment: Meets Expectation/Less than expectation/ Beyond expectation Gives practical tips for improvement
Professional Year 3 Semester 7-9 (Shows/Shows How) Demonstrates ability to communicate to patients in a respectful manner, non-threatening, non-judgmental and empathetic manner (after completing Module 3.1)	
Task: You have been exposed to various methods to communicate effectively with patients or standardized patient. As a follow up, make a video-clipping based on role play with your friend or standardized patient demonstrating how effectively you have satisfied the patient. Show the clipping to your mentor and discuss its value to you.	
Student's experience and reflection	Supervisors' comment and feedback

Shows the video clipping to mentor	Assesses the video clipping based on Calgary Cambridge scale
Student reflects his/her reaction on what went well? Why?	Listens and amplifies student's comments
Student reflects his/her reaction on what did not go well? Why?	Listens and amplifies student's comments
Student suggests what he/she could have done to improve the performance	Listens and amplifies student's comments
Student suggests what he/she will do next time to improve the performance	Makes assessment: Meets Expectation/Less than expectation/ Beyond expectation Gives practical tips for improvement
Professional Year : Internship (Performs in a real life or simulated situation) Demonstrates ability to communicate to patients in a respectful manner, non-threatening, non-judgmental and empathetic manner in a simulated or real life situation	
By this time the expectation is that the Indian Medical Graduate is capable of showing respect to patients, and health team colleagues in a simulated situation. Task: Documentation and reflection of learning experienced by the intern during internship postings related to community, emergency care (ICU), labour room posting etc., which bring challenges to interns. For example, an intern may narrate an incident in which he/she participated in a voluntary blood donation campaign organized by the village youth. It was a tough challenge how to motivate the village folk for donating blood. However, with great ingenuity the intern was able to make it a success. He/she collected evidence including reports of targets achieved, besides letters of appreciation and press media reports of this success story.	
Student's experience and reflection	Supervisors' comment and feedback
Shows the evidence of his/her achievement to the mentor	Verifies the authenticity of success claimed by the intern by going through various reports
Student reflects his/her reaction on what went well? Why?	Listens and amplifies student's comments
Student reflects his/her reaction on what did not go well? Why?	Listens and amplifies student's comments
Student suggests what he/she could have done to improve the performance	Listens and amplifies student's comments
Based on assessment the intern is either qualified for summative assessment (EXIT OSCE) or repeats particular part of internship	Makes assessment: Meets Expectation/Less than expectation/ Beyond expectation If the intern doesn't meet expectation, the mentor recommends the intern to repeat the internship and gives practical tips for improvement

c. Product Evaluation

We can expect behavioural outcomes of professionalism only during the internship when the Indian Medical Graduate gets first hand clinical experience in wards, communities and workplaces. The assessment can be a part of the exit OSCE examination to be conducted at the end of Internship. This will ensure that every student is capable of performing the required skills under simulated condition. The OSCE stations can be designed using simulations and standardized patients. A table showing example of a station on Professionalism in Exit OSCE examination has been shown in Table 3.

Table 3: Example of an Exit OSCE Station for assessing compassion in summative assessment

Time 3-5 minutes	Behaviour performed by the student, checked by the observer
Station 1: Competency - Reassuring a patient who is anxious about his operation [Level tested: Shows, Shows How]	Greeted patient by calling his/her name and connected with the patient by inquiring about his/her background in a balanced manner (1)
	Inquired about patients' apprehension and answered each query in a convincing manner (by giving facts and figures) (2)
	Used body language (eye contact, non verbal cues, proper emotions to empathize with the patient (2)
	Before concluding again asked the patient if there are any other issues which he/she can address (2)
	Gave a final positive stroke to patient (1)
	Total Marks: (8)

Plethora of Methods, Tools and Techniques for Assessment of Professionalism

Besides direct assessment by the mentors based on portfolio approach, the institutes can also think of other methods and tools which can be administered periodically as a part of internal assessment. (Table 4)

Table 4: List of Tools for assessing professionalism and their utility

Tool	Utility
Professionalism Mini Evaluation Exercise (PMEX)	PMEX has proven value in assessing four essential attributes, viz., reflection, doctor-patient relationship, time management and inter-professional relationship.[11] These are assessed by 21 items. Each of the items is rated on a 4 point scale. The rating is done as follows: 1 if the performance is unacceptable, 2 – if it is below expectation, 3 – if it meets expectations and 4-if it exceeds expectations. The main advantage of PMEX is that it allows the supervisor to discuss the lapse in professional behaviour with the student and to suggest appropriate remedial measure. Hence it has a formative role to play.
Professionalism Assessment Tool (PAT) Kelley et al (2011)	Cross validated instrument consisting of 33 items which addressed five domains, viz., (1) Reliability, Responsibility and Accountability; (2) Lifelong Learning and Adaptability; (3) Relationships with Others; (4) Upholding Principles of Integrity and Respect; and (5) Citizenship and Professional Engagement.[12]
Written Tests MCQs, SAQs or Essay Questions (MEQs)	MCQs, SAQs or Essay Questions can be used for assessing only knowledge base of professionalism.[8,9] Scenario based questions can be used effectively in written or viva exam to test attitude of students towards colleagues, team, patients and community.
OSCE, Case Based Discussion, Mini-CEX	These modalities are helpful in objective assessment of communication skills and professionalism in an artificial setting. Good for giving feedback for improvement.[8]
Simulated patients, Standardized Patients (SP)	Use of a video clipping made on the basis of a real life incident happening in crowded OPD or ward setting or a simulated version crafted by the teacher can also be used with some ingenuity and effort put up by the departmental faculty.
Self-assessment	Self-assessment is highly appropriate for measuring qualities of self-regulation and self-reflection. One can imagine that self-assessment suffers from the bias of social desirability. Studies have shown that good students' self-rating is closer to instructors' rating compared with that of weak students. Self-assessment plays more of a formative role, as it gives opportunity for reflection, correction and continuous improvement. If combined with peer assessment and supervisors' assessment, this can also be used for summative purposes.
Assessment by peers	Assessment of professional behaviour can be carried out by peers, using a checklist or a rating scale. Since they are in close contact with each other, their observations can be recorded more in number and frequency. The internal consistency of such measurement is found to be moderate. In addition, bottlenecks such as lack of willingness to rate their friends, and the tendency to rate clinical competence rather than professional qualities, need to be addressed. The peer assessment is therefore recommended for formative assessment.
Assessment by Patients	Patient surveys are effective modalities of assessing satisfaction with professional behaviour including students' empathy, listening skills and sensitivity to cultural issues, besides overall quality of care. They are aided by rating scales, (*e.g.*, poor, fair, good, very good, excellent), checklists, questionnaires, or any other kind of feedback on the level of satisfaction experienced by the patient during his/her encounter with the candidate. The surveys mostly yield a group performance data rather than individual data. Hence, they are useful in improving the system rather than individual performance. Studies have shown that one needs to collect ratings from 30 – 50 patients in order to make a fair assessment decision.[13]
360° Evaluation (Multi-source feedback-MSF)	The current trend in assessment greatly supports the use of 360°assessment, especially in the context of professional qualities which require constant assessment.[14] The 360° evaluation consists of using measurement tools (checklist or rating scales) completed by multiple observers including faculty members, peers, patients, and other health personnel such as nursing or

	technical staff. The results of MSF can be reported at the end of the year or course as a comprehensive report indicating the strength and weak areas of the candidate. Even the collective analysis of MSF can help the institute to improve its quality by looking at the areas needing improvement. Research shows that the 360° assessment is reliable when the number of observations/ratings increases. Moreover, the ratings by those who are in constant interaction with the students are more reliable than the ratings given by the faculty. The practical limitations of the 360° assessment are the extensive effort involved in the construction and administration of a proper tool uniformly across diverse stakeholders, and further analyzing and interpreting the data collected in taking the final decision.
Use of Narratives, co-curricular activities, Theatre of the oppressed, service learning	The narrative approach has been exploited by educators who promote medical humanities. This approach demands "role modelling" by a highly committed faculty, contextual learning and problem solving in small groups, connecting to the patients' life stories, and deep engagement in community-based activities. The utilization of co-curricular activities, videos and movies, Theatre of the Oppressed, the analysis of concept maps prepared by the students, are some of the interesting developments.

A note of Professionalism at the Post-graduate Training

ACGME has recognized professionalism as one of the six core competencies. Professionalism manifests in other competencies also. The progress evaluation suggested for UG training is perhaps more feasible in the context of PG training in India where there is improved teacher - student ratio. The only difference is that professionalism forms a part and parcel of many Entrustable Professional Activities (EPAs), which form the basis for competency based PG curriculum.[15] More than a formal case scenario based approach, the teaching can be done by role modelling and immersing the residents in vulnerable situations. There is need for observation, monitoring and handholding on a day today basis, covering all activities captured through e-portfolio. However, the final decisions regarding certification should be based on Multi-Source Feedback, including feedback from peers, patients and health team partners.

Future of Assessment of Professionalism

A vertically integrated curriculum with innovative methodology for teaching bioethics has been developed by the UNESCO Chair in Bioethics, Haifa. This new curriculum was piloted in a few medical colleges in India from 2011 to 2015. Based on positive results, this integrated curriculum is now formally implemented in Health Science Universities affiliating over 200 medical schools in India.

Recent researches have focussed on professionalism as a continuous process of forming professional identity.[16] Each medical student develops his/her own professional identity during medical training as a result of collective influence of his/her previous background, peer influence, influence of role model(s) and encounter with patients and community at large. The concept of Professional identity formation has practical implications for teaching and assessment of professionalism based on the Miller's Pyramid. After Miller's four level, ('knows'; 'knows how'; 'shows how' and 'does') a next level 'Is' has been proposed. At the highest level the professional 'is' a self-actualized person. He/she is a unique physician who acts according to his/her sum total experience gained earlier. If we agree with the concept that each professional has to be trained as a unique professional (of course, after acquiring acceptable level of competency), the approach to the teaching and assessment will be somewhat different. We need to support, hand hold a student towards excellence and try to pick up the unique way in which the student moves towards perfection.

The future challenge lies in how best we can harness the power of social media for recognizing, rewarding and reinforcing professional behaviour. Used judiciously, it can be a great source of learning and assessment.

Some Final Thoughts

Considering that professionalism is a continuous and incremental process, it is necessary to see that the assessment also reflects this process. We need to focus on the evaluation of the process of teaching, the progress of learning and the performance of the product before they are certified as Indian Medical Graduates.

While curricular interventions such as the introduction of ATCOM Modules are promising initiatives, we need to develop a robust mechanism of faculty development for enabling and empowering faculty to carry forward this movement. Exposure to medical humanities, involving the students in community based, social service activities, fostering all-round development of students with a strong component of Co-curricular activities should be encouraged. The teachers' influence as mentors and role models will play a key role in this process. Keeping in mind the time consumed in implementing curricular reforms by the regulatory bodies, what can be done is pro-active intervention by the teachers to make judicious use of the internal assessment. Over and above, the steps taken by the institutes to promote a culture of professionalism will finally decide the contour of an IMG. Admitting fully that professionalism is a resultant product of several factors, every faculty member can contribute his/her best as a part of the cogwheel.

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