

Study skills course in medical education for postgraduate residents

Bhattarai MD

Chief, Medical Education Unit, National Academy of Medical Education, Bir Hospital, Kathmandu

Abstract

The learners have to take active parts in the teaching learning activities. To make them aware and to help them develop the skills required, the need of the study skills course in medical education early in the part of their training has been realized for the postgraduate residents. The important areas of the study skills course focusing in the requirement of clinical components of the postgraduate residents are 1.) Interpersonal and communications skills, 2.) Teaching, learning and presentation skills, 3.) Language, reading and computer use, 4.) Evidence based medicine and diagnosis and management, 5). Assessment principles and strategies, 6). Time management strategies to get the best out of the training, 7). Reflection, portfolio and self-directed lifelong learning, and 8). Follow-up presentation. The methodologies that could be used in such study skills course are interactive lectures, brainstorming, presentations by the trainees, demonstration to and by the trainees, small group discussion, group work and presentation, group and individual feedback, practice sessions, role play, short relevant video movies, video recording of the trainees and viewing with feedback. With their already tight training schedule and posting and other similar other mandatory courses required for the postgraduate residents, much time cannot be allocated for the study skills course in medical education alone. Similar study skills course in medical education may need to be arranged for the undergraduate medical students as well.

Key words: Study skills, medical education, postgraduate training

The concept of medical education has changed significantly now. The focus is on active learning, rather than on passive teaching. The postgraduate residents have to take active parts in the teaching learning activities.¹ To make them aware and to help them develop the skills required, the need of the study skills course in medical education early in the part of their training has been realized for the postgraduate residents. Even if the residents are doing post-graduation in different specialties of medicine, the training and approach in the clinical components are similar and common study skills course is applicable to all. The training and posting programmes of postgraduate residents are as such tightly scheduled. Moreover, there are similar other mandatory courses, like research methodology, basic surgical skills, cardiac life support skills etc, required for the postgraduate residents. So much time cannot be allocated for the study skills course in medical education alone. A possible four days programme with its basis and methodology has been presented here. The study skills course needs to cover different areas. The residents would be working together in the institute. Arranging skill course for one batch together will make them familiar with each other and help them later to work together applying the principles of the skill course in a more relaxed and effective way.

Areas of the Study Skills Course

The basis to consider while planning the study skills course in medical education are critical thinking for mastery learning, learning strategies, learning attitudes, learning to learn with information technology, learning generic and transferable skills, learning to be a distance learner, problem and task-based learning, portfolio and project learning and the continuum of learning.² The important areas of the study skills course focusing in the requirement of clinical components of the postgraduate residents could be considered in the following ways.

1. Interpersonal and communications skills

Interpersonal and communication skills are of paramount importance for the medical professionals working in any field. Accumulation and recording information about patients and communicating information reliably both with patients and peers are regular day to day activities.

Correspondence

Prof. Madhur Dev Bhattarai
Chief, Medical Education Unit
National Academy of Medical Education, Bir Hospital
Kathmandu
Email: mdb@ntc.net.np

It also involves listening and responding skills, psychosocial aspects of meetings with patients, body language, defence mechanism, emotion intelligence, counselling, breaking bad news, and feedback.³ The theoretical as well as the group work with skill participation need to be arranged. The principles and approaches, including the listening and responding skills and the roles individual take up, of the small group sessions also have to be included. During such skill sessions, the residents will have to be encouraged to reflect on their own experiences and what they perceive their strengths and weakness to be. They will have to be encouraged to interact, reflect and express freely. The ability to reflect is a key element of group work and a significant attribute of the 'adult learner' equipped to engage in lifelong learning and continuing professional development.⁴⁻⁸ The group activity need also to include practical exercise, role play, feedback to the individual and group, with the guidance in how to work as a group, encouraging cooperative learning. Such group activities also help to remove their initial hesitancy, 'to break the ice' at least with the group having developed the familiarity during the course.

2. Teaching, learning and presentation skills

Sessions need be arranged to discuss the underlying principle of teaching learning, highlighting the importance of learners' active involvement particularly relevant to this postgraduate stage of medical professional training. During their training, the residents have to make presentations, take part in small group discussion and teach their juniors. The principles of effective teaching learning, adult learning, lesson planning, schema theory, information processing, learning theories, and learning styles are thus important.⁹ Group exercises on lesson planning, small group discussion, effective delivery of lecture, and microteaching practice, including explanation and reinforcement skills, with presentations, video recording, watching the video, group and individual feedback, are required. Clinical round and case presentation share the principles of small group discussion. In postgraduate residential training, learning as such is supposed to be problem-based one, which results from the process of working towards the understanding or resolution of a problem. The learners need to be emphasized and encouraged that they should actively involve themselves in defining the problem and solving it by finding and analyzing the solutions while focusing on the process of solving as well. Discussion and practice sessions of think aloud modelling, rehearsal and debriefing, and feedback are important to be included.¹⁰ Discussion and practice sessions on teaching learning

materials like computer assisted learning, overhead projector and power-point need also to be arranged.

3. Language, reading and computer use

English is the medium of instruction and discussion, but it is not the first language of the students. Guidance on English will help many and some may need to attend special class regularly later to improve their language proficiency.^{2,3} Such regular sessions of English for doctors in the off-hours for residents as a language support programme may need to be arranged in the institute. In this Study Skill course, one discussion session on English language for doctors, can highlight the important aspects and encourage those, who have difficulties, to join regular session later. Discussion on objective and levels of reading, including critical reading for primary care, fast reading, fast and clear note-making, memory and forgetting, and directed reading for the required information at early stage of training may help residents to accumulate factual medical knowledge to ensure solid base of knowledge. Other basic areas like using the computer, typing skills need also to be covered, as some students may not be familiar with computer.

4. Evidence based medicine and diagnosis and management

Evidence based medicine and diagnosis and management in medicine, with focus on probability reasoning, predictive values, likelihood ratios, action threshold, and exclusion threshold need to be covered as interactive lecture and discussion session.¹¹

5. Assessment principles and strategies

Students naturally tailor their learning styles to those assessment demands. They are very quick to respond to what they perceive as the demands of the assessment system.¹² Thus assessment criteria need to consider the training need of the students for the specialty and such criteria then should be made known to the students, so that they try to prepare accordingly, which in the process helps them to achieve the expected training need. Taxonomy of objectives, principles of selection of the assessment procedures, norm-referenced and criterion-referenced assessment, reliability and validity, and criteria and check list of long case, short case, other OSCE and viva voce stations need to be discussed and practice sessions of observed assessments will be useful. This may stimulate the students to consider the criteria of assessment during the training period. It should be emphasized that as the assessment for the exit examination is criterion based, there is no competition among the residents. It is necessary to foster cooperative learning and non-threatening

constructive framework for interaction and mutual feedback among the students during the whole of the training period

6. Time management strategies to get the best out of the training

The importance of time management and personnel management skills for the effective working as a team is increasingly realized.^{2,3} Further during the relatively short three year training period, the residents have to learn a lot in this ever increasing field of medicine. To get the best out of it, the residents have to take the responsibility of their learning; otherwise training nearly always loses out to service.¹³ The residents have to consider if they are making and taking the best opportunities to learn from day-to-day activities in the wards, outdoors, emergencies or operation theatres. The outdoor clinics serve as an opportunity for ambulatory care clinical teaching learning. So discussion and group work sessions need to be arranged regarding how best to utilize the training opportunities. During the group works, the residents from each subject should discuss and present their time utilization strategies to make the best of their training period.

7. Reflection, portfolio and self-directed lifelong learning

By reflection, the distinctive metacognitive capability of humans, we can analyze our experiences and think about the thought process. It makes an experience the learning experience. Reflection is an essential component for the development of a learning cycle and life long learning required for the professionals.^{8,14} Portfolio is one of the useful approaches to facilitate reflection.¹⁵⁻¹⁷ Making the residents to keep portfolio in activities required for their training helps them to develop the habit of reflection and to encourage the process of lifelong learning. For such initial training on and by portfolio development, it will be difficult to introduce a generic portfolio to record a wide range of activity. A structured and focused portfolio needs to be made to record and review for all the trainees. The most appropriate area to introduce portfolio learning to the postgraduate residents is obviously effective communication, including presentation. In this way the two vital areas required for the medical professionals will simultaneously be covered effectively, i.e. the process of reflection and self-directed learning and the effective communication and presentation. Apart from their respective subject matter, effective communication is obviously important for all the postgraduate students from different specialties. Communications and presentations are a common day to day experience

for the postgraduate residents. If we could sensitize the process of reflection early in the training of the residents through the introduction of portfolio, each of such communication and presentation experiences, which many a time are quite unpleasant, could also turn into useful learning experience. If they could be made to reflect, on their difficulties and successes, in their day to day interactions during their training period, they could make endeavours to improve in their successive experience. A guideline has to be prepared with the introduction of portfolio, review of process of reflection regarding communication and presentation and spaces for the residents to fill regarding their review, experiences and scenario, reflection with critical self-awareness about the experience and the possible alternative actions and finally demonstration of the learning. In the portfolio, the approved criteria for effective communication and presentation, put as examples for the reflection, are also thus made known to the learners to follow, which otherwise they may not consider seriously or forget later after the Study Skills course. During the Study Skills course, discussion sessions regarding the role of critical reflection as a key to self-directed lifelong learning, continuing professional development, reflective cycle model, and portfolio will be useful. Interactive session will have to be arranged on the structured and focused portfolio, which is to be handed over to the residents to complete later. As student works are basically motivated from the feeling of assessment and certification, the certificates of training in Study Skills course should only be issued after the submission of portfolio about one year later. Portfolio learning can, thus, be a good way to require students to integrate their learning, as well as to take increasing responsibility for managing their own learning – finding learning opportunities and developing their potential. It also requires residents to continuously relate their learning to clearly set and measurable outcomes of the effective communication and presentation.

8. Follow-up presentation

It is also suggested that for the undergraduate medical students the training in study skills might need to be infused throughout the curriculum.² For postgraduate residents with relatively homogenous training, the situation is not clear. But during the Study Skill course arranged for the new batch after one year, group work has to be arranged for the residents and each group should make short presentation in the presence of the new batch about the portfolio focused on effective communication and presentation. This will not only stimulate the new batch but also help the previous batch to review,

integrate and synthesize the learning. After the completion of the portfolio and presentation one year later, the certificate of the Study Skill course is to be handed over to the previous batch with the new batch of trainees present in the audience.

Methods used in the Study Skills Course

Following methods are suitable in the Study Skills Course.

- Interactive lectures: The lecture sessions should be arranged in a round table face to face situation to encourage interaction. Any lecture session should not ideally be more than 20 minutes continuously. In between there should be

interaction, brainstorming, discussion on points for local application, video clips etc.

- Brainstorming
- Presentations by the trainees
- Demonstration to and by the trainees
- Small group discussion
- Group work and presentation
- Group and individual feedback
- Practice sessions e.g. of think aloud modelling, rehearsal, debriefing, lesson planning, over head projector, computer use, power point preparation
- Role play e.g. of feedback
- Video: short relevant video movies, video recording of the trainees and viewing and feedback,

Table 1: The outline of the programme schedule of the study skills course

Day 1	Day 2	Day 3	Day 4
0900 An overview of course and the day	0900 An overview of the day's programme	0900 An overview of the day's programme	0900 An overview of the day's programme
0930 Body language, Defence mechanism, Emotional intelligence	0910 Use of overhead projector	0910 Assessment principles, behavioural objectives, norm & criterion ref, reliability, validity & practicability	0910 Group work on the portfolio to be completed focusing on review of strength, weakness, learning needs and action plan for effective communication and presentation
	1000 Computer assisted learning, use of computer, power point preparation	1015 Preparation as per the criteria of short & long case, other OSCE, and viva assessment criteria	1100 TEA BREAK
1100 TEA BREAK	1100 TEA BREAK	1115 TEA BREAK	1115 Group work presentation by a resident from each subject and discussion
1115 Communication, counselling listening and responding skills	1115 Reading & note making	1130 Time management: How to utilize best the training opportunities?	1300 LUNCH BREAK
1230 Breaking bad news & communication in other special situations	1200 Microteaching with video recording and criteria assessment by the participants and discussion	1230 How to utilize best the training opportunities?: Group works of each specialty	1400 Evaluation and feedback about the training programme and group photographs of the current batch of the trainee
1330 LUNCH BREAK	1330 LUNCH BREAK	1330 LUNCH BREAK	1400 Separate group work of previous batch of the course with groups of different specialties for the presentation of their experience on the completed portfolio
1430 Feedback with role play	1430 English language skill for medical professionals	1430 How to utilize best the training opportunities?: Group work presentation	1500 TEA BREAK
1600 TEA BREAK	1500 Evidence based medicine & clinical diagnosis & management	1530 TEA BREAK	1500 TEA BREAK
1615 Learning theories and styles	1600 TEA BREAK	1545 Reflection and self-directed lifelong learning (SDL)	1515 Presentations by students of different subjects of the previous batch on completed portfolio
1700-1800 Effective delivery of lecture & lesson planning	1615-1800 Viewing of video recording of micro-teaching, feedback and discussion	1700-1800 Portfolio focused on effective communication & presentation	1615 Closing ceremony and certification of previous batch who has completed their portfolio followed by tea

Programme

The outline of the four days programme schedule is shown as below in Table 1. The programme can be adjusted as per the differing need of the individual programme and institute. The closing ceremony is important as the certificate of completion of training in study skills course in medical education has to be given to the previous batch. The concerned officials, subject coordinators and faculty have to be invited during the last session of presentations by students of different subjects of the previous batch on completed portfolio and the closing ceremony to get everyone informed and involved with the concept of training in study skills course in medical education.

Conclusion

To help the postgraduate residents develop necessary attitude and skills to take active part in the teaching learning activities, the importance of the study skills course in medical education early in the part of their training is obvious. The programme may need to be arranged concerning the optimum length of the time possible for the postgraduate residents with their already tight training schedule and posting and other similar other mandatory courses required. Similar study skills course in medical education may need to be arranged for the undergraduate medical students as well.

References

1. McLeod PJ, Harden RM. Clinical Teaching Strategies for Physicians. *Medical Teacher* 1985; 7: 173-89.
2. Roff S. Study Skill Courses. Dundee: Centre of Medical Education 2005.
3. Hoad-Reddick G, Theaker E. Providing support for problem-based learning in dentistry: the Manchester experience. *Eur J Den Educ* 2003; 7: 3-12.
4. Brigley S, Young Y, Littlejohns P, McEwen J. Continuing education for medical professionals: a reflective model. *Postgrad Med J* 1997; 73: 23-26.
5. Atkins S, Murphy K. Reflection: a review of the literature. *Journal of Advanced Nursing* 1993; 18: 1188-92.
6. Schön DA. *Educating the Reflective Practitioner : Toward a New Design for Teaching and Learning in the Professions*. San Francisco (CA): Jossey-Bass, 1987.
7. Kolb DA. *Experimental Learning Experience as a Source of Learning and Development*. London: Prentice Hall, 1984.
8. Law SAT, Davies MH, Brigley S (updated by Riquelme A). *Lifelong Learning*. Dundee: Centre of Medical Education 2006.
9. Kaufman DM, Mann KV, Jennet PA. *Teaching and Learning in Medical Education: How Theory can Inform Practice*. Edinburgh: Association for the Study of Medical Education (ASME); 2000.
10. Ker J. *Clinical Teaching*. Dundee: Centre of Medical Education 2005.
11. Mar CD, Doust J, Glasziou P. *Clinical Thinking: Evidence, Communication and Decision – Making*. BMJ Books and Blackwell Publishing 2006.
12. Harden RM. Assess students: An overview. *Medical Teacher* 1979; 1: 65-69.
13. Hargreaves DH, Stanley P, Ward S. *Getting the Best Out of Your Training: A Practical Guide for Trainees*. Edinburgh: Association for the Study of Medical Education, 1998.
14. Johns C. Nuances of reflection. *Journal of Clinical Nursing* 1994; 3(2): 71-75.
15. Law S, Davis M. *Portfolio Building*. Dundee: Centre of Medical Education 2005.
16. Neades BL. Professional portfolios: all you need to know and were afraid to ask. *Accident and Emergency Nursing* 2003; 11: 49-55.
17. Challis M. AMEE Medical Education Guide No. 11 (revised): Portfolio-based learning and assessment in medical education. *Medical Teacher* 1999; 21(4): 370-85.