Do Students Value Feedback? - Perception, Attitude and Practices of Students Regarding Role of Feedback in Their learning

Anshoo Agarwal[1*] and S. Anil Mohan Rao[2]

[1]*Department of Pathology, Faculty of Medicine, Northern Border University, Arar, Kingdom of Saudi Arabia.*

Authors' contributions:

This work was carried out in collaboration between both authors. Author AA designed the study, performed the statistical analysis, wrote the protocol and the first draft of the manuscript. Author SAMR managed the analyses of the study, reviewed, edited and helped in literature searches. Both authors read and approved the final manuscript.

Short Research Article

ABSTRACT

Feedback is viewed as data given by a source (e.g., tutor, contemporary manual, guardian, Personal incident) about features of one's achievement or perception. Feedback is one of the greatest compelling effect on learning and achievement, but this affects can be either productive or pessimistic. Its insight by students is studied by us. Our study provides an ideal survey of feedback and evaluates the proof regards to its effect on training and performance.

This proof shows that although feedback is among the major impact, the type of feedback and the way it is collected can be distinctly effective. A prototype of feedback is then suggested that recognizes the exact qualities and conditions that make it useful, and some characteristic problems are discussed, including the time plan of feedback and the effects of convincing and discouraging

_____

Corresponding author: E-mail: dranshoo3@gmail.com;

feedback. In the end, this survey is to use to propose methods in which feedback can be used to improve its efficacy in classrooms.

In this descriptive transversal study Medical and health Sciences students' in a University in UAE were surveyed. Total 200 hundred students participated in the study. There were 50 students each from Medical, Dental and Nursing college included to participate in the survey. Participation with in these colleges was completely voluntary. A pre-validated self-designed modified questionnaire was adapted from the previous studies that assessed feedback of second year medical students on teaching-learning methodology and evaluation methods in Pharmacology. Questionnaire was derived focusing on three main dimensions: improvement of performance, the need for feedback and quality of feedback. The pilot study was done in 20 (10%) students to determine whether the questionnaire measured what it was designed to measure. Content validation method was used for the validation procedure.8 Answer to each question was reviewed by our experts and the necessary modifications and deletions were done to validate the questions in the questionnaire. The following validation criteria were used.

1. INTRODUCTION

It is very important to highlight the need of revising the teaching methodology and making adequate modifications, to keep pace with progress in the subject and to cope with the requirements of the students. It is accepted that the feedback from students' serve as an effective tool in developing teaching methodology and evaluation methods [1]. Facility of effective and high-quality feedback has been identified as a key element of quality teaching. There is a diversity of preferences suggesting that a balanced approach in providing feedback would be most effective to meet individual needs. Several constructs involved in the feedback process are: the source of feedback (teachers and students), the mode of feedback (how it is presented); the content (information conveyed); and the occasion (when it is presented). Many definitions of feedback exist and the numerous interpretations explain the importance and the complexity involved in understanding what the term feedback means to academics in higher education. In a broad perspective, feedback is defined as 'all dialogue to support learning in both formal and informal situations' [2]. A more specific on in terms of understanding it is defined as [3]- 'feedback is information about the gap between the actual level and the reference level of a system parameter that is used to alter the gap in some way.' The main aim of feedback is to increase students' understanding of their knowledge or skill in a specific or general area of content that is part of the learning objectives and outcomes. The use of technology can aid in the provision of timely feedback [4]. Emphasis on student-centered learning is part of the global quality movement that seeks to address accountability in all aspects of higher learning [5]. One aspect of the quality accountability by universities is the quality of feedback that is given through assessments. In a recent empirical study, [6] also emphasized the importance of feedback to student satisfaction and learning in tutorials. Just feedback is crucial for learning, the quality aspect is equally important. Poor handwriting [7] inadequate information [8] and grading without any written comments [9] are few examples that affect the quality of feedback to students. The aim of feedback is to facilitate learning in a manner that students are able to understand the ability to do a particular assessment and to further improve and bridge the gap between their actual knowledge and required performance. The above discussion suggests that feedback is being viewed as an important feature for learning and improvement by students. Thus, the quality aspect must be taken seriously in the process of providing effective feedback. For the purpose of this research, we define feedback as a process that guides students to close the gap between their current and desired performance.

1.1 Aim and Objectives

To analyze perception, attitude and practices of students regarding role of feedback in their learning.

2. MATERIALS AND METHODS

In this descriptive transversal study Medical and health Sciences students' in a University in UAE were surveyed. Total 200 hundred students participated in the study. There were 50 students each from Medical, Dental and Nursing college

included to participate in the survey. Participation in the colleges was completely voluntary. A pre-validated self-designed modified questionnaire was adapted from the previous studies that assessed feedback of second year medical students on teaching-learning methodology and evaluation methods in Pharmacology [10-13]. Questionnaire was derived focusing on three main dimensions: improvement of performance, the need for feedback and quality of feedback. Considering that the improvements in each of these dimensions will improve student satisfaction with the feedback received from their assessed work.

A few modifications were done in the questionnaire to best fit with the goals and aims of university curriculum. A pilot study was done for questionnaire validation.

The pilot study was done in 20 (10%) students to determine whether the questionnaire measured what it was designed to measure. Content validation method was used for the validation procedure.8 Answer to each question was reviewed by our experts and the necessary modifications and deletions were done to validate the questions in the questionnaire. The following validation criteria were used.

- Time requirement for completion of questionnaire (5-10 min)
- Appropriateness of questionnaire for collecting data
- Repetition of questions
- Logical order of questions
- Clear, concise and unambiguous questions
- Easy and meaningful instructions
- Comments and suggestions specified to the application guidelines.

In an educational setting, the use of a questionnaire is a useful approach in terms of factors such as time and efficiency. The anonymity of the questionnaire allows students' to respond with ease and comfort without the perceived fear of being punished.

After getting the approved by the Institutional Ethics Committee, students were administered a pre-validated questionnaire. The filled questionnaires were collected immediately once they were filled up, on the same day.

The Questionnaire was divided into six sections:

  i) Demographic Data
  ii) Type of Feedback
  iii) Perceptions of Feedback,
  iv) Value of Feedback
  v) Preferences for Feedback
  vi) Suggestions for Feedback.

Sections ii), iii) iv) and v) required students to indicate their level of agreement with a series of statements on a fivepoint Likert scale, ranging from 'strongly disagree" to "ranging from "to "strongly agree".

For part of section ii) a five-point Likert scale with numerical point reference. (0%, 25%, 50%, 75% and 100%) was used.

There were two open- ended questions on the importance of feedback (section iii) and suggestions to improve it (section vi).

- Sample size-200
- Study population-Students of University in UAE
- Sample selection-Random selection
- Inclusion criteria: Regular students enrolled with the University
- Exclusion criteria-Part time students

2.1 Statistical Analysis

Descriptive statistics was used for analysis of data and results were expressed as percentage.

3. RESULTS

Our questionnaire was administered to students of MBBS (Medical), students of BDS (Dental) and Nursing. The age was between 18-23 years. Male: female ratio was 1.7:1. Regarding Preferences and Perceptions for Feedback among Students: 74% mentioned that they receive enough feedback from their faculty. 63% of all feel that the feedback they receive is relevant to the goals as a student. 79% stated that the faculty give useful feedback with enough information. 85% mentioned that feedback on assignments, quiz and examination are always provided within two weeks. 57% stated that the feedback given to them is applied to their studies and work. 76% felt that the feedback is given in the way that everyone in the class is able to participate in it. 61% felt that teaching staff is active in providing the feedback.

Regarding the types of the feedback, results showed that 73% of the feedback had been in the form of verbal feedback from the faculty. Students mentioned that 17% of feedback they

get is from peer and self-assessment feedback which they get during active learning sessions like problem based learning etc. Regarding the perception of the feedback 62% of them feel that when faculty gives them feedback they care about them. 89% mentioned that feedback makes them realize that they need to improve their performance in the studies. 95% of all feel that they deserve feedback when they had put in so many efforts for study and assignments. 74% mentioned that when they received feedback from the faculty they felt encouraged. 73% of the students believed that they consider feedback to be an any contact with the faculty. For 29% feedback does not seem to reduce to their anxiety about a subject. Only 43% feels that feedback had been evaluation of their strengths and weeknesses. 52% of the students stated the feedback tells them the expectation of the faculty and only 35% of the students had been motivated to study by the feedback given to them.76% strongly agreed that feedback is important to them. 82% agreed that they need feedback to improve in future performance. For 65% verbal feedback was easier to understand.

Demographic Details:
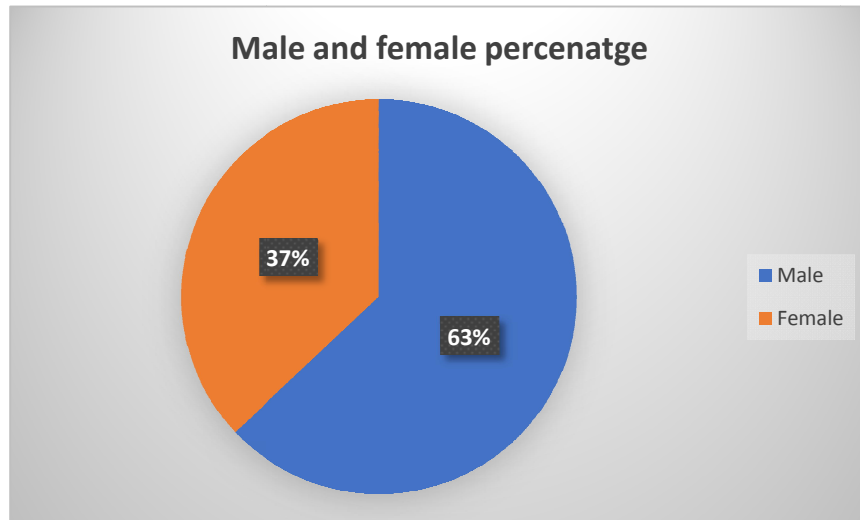
Fig 1. Percentage of male and female students
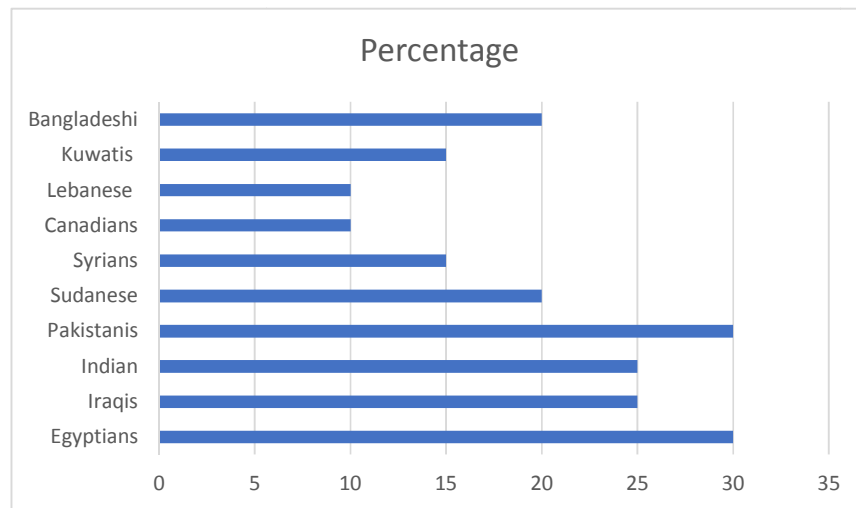
Fig 2. Details of percentage of nationality of students

Table 1. Questionnaire regarding perception, attitude and practices of students regarding role of feedback in their learning

Questionnaire	Study groups[n=200]				Results/feedback [% &n]				
	Medical [N=50]	Dental [N=50]	Undergraduate nursing [N=50]	Postgraduate nursing [N=50]	Disagree	Strongly disagree	Neutral	Agree	Strongly agree
Preferences and Perceptions for Feedback among Students									
a. Receive enough feedback from their faculty	40 80%	38 76%	34 68%	36 72%	20 10%	22 11%	10 5%	74% 148	
b. Feedback they receive is relevant to the goals as a student	37 74%	35 70%	24 48%	30 60%	30 15%	30 15%	14 7%	63% 126	
c. Faculty give useful feedback with enough information	44 88%	40 80%	36 72%	38 76%	18 9%	15 7.5%	9 4.5%	79% 158	
d. Feedback on assignments, quiz and examination are always provided within 2 weeks	46 92%	44 88%	38 76%	42 84%	13 6.5%	11 5.5%	6 3%	85% 170	
e. Feedback given to them is applied to their studies and work	32 64%	30 60%	25 50%	27 54%	36 18%	34 17%	16 8%	57% 114	
f. Feedback is given in the way that everyone in the class is able to participate	41 82%	39 78%	35 70%	37 74%	24 12%	18 9%	6 3%	76% 152	
g. Teaching staff is active in providing the feedback	33 66%	31 62%	28 56%	30 60%	34 17%	31 15.5%	13 6.5%	61% 122	
2.Types of the feedback									
Types of the feedback									
a. Feedback had been in the form of verbal feedback from the faculty	38 76%	37 74%	35 70%	36 72%	22 11%	18 9%	14 7%	73% 146	
b. Feedback they get is from peer and self assessment feedback which they get during active learning sessions like problem based learning etc	11 22%	9 18%	6 12%	8 16%	75 37.5%	65 32.5%	26 13%	17% 34	
3.Perception of the feedback									
Perception of the feedback									
a. When faculty gives them feedback they care about them	34 68%	32 64%	28 56%	30 60%	33 16.5%	27 13.5%	16 8%	62% 124	

b. Feedback makes them realize that they need to improve their performance in the studies	48 96%	46 92%	41 82%	43 86%	10 5%	8 4%	4 2%	89% 178
c. Deserve feedback when they had put in so much efforts into study and assignments	49 98%	48 96%	46 92%	47 94%	5 2.5%	3 1.5%	2 1%	95% 190
d. When they received feedback from the faculty they felt encouraged	40 80%	38 76%	34 68%	36 72%	22 11%	20 10%	10 5%	74% 148
e. Believed that they consider feedback to be an any contact with the faculty	40 80%	38 76%	33 66%	35 70%	24 12%	22 11%	8 4%	73% 146
f. Feedback does not seem to reduce to my anxiety about a subject	17 34%	15 30%	12 24%	14 28%	65 32.5%	55 27.5%	22 11%	29% 58
g. Feedback had been evaluation of their strengths and weaknesses	13 26%	11 22%	9 18%	10 20%	68 34%	62 31%	27 13.5%	43% 86
h. Feedback tells them the expectation of the faculty	29 58%	27 54%	23 46%	25 50%	42 21%	40 20%	14 7%	52% 104
i. Students had been motivated to study by the feedback given to them	21 42%	18 36%	15 30%	16 32%	55 27.5%	50 25%	25 12.5%	35% 70
j. Feedback is important to me	41 84%	39 78%	35 70%	37 74%	25 12.5%	18 9%	5 2.5%	76% 152
k. They need feedback to improve in future performance	44 88%	42 84%	38 76%	40 80%	17 8.5%	13 6.5%	6 3%	82% 164
L. Verbal feedback was easier to understand.	36 72%	34 68%	29 58%	31 62%	40 20%	22 11%	8 4%	65% 130

4. DISCUSSION

Earlier studies [14] have stated an outstanding summary in their claim that "feedback is information with which a learner can confirm, supplement to, overwrite, tune, or rearrange information in memory, whether that information is domain knowledge, meta-cognitive knowledge, beliefs about self and tasks, or cognitive tactics and methods".

There are many ways in which faculty can give feedback to learners and for learners to get feedback from faculty, peers, and other sources [15]. For learners, it means acquiring information about how and what they comprehend and misinterpret, finding guidelines and methods that they must take to improve, and seeking assistance to understand the goals of feedback can be accepted, modified, or rejected.

Feedback by itself may not have the influence to instigate further action. In addition, it is the case that feedback is not only given by faculty, learners and, peers but can also be pursued by learners and peers and noticed by a student without it being purposefully pursued. In our study we tried to analyze that how effective is feedback to the students. Few studies [16,17] have demonstrated that feedback is not essentially a reinforce. Studies [18] done earlier have reported a synthesis of over 500 meta-analyses, signifying approximately 20 to 30 million students, on different effects on learner accomplishments. The most methodical study addressing the effects of different types of feedback was conducted by Kluger and DeNisi [19]. Their meta-analysis included studies which showed that the power of feedback is persuaded by the direction of the feedback comparative to implementation on a task. Specifically, feedback is more applicable when it gives information on correct rather than incorrect responses and when it builds on changes from previous streams. In our study also, student stated that feedback on positive correct information is more positive. In our study we also tried to analyze that whether the effective feedback was able to answer three major questions asked by a faculty and/or by a learner and these questions are:

1. What is the aim? 2. What advancement is being made toward the goals? And what undertakings need to be undertaken to make improved development?

These questions agree to concepts of feed up, feedback, and feed forward. And it was found that effective answers to these questions helped to lessen the gap which was partly dependent on the level at which the feedback works. These included the level of errand performance, the level of process of understanding how to do a task, the authoritarian level, and/or the personal level. Feedback had conflicting effects across these levels.

In a study by Black and Wiliam [20] it was concluded, that "the provision of challenging and extensive feedback lead to greater student engagement and higher achievement". Too often, the feedback given is not related to attaining success on critical dimensions of the goal. For example, learners are given feedback on spelling, presentation, and in writing when the yardstick for accomplishment requirement, is totally different. And hence such feedback are totally unproductive [21,22]. There has been much study on the timing of feedback, particularly comparing immediate and delayed feedback. Kulik and Kulik [23] reported that at the task level, some delay is beneficial, but at the process level during engaging in processing classroom activities immediate feedback is beneficial. Other studies also have stated the similar findings [24-29].

In medicine, the scholastic emphasis has shifted away from knowledge gaining and preparation of learners for meeting healthcare needs. In this competency-based approach to teaching, students are expected to reach specific milestones. Detailed and quick feedback on performance, coupled with chances to improve, helps them gain these milestones [30]. Earlier studies [31] have presented a Curriculum Development model in which thoughtful practice plays an essential role in building expertise as the learners acquire knowledge, skills and behaviors in an iterative process over time. In this curriculum model, learners should receive regular feedback and have chance to discuss the abilities with their faculty in relation assessments. When we think about feedback in this way, we see that positive feedback helps students enhance their learning while working to achieve the desired outcomes.

Our study similar to the study done earlier showed that the Feedback links the teaching and assessment roles of faculty and proves their assurance to the students [32]. Many students see the advantage of having peer- assessment

[33,34]. Even in our study the similar findings were noted and peer assessment was appreciated by the students. Furthermore, across different studies undergraduate and graduate students have reported positive effects of engaging in peer-feedback including an improved ability to reflect [35,36]. Studies done earlier have also described about how many students admire getting and applying feedback. Few studies have also stated limitations of using peer-assessment, in particular that it can be time-consuming both for learners and educators [37]. Mostly studies have shown that, peers do not always identify imperfections in one another's work and can be less likely then experts to suggest improvements [38-39]. In our study the learners have stated that feedback, when given positively, is useful in helping them measure their performance.

5. CONCLUSION

In our study, we concluded that simply providing more feedback is not of much use because it must consider the type of the feedback, the timing and how a learner "receives" this feedback. And the ways and approach in which learner interpret feedback information is the vital to develop positive and valued concepts of self-efficacy learning, which in turns leads to further learning. Faculty need to view feedback from the perspective of the learners involved in the learning and become active in providing information addressing the feedback questions and developing ways for learners to ask these questions to themselves. Learners view feedback as the responsibility of faculty, as they think that it is their job to provide feedback by deciding for the learners as how good they are going, what the aims are, and what to do in the future. And it was also studied that if the feedback is given to the learners in the positive way manner, it has shown an incredible change in learner's attitude.

CONSENT

As per international standard or university standard, patient's written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

Ethics approval was obtained from -RAKMHSU Research and Ethics Committee. Name of the Institute: RAK Medical and Health Sciences (Reference no: RAKMHSU-REC-71-2014)

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Chavda N, Yadav P, Chaudhari M, Kantharia ND. Second year student's feedback on teaching methodology and evaluation methods in Pharmacology. Natl J Physio Pharm Pharmacol. 2011;1:23–31.

2. Askew S, Lodge C. Gifts, ping-pong and loops-linking feedback and learning. In S. Askew (Ed.) Feedback for Learning. London: Routledge. 2000;1-17.

3. Ramaprasad A. On the definition of feedback. Behavioural Science. (1983);28: 4-13.

4. Ribchester P, France D, Wakefield K. It was just like a personal tutorial: Using podcasts to provide effective feedback. Paper presented at the Higher Education Academy conference; 2008.

5. Leckey J, Neill N. Quantifying Quality: The importance of student feedback. Quality in Higher Education. 2001;7(1):19-32.

6. Retna KS, Chong E, Cavana RY. Tutors and tutorials: students' perceptions in A New Zealand university. Journal of Higher Education Policy and Management. 2009; 31(3):251-260.

7. Race P. Using feedback to help students to learn. York, UK: The Higher Education Academy. 2001.

8. Carless D. Differing perceptions in the feedback process. Studies in Higher Education. 2006;31(2):219-233.

9. James R, McInnis C, Devlin M. Assessing Learning in Australasian Universities: Ideas strategies and resources for quality in student assessment. Melbourne: University of Melbourne, Centre for the Study of Higher Education; 2002.

10. Kaufman M, Mann V. Achievement of students in a conventional and problem based learning (PBL) curriculum. Adv Health Sci Educ Theory Pract. 1999; 4:245–60.

11. Kaufman DM, Mann KV. Students' attitudes toward basic sciences in PBL and conventional curricula. Med Educ. 1997;31:77–80.

12. Kaufman DM, Mann KV. Comparing achievement on the medical council of Canada qualifying examination part I of students in conventional and problem-based learning curricula. Acad Med. 1998;73:1211–3.

13. Wilson FR, Pan W, Schumsky DA. Recalculation of the critical values for Lawshe's content validity ratio. MEC. 2012;45:197–210.

14. Winne PH, Butler DL. Student cognition in learning from teaching. In T. Husen & T. Postlewaite (Eds.), International Encyclopaedia of Education (2nd ed.) 1994;5738– 5745.

15. Bangert-Drowns RL, Kulik CL, Kulik JA, Morgan MT. The instructional effect of feedback in test-like events. Review of Educational Research. 1991;61:213–237.

16. Kulhavy, RW. Feedback in written instruction. Review of Educational Research. 1977;47(1):211–232.

17. Kulhavy RW, Stock WA. Feedback in written instruction: The place of response certitude. Educational Psychology Review. 1989;1(4):279–308.

18. Hattie JA. Influences on student learning (Inaugural professorial address, University of Auckland, New Zealand); 1999. Available:http://www.arts.auckland.ac.nz/staff/index.cfm

19. Kluger AN, DeNisi A. Feedback interventions: Towards the understanding of a double-edge sword. Current Directions in Psychological Science. 1998;7:67–72.

20. Black P, Wiliam D. Assessment and classroom learning. Assessment in Education. 1998;5(1):7–75.

21. Clarke S, Timperley H, Hattie JA. Assessing formative assessment. Auckland, New Zealand: Hodder Moa Beckett; 2003.

22. Timperley H, Parr J. Literacy professional development project. Wellington:New Zealand Ministry of Education; 2005.

23. Kulik JA, Kulik CC. Timing of feedback and verbal learning. Review of Educational Research. 1988;58(1):79–97.

24. Bangert-Drowns RL, Kulik CL, Kulik JA, Morgan MT. The instructional effect of feedback in test-like events. Review of Educational Research. 1991;61:213–237.

25. Blobitt WE, Davlin D, Wagner JE. Amplitude of response and the delay-retention effect. Journal of Experimental Psychology. 1963;66(1):57–64.

26. Schroth ML, Lund E. Role of delay of feedback on subsequent pattern recognition transfer tasks. Contemporary Educational Psychology. 1993;18:15–22.

27. Sturges PT. Information delay and retention: Effect of information in feedback and tests. Journal of Educational Psychology. 1972;63(1):32–43.

28. Sturges PT. Delay of informative feedback in computer-assisted testing. Journal of Educational Psychology. 1978;70(3):378–387.

29. Swindell LK, Walls WF. Response confidence and the delay retention effect. Contemporary Educational Psychology. 1993;18:363–375.

30. Krackov SK. Expanding the horizon for feedback. Med Teach 2011;33:873–874.

31. Krackov SK, Pohl H. Building expertise using the deliberate-practice curriculum-planning model. Med Teach. 2011;33(7):570–575.

32. Krackov SK. Giving feedback. In: Dent JA, Harden RM, editors. A practical guide for medical teachers. 3rd ed. Churchill Livingstone Elsevier; 2009.

33. Moore C, Teather S. Engaging students in peer review: Feedback as learning. Issues in Educational Research. 2013;23(Suppl.): 196–211.

34. Al-Barakat A, Al-Hassan O. Peer assessment as a learning tool for enhancing student teachers' preparation. Asia-Pacific Journal of Teacher Education. 2009;37:399–413.

35. McDonnell J, Curtis W. Making space for democracy through assessment and feedback in higher education: Thoughts from an action research project in education studies. Assessment & Evaluation in Higher Education. 2014;39: 932–948.

36. Bedford S, Legg S. Formative peer and self feedback as a catalyst for change within science teaching. Chemistry Education Research and Practice. 2007;8:80–92.

37. Hovardas T, Tsivitanidou OE, Zacharia Z. C. Peer versus expert feedback: An investigation of the quality of peer feedback among secondary school

students. Computers & Education. 2014; 71:133–152.

38. Hauer KE, Holmboe ES, Kogan JR. Twelve tips for implementing tools for direct observation of medical trainees' clinical skills during patient encounters. Med Teach. 2011;33:27–33.

39. Ericsson KA. Deliberate practice and the acquisition and maintenance of expert performance in medicine and related domains, 2003 Research in Medical Education invited address. Acad Med. 2004;79(10):S70–S81.