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Evaluation of Lecturer's Feedback in Mini Clinical Evaluation Exercise Assessment (Mini-CEX)

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ABSTRACT

Many educators adopt feedback models from articles and books which contain various feedback strategies rather than depending on their own experiences. Mini Clinical Evaluation Exercise (Mini-CEX) is a Workplace-Based Assessment (WPBA) that requires the examiner to observe the student performing a focused task within 15–20 minutes at the clinic or ward with compulsory immediate feedback. The aim of this study is to identify the feedback strategies adopted by family physician lecturers during the feedback session at the end of the Mini-CEX assessment. A qualitative methodology using indirect observation was adopted for this cross-sectional study. Thirty-three Mini-CEX feedback sessions were selected using a purposive sampling involving 33 Final Year Medical Students and 14 Family Physician lecturers at the Department of Family Medicine, Universiti Kebangsaan Malaysia. The feedback sessions were audio-recorded, transcribed and analysed using content analysis. Results showed eight feedback strategies were adopted in the feedback sessions. The majority of the feedback sessions were conducted in a dialogic approach through self-reflection (96.7%). However, the students' contribution was minimal in student's plan for improvement (36.3%) and self-scoring (39.4%). About 90.9% of the students were also praised on their correct performance and received plan for improvement. From 60.6% of the candidates who were informed of their final scores, 45.4% of the scores were justified; and 24.2% of the students were offered to ask questions during the feedback session. More exposure to various feedback strategies may provide better advantage for the students to monitor and improve their level of achievement. Adopting a dialogic feedback approach is crucial to encourage a sense of belonging in the process of feedback.

Keywords: *Workplace-based assessment, Mini clinical evaluation, Feedback strategy, Dialogic feedback*

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INTRODUCTION

Giving and receiving effective feedback is crucial, yet it is one of the most challenging aspects of interpersonal communication skills. Feedback can be given either in written or verbal form, in classrooms or after a formal assessment. The implication, advantages and disadvantages between the various modes of feedback should be familiarised by educators to enhance the benefits of feedback for the learners. Sadler (1) directly relates formative assessment and feedback in his definition of formative assessment as “an assessment that specifically intends to generate feedback on performance to improve and accelerate learning”. Feedback in assessment is one of the initiatives of classroom feedback to help students improve their learning. Providing feedback in assessment tasks along with teaching activities is beneficial to students.

In the context of teaching and learning, there are various definitions for the term “feedback”. Price et al. (2) believed that there is no definite agreement on the definition of “feedback”, either in the pedagogic literature or in practice. In this section, feedback definitions will be explained based on three important elements according to different groups of researchers.

DEFINITION OF FEEDBACK

Feedback is generally assumed to be something that educators give to learners to help them better understand the results they have received and to improve their future work. A few version of feedback definition can be referred by educators and learners. One of the definition of feedback was given by Ramaprasad (3):

Feedback is information about the gap between the actual level and the reference level of a system parameter which is used to alter the gap in some way (p. 4).

According to Ramaprasad, feedback must include plans to improve the performance gaps. The importance of closing the performance gaps have been highlighted by Sadler (4), who argued that feedback is not entirely complete without a plan for improvement. However, this definition has a major setback to educators and learners, as it views feedback as a one-way interaction. As mentioned by Sadler (5), most of the feedback definitions prescribed feedback as “telling”, which refers to a one-way transmission of information.

The second group of educators promotes dialogic approach which highlighted the crucial role of learners who must actively involve during feedback sessions (6–12). The dialogic approach has to be a part of the feedback process to identify students’ performance gaps. Information in feedback is high in complexity, contested, and dynamic can be achieved through a two-way interaction between the givers and receivers. Several feedback models were created by different authors to promote dialogic feedback, such as Pendleton’s technique (13), SETGO technique (14), and Reflective Feedback Conversation Model (15).

The last element highlighted by several authors in their definition of feedback is information on student strength (16–18). The definition highlights students’ correct performances rather than focusing only on their performance gaps (weaknesses) to assist student learning. The two feedback models that include student strength as part of the feedback process are “Feedback Sandwich” and “Pendleton’s technique”.

The definition of feedback has been explicitly improved from focusing on students’ performance gaps to plans to improve the gaps, from teacher-centred to student-centred, and from focusing only on students’ weaknesses to including their strengths.

FEEDBACK MODELS AND TECHNIQUES

Feedback techniques are best adopted from well-recognised feedback models. Feedback models propose a structured feedback process for the educators to ensure that the students receive proper feedback. A considerable amount of literature has been published about the importance of adopting feedback models. Hewson and Little (19) stated that the techniques of giving feedback may determine the positive and negative effects on students. Rather than focusing on a single model, educators should adopt several feedback techniques on how to give feedback to their students. Carr (20) expressed his concerns towards educators who preferred to utilise similar techniques or model which may cause spontaneous discussion, because the students will be able to predict the sequence of the feedback comments. Even though there are many feedback models from the literature, the following section examines the feedback models adopted in medical curriculum, such as Feedback Sandwich, Pendleton technique (13), SETGO technique (14), and the Reflective Feedback Conversation Model (15).

Most of the authors were trying to improve their models to enhance the positive effect on student learning. The Feedback Sandwich or Hamburger technique is a

direct monologic feedback with emphasis on praising, correcting and following this with repeated praising to balance negative feedback. Molloy and Boud (11) noted that the primary role of feedback sandwich is to support the students' emotions.

Meanwhile, Pendleton's technique creates feedback which is more dialogic by insisting students to reflect on their strengths, weaknesses, and have an improvement plan. The Reflective Feedback Conversation Model allows students to begin with their weaknesses. The SETGO technique offers a choice for the teacher to either start with students' strengths or weaknesses in order to improve the rigidity in Pendleton's technique and Reflective Feedback Conversation Model.

FEEDBACK STRATEGIES

While many articles focused on a few feedback strategies such as identify weaknesses and provides plan for improvement, Lizzio and Wilson (21) listed 13 feedback strategies from the university students' perspective in receiving written feedback (Figure 1).

On the other hand, 83 participants (64 physicians and 19 behavioural scientists) from approximately 60 different medical institutions, mainly from the United States, Canada, and the United Kingdom gave a

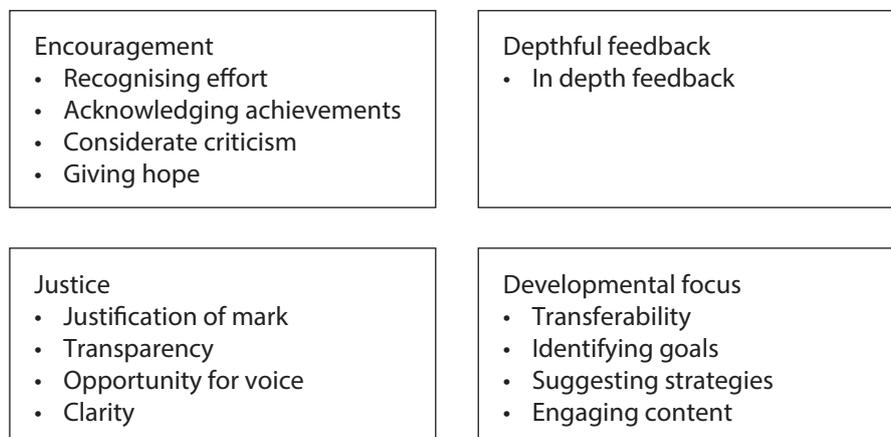


Figure 1: Categories of effective feedback from the students' perspective.

short narrative on the feedback they received that was perceived as personally helpful. Five feedback strategies were highlighted, such as self-improvement plan, self-assessment, feedback summaries, plan for improvement, and application of feedback Hewson and Little (19).

THE PROCESS OF MINI-CEX ASSESSMENT

The Mini-CEX assessment is one of the assessment tools used at the Department of Family Medicine. Mini-CEX was chosen as a tool in this research because of the necessary element of feedback at the end of the session. Mini-CEX requires the students to demonstrate either one or more cognitive, psychomotor (patient's examination skill) or soft skills (communication skill) related to the task.

One or two students are given 10 minutes to perform the task assigned during the Mini-CEX assessment. Student performance in the Mini-CEX is observed without interruption by the lecturers. While the lecturer treats the patients involved in the Mini-CEX, the students are allowed to prepare the findings of the task for a discussion session. The students begin to present their findings of the task after the patients have left the consultation room. During the discussion session, the students' knowledge and skills in terms of diagnostic or therapeutic decisions will be assessed. The discussion session is concluded by awarding the rating using the standardised Mini-CEX rating form. The feedback session begins immediately after the Mini-CEX rating form is completed.

Written feedback is the second component on the rating form, which has been divided into three sections: (i) students' strengths, (ii) suggestion for development or improvement, and (iii) agreed action which will be used as a guideline for feedback.

METHODS

A qualitative methodology using indirect observation was adopted for this cross-sectional study. Thirty-three Final Year Medical Students were selected using a purposive sampling to audio record 33 Mini-CEX feedback sessions involving 14 Family Physician lecturers at the Department of Family Medicine, Universiti Kebangsaan Malaysia. Indirect observation of the Mini-CEX feedback sessions was analysed using content analyses. Content analyses is a systematic coding and categorising approach used for exploring large amounts of textual information unobtrusively to determine trends and patterns of words used and their frequency (22).

The Mini-CEX assessment was one of the assessment tools utilised by the Department of Family Medicine to identify medical competencies among the final year medical students. Using indirect observation can avoid the presence of the researcher, who is also an academic staff at the same institution may interfere with the Mini-CEX assessment process and also may disrupt during the feedback session. Indirect observation may appear less intrusive, have less pressure and allow the feedback session between the lecturer and student to be conducted in a more natural manner. The other advantage was the ability to use an audio recorder as the instrument in indirect observation which captures the actual words and makes the data collected very accurate in nature and highly reliable.

The data collection began after obtaining the authorisation letter from the Faculty of Medicine UKM Ethical Committee. All participants received the research information sheet describing the research, mainly about the research title, an overview of the research topic, the process of data collection, benefits of the research and research confidentiality. Upon their

agreement, the participants were briefed on the research information sheets and signing the consent forms as well as being trained to operate the audio-recorder for data collection. In order to make sure that the data obtained were not influenced, the lecturers were not told which students were selected and the schedule for the audio recording session to ensure that the lecturers did not make any special efforts and prepare the feedback content in advance as well as trying to act naturally. The students were also taught how to operate the audio recorder and advised to insert the audio recorder in the students' upper front pocket to capture clear voices and to prevent distraction. The schedules and location for indirect observation were created based on the official Mini-CEX exams schedule received from the department office.

Participants' names were changed into alphabets and numbers in all data analysed in this thesis or used for presentations. The transcripts of the feedback session were coded as FS 1 to FS 33 respectively to preserve their anonymity.

Analyses of the feedback session transcripts had used a deductive approach based on the list of themes identified from the literature. Content analysis was adopted to analyse the feedback session transcripts from the indirect observation of the feedback session at the end of the Mini-CEX assessment.

There are a few strategies adopted by the researcher to improve the validity in this research. The first strategy is a regular discussion with an expert. In this research, a specific date was set to discuss the coding and themes identified by the researcher. A few selected feedback session transcripts also were analysed by the second lecturer to determine the accuracy of the qualitative findings. The results were compared and any differences were brought for further discussion.

RESULTS

The transcript was repeatedly read to increase identifying the possible themes and pattern. The deductive analysis was adopted based on the list of feedback strategies found by Lizzio and Wilson (21), and Hewson and Little (19).

Table 1: Count and percentages of feedback strategies in the feedback session

Feedback strategies	Counts	Percentage (%)
Self-reflection	32	96.7
Student's plan for improvement	12	36.3
Self-scoring	13	39.4
Praise	30	90.9
Informing the score	20	60.6
Justification of score	15	45.4
Lecturer's plan for improvement	30	90.9
Opportunity of voice	8	24.2

Results in Table 1 showed that 32 out of 33 (96.7%) feedback session began with the students reflecting their own performance. The other feedback strategies used to encourage interactive feedback were student's plan for improvement (36.3%) and self-scoring (39.4%). Both feedback strategies namely praise and lecturer's plan for improvement received the highest percentages in feedback (90.9%). There were 20 students were informed of their final scores (60.6%), however only 15 (45.4%) of them were justified. Only 24.2% students were offered to ask questions during the feedback session.

Table 2 showed that of the 32 students that reflected their own performances, 15 (46.8%) of them were in response to open-ended questions. The remaining 17 students' self-reflection were in response to close-ended questions such as identifying their strength and weaknesses.

Table 2: Count and percentages of self-reflection in the feedback session

Category	Cluster	Counts	Percentage (%)
Self-reflection	Open-ended question	15	46.8
	Identify student's weaknesses	8	25
	Identify student's strength	9	28

DISCUSSION

Dialogic Feedback

Various definitions of dialogic feedback were gathered from the education literature. Carless et al. (23) emphasised on the role of both educators and learners in sharing, negotiating, and clarifying information. The term “negotiating” is crucial to demonstrate that educators do not necessarily hold the final decision in every topic of discussion. This principle encourages learners to become actively involved in the feedback discussion. Feedback dialogue needs an interaction between two people. Despite recent academic developments emphasising more on dialogic feedback approach, Molloy and Boud (11) argued that the number of institutions that rely on dialogic feedback is still at a disappointing level. According to Molloy (24), educators’ factors include time constraint, less skills, adhering to traditional methods, and the tendency to diagnose and fix rather than engage in collaborative decision-making inhibited dialogic feedback. On the students’ side, the reasons were fear of being wrong in self-assessment, viewing the lecturer as a content-practice expert, dilemma in challenging the lecturer due to power-hierarchy, and being concerned about the assessment rather than learning. The role of feedback becomes powerless as the results had shown that a small number of students were given the opportunity to ask the question. Although the lecturer might think that the students will ask questions, there might be the students who were waiting for the lecturer to give permission to ask. Carr (20) insisted that any strategies that provide an opportunity to communicate during feedback are crucial for the

improvement and development of doctors professionally. However, further study has to be conducted to identify students’ perception and interpretations towards dialogic feedback.

The Process of Self-Assessment (SSA) in Mini-CEX Feedback Session

Self-assessment (SSA) requires students to assess their performances rather than passively receive information from lecturers. The definitions of SSA proposed by Lau (25), included standards and criteria as “to evaluate and monitor their performance about identified criteria or standards”. The other definition of self-assessment is from Alverno College; “The ability of a student to observe, analyse, and judge her performance by criteria and determine how she can improve it” (<http://depts.alverno.edu/saal/>). Based on both definition, the role of SSA was improvised to not only focus on identifying criteria and standard, self-judge and self-monitoring, but it also requires students to provide their plans for improvement.

The process of SSA in the Mini-CEX feedback session consisted of five steps (Figure 2). The first step involved students identifying their strengths and weaknesses. The second step involved lecturer’s immediate response by either verifying or discussing the information given by the students in regard to their strengths and weaknesses. The third step in the SSA process allowed the students to provide the strategies to improve their performance gaps, followed by the lecturers acknowledging and discussing the students’ plan for improvement. After being exposed to the lecturers’ feedback, the students

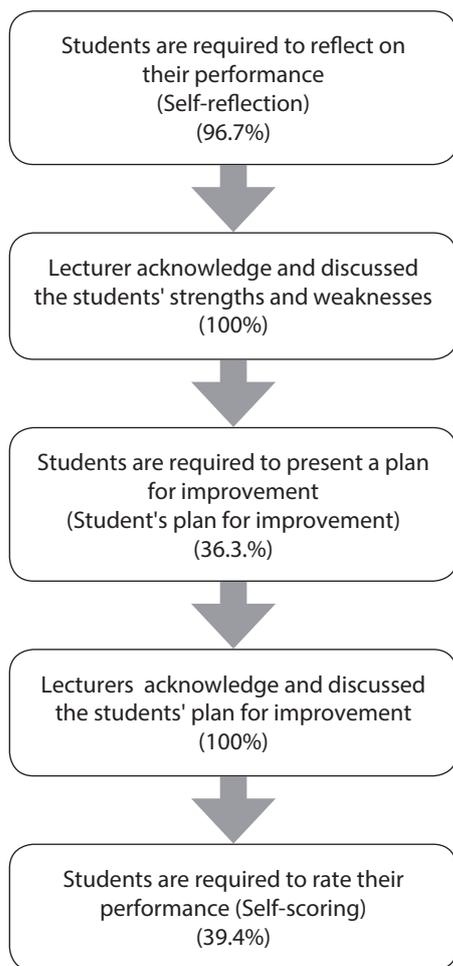


Figure 2: Self-assessment process in the Mini-CEX feedback session.

were given the opportunity to rate their own performance. The final SSA process involved the lecturers providing a rating and a justification of the rating given.

The process of SSA in Mini-CEX (Figure 1) is clearly different to the five models of SSA discussed in past research. The five SSA models discussed by Taras (26) are standard model (27), self-marking and sound standard (28), self-assessment integrated with tutors'/peers' feedback Taras (29) and Learning Contract Design Cowan (30). The standard model suggested Boud (27) requires students to list their strengths, weaknesses, and grades before the lecturer gives their feedback. The self-marking model requires the lecturer to explain the criteria and standards on the

marking sheet to the student. On the other part, sound standard model replaced the marking scheme with exemplars. The self-assessment integrated with tutors/peers feedback model was invented by Taras (29), which integrates the involvement of peers and minimise the feedback from lecturers. The Taras model is convincing and it can be applied to group feedback when it involves more than two peers. However, involving peers have several disadvantages. Beaumont et al. (31) argued that some students saw the peer feedback process as constructive and motivational, while others were concerned about trust and competency. This study argues that the new process of SSA practised by the Family Physician lecturers enhances students' understanding of the assessment criteria and standards. This is because the SSA process contains three important steps, namely self-reflection, students' improvement plan, and self-rating which required the students to reflect at the early stage of feedback follow by second and third reflection after received a verification and discussion with their lecturers. On the contrary, the SSA process in SSA models such as standard model, sound standard model and self-marking model and learning contract design model only consists of a single explanation of the assessment criteria and standards. Meanwhile, SSA integrated with tutors and peers feedback model involves a two-step discussion regarding assessment criteria and standards. The three steps during the SSA process practiced by the lecturers during Mini-CEX allow lecturers' verifications and discussions of the students' justifications which may explicitly or implicitly expose the actual assessment criteria and standards. Improve the level of understanding towards assessment criteria and standards give a positive effect on the validity of the SSA by the students.

However, more than half SSA process in the feedback sessions was uncompleted. Only 36.3% and 39.4% of the feedback session consists of student's plan for improvement and self-scoring respectively. Further study is crucial to explore the unexpected result.

Modification of Pendleton's Technique

All lecturers who attended the feedback workshop as part of their academic development were given an explanation and encouraged to adopt Pendleton's technique which was integrated in the feedback guideline written in the Mini-CEX rating form. Pendleton's technique plays an important part in encouraging the students to interact with their lecturers during feedback. Pendleton's technique also promotes the students to engage in feedback through encouraging dialogic feedback by positioning students at the center of the feedback process. One of the essential components in Pendleton's technique is that feedback should start with instructing the students to identify their strengths.

Pendleton's technique indirectly shows the significance of improving the feedback definition, when most researchers only focused on performance discrepancies. However, one of the disadvantages of the Pendleton technique is that the rigidity of the model may cause poor participation during feedback sessions. Even though the intention of discussing the students' strengths was to motivate and increase confidence, the lack of readiness among the students to expose their strengths became a major setback. The negative effect of discussing more on strength was also discussed by Anderman and Anderman (32) who related it with low level of self-efficacy and may cause students to deviate from participating in feedback.

Moreover, the feedback session which focused on highlighting the students' weaknesses may create negative learning environment. The discussion may end up with the students feeling demotivated. Perhaps, giving hope and recognising effort may be suitable to increase the level of self-confidence and motivation. One of the solutions shown by this research which in 46.8% self-reflection was asked in open-ended question, was to replace the closed-ended question with more open-ended questions.

Adopting general questions on the SSA provided many advantages. The first advantage is that it gave students the opportunity to express their emotions. Taras (33) agreed that students may expose their personal thoughts and feelings during self-reflection. The second advantage is that the students could explain the reasons or factors of poor performance which also known as causal attribution. Causal attribution allows students to explain the possible reasons related to their poor or good performances. However, the positive impact of causal attribution depended on how lecturers respond to the reasons given. Rather than just accepting the students' reasons, the role of the lecturer is to ensure that students are able to transform their poor ability (irreversible causes) into capability (reversible causes). According to Zimmerman (34), a student's motivation can be impaired if the students attributes their poor performance to a fixed disability rather than a controllable process to improve. Therefore, the role of the lecturer in causal attribution is crucial to avoid adverse effects on a student's motivation.

The Negative Effect of Feedback Sandwich

One out of 32 feedback sessions were not given in dialogic approach because the lecturer had adopted the Feedback Sandwich model. Feedback Sandwich consist of two layers of praise improved the students' motivation and confidence. Despite the benefits, the Feedback Sandwich model has a few disadvantages. Firstly, the process of giving feedback in the Feedback Sandwich is easily predicted by the students. This concern was shared by Carr (35) who argued that those who utilise similar techniques or model in feedback may cause spontaneous discussion because students can predict the sequence of the feedback comments. If this happens, the multiple roles of praise in the Feedback Sandwich process may be ignored by the students who are only focusing on their performance gaps which occur in the second step of the Feedback Sandwich process.

Several options of feedback models should be highlighted in the feedback training to improve lecturers' knowledge.

The second disadvantage of the Feedback Sandwich is the exaggerated praise given in feedback. The exaggerated praise may deviate the lecturer from focusing on the student's performance gaps. These concerns was highlighted by Lipnevich and Smith (36) who argued that praise may cause the students to feel satisfied, which deviates the students' efforts on their performances.

The third disadvantage relates to the non-interactive approaches in Feedback Sandwich, which could minimise the benefits of dialogic feedback to students' learning. Feedback Sandwich encourages unilateral feedback which is not suitable for learners who prefer more discussion and healthy open debates with their lecturers. The disadvantage of unilateral feedback was support by a study conducted by Orsmond and Merry (37) who concluded that feedback "dialogue" improves the level of understanding among students. Therefore, educators should be made aware of the three major disadvantages discussed above to highlight the limitations of the Sandwich Feedback.

CONCLUSION

This study showed dialogic feedback has been adopted in the feedback session to enhance the benefit to the student's learning. Several important components namely self-reflection, student's plan for improvement and self-scoring was fully adopted in SSA. Adopting open-ended question as part of modification of Pendleton's technique provide more options for the students to guide the discussion in the feedback.

LIMITATION

Time management is the most crucial in Workplace-Based Assessment (WBPA). The nature of Mini-CEX assessment conducted at the community clinic during office hours lead to time constraint which may contributed to low variety of feedback strategies in feedback.

FURTHER STUDY

The study reiterates the call for further empirical research on how students interpret feedback for each individual feedback strategy to identify the effectiveness of the feedback.

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