Feedback during clerkships: the role of culture

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Chapter 1

Introduction

Globalization and internationalization has an impact on the development of medical education. Medical education communication channels between countries come open, both through a variety of international medical education conferences and through publications in various international journals of medical education.[1] Many concepts and innovations in medical education, including teaching and learning processes, are now conveyed widely over the world. However, research shows that medical education concepts and innovations cannot easily be transferred from one country to another due to cultural differences in teaching and learning.[2-6]

To stimulate medical schools to improve and maintain their educational quality, the World Federation for Medical Education (WFME) developed Global Standards for Quality Improvement based on international recommendations.[7] Medical schools in many countries try to adapt their curriculum to meet these international standards to gain international recognition. Therefore, when implementing global standards, cultural differences between countries, local context and need have to be taken into account.[7-11]

Feedback is one of the educational concepts recommended by the global standards.[7] Feedback has to be given timely, specific, constructive and fair to students on basis of assessment results. The influence of culture in feedback processes has been acknowledged outside the field of medical education.[12,13] However, empirical evidence about how feedback processes relate to differences in culture and what this means for the instructiveness of feedback in medical education is lacking. This thesis explores cultural differences in feedback process, how feedback can be implemented effectively based on literature by considering and facing the cultural differences as challenges, and the effect of feedback to the perceived learning value and competencies of students in medical education, especially in undergraduate clerkship.

Background

Medical schools must ensure that students acquire sufficient skills to be able to take appropriate responsibility after graduation.[7] Clerkship is the relevant setting for students to learn clinical skills, e.g. history taking, physical examination, professionalism, clinical judgment and communication. These competencies

can be achieved through patient-based learning activities, either by independent learning or formal teaching-learning activities in the ward, outpatient clinic, emergency department and operating theatre.

To improve learning and clinical competencies during clerkship, students need feedback.[14-19] Unfortunately, it is not easy to provide sensible feedback effectively.[14,20,21] Inadequate feedback has been acknowledged as one of the major problems and challenges in clinical teaching.[21-23]

Feedback in Clerkships

Van de Ridder et al (2008) define feedback in clerkships as: "*specific information about the comparison between a trainee's observed performance and a standard, given with the intent to improve the trainee's performance*".[24] Literature indicated that some approaches of feedback are more effective than others.[18,19] The following characteristics were recommended in providing effective feedback during clerkships.

Feedback should focus on observable competencies such as history taking, physical examination, clinical judgment, patient management, communication, patient counseling, and professional behavior.[24] It makes the feedback performance-oriented which is meaningful for students learning.[7,18]

The feedback provider should be an expert and credible person who can envision a standard against which students' performance can be compared.[15,18,23,24] Daelmans et al (2004, 2005) stated that seniority level can distinguish the quality of feedback.[23, 25] However, students get more often feedback from residents or junior staff than from specialists or senior staff.[23,25-28] Contrary to literature, Van Hell et al (2008) reported that feedback from the specialists had the same effect on student learning than feedback from residents.[29] The question arises whether these empirical findings are generalizable to other settings.

Feedback should be based on direct observation, so the student performance gap can be identified.[17,19,24,29-33] Feedback based on direct observation is very influential to the learning process; especially improve students' competence. However, direct observations of student performance are quite rare during clerkships.[21] Parsell & Bligh (2001) report that students expect to be observed directly and in a regular manner during contact with patients.[34] Direct observation offers the opportunity to the clinical teacher to stimulate and assess the level of students' need and performance.[34,35]

Students should participate actively in the learning process during the clerkship.[21] In the context of feedback, students must take the initiative to ask for feedback from their clinical supervisors. The objective is to ensure that feedback given in accordance with the learning needs of students and can improve students' internal motivation. Van Hell et al (2008) reported that feedback based on student initiative has more effect on the learning process than feedback based on the initiative of the clinical teacher.[29]

Students should know what was done well (i.e. strengths).[17,31,32,36] The appraisal of good performance will enhance students' confidence and, therefore, supports good practice.

Students also need to know which aspect(s) of their performance need to be improved (i.e. weaknesses).[17,31,32,36] Information about performance deficiencies will help students to set learning goals.

Students' performance should be compared with a standard such as professional judgment, local standard, or guideline.[15,17,24,30,33] It facilitates students to become aware of their progress.

Explanation of the correct performance that elaborates what, how and why a performance is correct or not should be given to the students.[37] It will give students sufficient information to correct errors.

The feedback provider should invite students to make plan of action to improve their performance and discuss it.[17,24,31,34,36] This practice will help students to apply feedback in practice which is needed to narrow the gap between actual and desired performance.[33,36]

Feedback and assessment are two educational activities that are important for students learning and closely related.[33] Together with adequate supervision, feedback and assessment are important factors to achieve clinical competencies during clerkship effectively.[23]

Assessment and feedback during clerkship

Assessment has been acknowledged to optimize student learning.[38-43] Assessment processes should not stop with the mere assessment of learning, but should be continued with using information provided by the assessment to optimize student learning such as training in clinical skills. Therefore, to influence learning, assessment should provide frequent and constructive feedback.[40,44-50]

Feedback promotes student learning through information about their strengths and weaknesses.[50] Information about strengths and weaknesses fosters self-reflection and self-remediation, and promotes students to advanced training.[47] There is evidence that delivering feedback on an assessment promotes better memory for content.[38, 51,52] The mini clinical evaluation exercise (Mini-CEX) is an assessment method that can facilitate feedback and has the potential to stimulate students learning effectively during clerkships.[50,53,54]

Mini Clinical Evaluation Exercise (Mini-CEX)

The Mini-CEX is a method that was developed to assess clinical skills through direct observation.[55-57] There are seven clinical skills competences that can be assessed by mini-CEX; (1) medical interviewing skills or history taking, (2) physical examination skills, (3) humanistic qualities or professionalism, (4) clinical judgments, (5) communication or counseling skills, (6) organization and efficiency, and (7) overall clinical care. The Mini-CEX is a modification of the traditional oral bedside examination. In the implementation process, it needs real patients and assessors judging student's clinical skills. The Mini-CEX has a wide flexibility both for time and place and needs short time for accomplishment. Such an assessment must be conducted repeatedly because it is difficult to evaluate all clinical skills competencies at once. The mini-CEX is a valid and reliable method for rating clinical performance and it can be applied in postgraduate and undergraduate education.[55-66]

The mini-CEX was designed to identify strengths and weaknesses in individual students' clinical performance based on direct observation in interaction with patients and as part of a longitudinal course with many occasions and assessors. Based on this information, assessors can give each student individual feedback in order to promote further development and improve their clinical competence.[55-66] The feedback in the mini-CEX, therefore, fulfils the requirements for effective feedback mentioned before. It focuses on observable competencies, is based on direct observation and provides a structure within which strengths, weaknesses and action plans can be discussed. The structure of the mini-CEX can facilitate the feedback provider in his role as an expert, encourage the comparison of student performance to standards and, consequently, the explanation of correct performance based on standards. Given its potential, the mini-CEX has been

used as a method to improve feedback during clerkships in many countries (Hauer 2000; Dewi & Achmad 2010).[67,68]

Many studies of mini-CEX implementation were conducted in America,[55-61,67] Europe,[53,62-64] and Australia.[69] Only a few studies were done in Asian countries, such as Indonesia.[68] The way and impact of the implementation of mini-CEX may be different between countries since there are cultural differences in teaching and learning.[70-71]

Cultural differences in Teaching and Learning

Cultural differences in teaching and learning between countries have long been recognized.[5,70-75] Nowadays, with growing globalization and internationalization of medical education, interest in cultural differences is increasing. Anderson (1988) has identified some fundamental differences in dimension and cognitive style between western and non-western societies.[76] Klimidis et al (1997) found cultural differences between medical students from Australia, representative for a Western society, and medical students from an Asian society.[72] Hoon Eng Khoo (2003) described the cultural differences of Asian societies that were considered to be compatible and incompatible with Problem Based Learning (PBL) which was developed in Western societies.[2]

Without an understanding of cultural differences in teaching and learning, misconceptions to the educational practices in certain societies can happen. Chalmers et al (1997) described the common misconceptions about medical students from Southeast Asia in Australia, e.g. students from Southeast Asia have been characterized as learners who want to learn the most to memorize information; do not have the skills to analyze and think critically, do not adjust their learning to a new context, passive, and did not want to mix with foreign students.[77] Wear (2000) also found a misconception of medical students from Asia Pacific in the United States, e.g. they were perceived by faculty as being "quiet," often too quiet, passive, or unassertive.[73]
Realizing and understanding cultural differences in teaching and learning may help us to avoid misconceptions, and find out causes and solutions for the difficulties. By now, research of cultural differences in teaching and learning processes is still limited, particularly related to the teaching and learning

processes in clinical settings.[5,72-75] Therefore, research to provide new empirical evidence about the cultural differences of teaching and learning process in the clinical setting is required

The Hofstede's model of cultural dimensions

One model often used in studies to discuss the cultural differences between countries is the Hofstede's model of cultural dimensions. Hofstede defines culture as *"programming minds in groups so that the members of a group can be distinguished from other groups"*.[70,71] He classified cultural differences between countries in five dimensions of cultural differences:

1. Power Distance, which is related to inequalities between people
2. Individualism, which is related to relationship between the individual and group
3. Uncertainty Avoidance, which is related to the way to deal with unpredictable situations
4. Masculinity, which is related to the emotional role division between gender, and
5. Long Term Orientation, which is related to the choice between present and future virtues.

The model was based on research results in more than 50 countries. In each dimension of culture, there are differences in the pattern of interaction between people, between teachers and students, and between students. Hofstede's dimensions are still very actual, as they are still used worldwide in university courses, cross-cultural training programs and research.[78,79] In addition, over the past 30 years, Hofstede expanded and updated his work continuously.[80] As to the globalization issue, Hofstede theorizes that cultures do evolve, but also that these differences tend to move together in one and the same cultural direction. This implies that the initial differences continue to exist.[80]

The Individualism dimension is the most popular dimension that is studied and discussed in understanding the cultural differences between countries.[81] The Individualism dimension has a very strong relationship with the power distance dimension.[71] Countries with large power distance are mostly countries with low individualism, and vice versa. Understanding the differences in these two

dimensions can be the basis and focus on understanding cultural differences in teaching and learning.

Indonesia as country with Low Individualism and Large Power Distance

Indonesia has been classified as country with low individualism or collectivistic country.[71] Hofstede (2001) defines collectivism as *"a society in which people from birth onwards are integrated into strong, cohesive in-group, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty"*.[71] In a collectivistic country, people are interdependent in which there is a sense that the self and others are intertwined.[82] Therefore, they emphasize to promote others' goal, being fit in to the group, occupy one's proper place, engage in appropriate action; and be attentive to others feeling and unexpressed thought – reading others mind.[82,83] The important motivation is the ability to adjust, retrain self, and maintain harmony with others.[71,83] As the impact, personal needs, goals, and desires must be controlled and regulated so that they do not interfere with the needs and goals of significant others, and discussions of one's performance openly are avoided.

The characteristics of collectivistic culture can be applied to the teaching and learning processes.[70,71] For example (table 1), the teacher will deal with students as a group rather than individuals and students will not take the initiative of communication especially not in front of a large group.

Power distance is a measure to show the influence of inequality between someone who is more powerful – superior – and someone who is less powerful – subordinate.[71] Generally, superiors strive to maintain and increase the distance with subordinates and the subordinate always will try to minimize the distance with a superior. However, in case of large power distance, superiors will take more attempts to maintain and increase the distance with a subordinate, so that the emotional distance between superior and subordinate remains large. For the subordinate who attempts to reduce the distance, it is very difficult to approach and contrary to the superior. Subordinates become dependent to the superior. This also applies to the patterns of interaction between teachers and students (Table 1).

Table 1. Hofstede's model of cultural dimensions: the individualism and power distance dimensions in educational contexts.[70,71]

Low Individualism (collectivism)	**High Individualism**
• Teachers deal with students as a group • Students will not speak up in class or large groups • Harmony, saving face and shaming in class	• Teachers deal with individual students • Students expected to speak up in class or large groups • Students' selves to be respected
Large Power Distance	**Small Power Distance**
• *Students expect teachers to outline paths to follow* • Quality of learning depends on excellence of teachers • Teachers initiate all communication in class	• *Teachers expect students to find their own paths* • Quality of learning depends on two-way communication and excellence of students • Students initiate some communication in class

In countries with large power distance, students tend to be dependent on teachers. The learning process is centered on the teachers, and the quality of learning is related to the excellence of them. Furthermore, the teacher is expected to give outlines to be followed by students, and teachers will generally initiate communication.[70,71]

Cultural differences in Providing Feedback

Some studies found cultural differences in feedback between large power distance and low individualism societies and low power distance and high individualism have been studied in both medical education and outside of the field of medical education. We found two studies outside the field of medical education. Pratt et al (1999) found, by asking faculty and students from Hong Kong, that the purpose of giving feedback is to identify the weaknesses or errors of understanding the

learning material.[84] Compared to teachers from expatriate western countries (United States or Britain), teachers in Hong Kong stated that balance between criticism and praise has to be achieved in feedback. Comparing post-graduate student in Hong Kong and United states, Morrison et al (2004) also found that feedback inquiry was related to self-assertiveness aspect of individualism, and to power distance. Individuals who scored high on self-assertiveness and low on power distance reported had more feedback inquiry than those low on self-assertiveness and high on power distance.[85]

In the field of medical education, Wong's study (2011) found differences between two countries.[86] The faculty staff of anaesthesia residency training program in Thailand stated that the purpose of feedback is to correct behaviour, while faculty from Canada considered the emotional consequences and showed their reluctance to give negative feedback.

To summarize, current concepts concerning teaching and learning have spread widely throughout the world and have been adopted in curriculum innovations by medical schools in many countries. Feedback to students is an example of such an educational concept, which is being implemented in medical curricula all over the world. Instructive feedback facilitates learning during clerkships. Providing feedback to students occurs in an interactive process. How teachers and students interact is rooted in the culture of a society and it can be questioned whether the implementation of feedback processes should be the same in each country.

Towards this Thesis

To improve students' learning and meet global standards, providing effective feedback during clerkships is critical. Innovations by implementing new feedback methods should be conducted in such a way that it meets the goal. However, to establish the effectiveness of feedback innovations in different cultures, we should explore common practice of feedback processes during clerkship. This thesis explores the common practice of feedback processes, and the implementation of a new method to improve feedback in clerkship. In this thesis we take into account the Indonesian culture as a country with low individualism (collectivist) and large power distance.

In *Chapter 2* cultural differences in feedback processes and perceived instructiveness of feedback during clerkships between two countries, Indonesia and the Netherlands, are explored. By replicating a Dutch study in Indonesia, we Analyzed differences in feedback processes and their influence to the perceived instructiveness of feedback. Over a two-week period, Indonesian students recorded feedback moments during clerkships, noting who provided the feedback, whether the feedback was based on observations, who initiated the feedback, and its perceived instructiveness. Data were compared with the earlier Dutch study. Cultural differences were explored using Hofstede's Model, with Indonesia and the Netherlands differing on 'power distance' and 'individualism' dimension.

Individual feedback is essential during clerkship. In collectivistic cultures, however, group feedback is common educational practice. *Chapter 3* explains the characteristics and perceived learning value of individual and group feedback in a collectivistic culture.

International standards recommended medical schools to ensure that students get timely, specific, constructive and fair feedback on basis of assessment results. Literature has explained the potential of the mini-CEX as an assessment method to facilitate feedback effectively in the clinical setting. Therefore, we implemented mini-CEX into the existing assessment program in clerkships to provide effective feedback and improve learning on clinical competencies. However, local culture might hamper innovation attempts. *Chapter 4* describes the challenges in implementing the mini-CEX in Indonesia and investigates its effect on students' clinical competence. Implementing the mini-CEX into the existing curriculum, while taking the Indonesian culture into account, implied a shift from group to individual feedback. We compared students' final clinical competence before and after the implementation of the mini-CEX, using a modified Objective Structured Long Examination Record (OSLER).

To establish the mini-CEX as an appropriate assessment tool for the Indonesian clinical setting, its practicality and impact on learning has to be investigated. *Chapter 5* describes students and specialist perception on practicality and impact on learning of mini-CEX as assessment tool.

Various feedback characteristics have been suggested as having a positive influence on student learning. However, there is little evidence for the effect of these characteristics and validation studies are needed. Furthermore, it is unknown how the learning value of feedback is perceived in cultures with low individualism and large power distance. In *Chapter 6* we try to validate the theoretical assumptions by analysing the influence of different feedback characteristics on the perceived learning value. During the implementation of mini-CEX, we asked students to assess the learning value of mini-CEX feedback using a 5-point Likert scale, and to record for each mini-CEX encounter whether the examiner informed the student what went well, mentioned which aspects of performance needed improvement, compared the student's performance to a standard, explained correct performance, and prepared an action plan with the student.

Chapter 7 provides a general discussion of the thesis's findings, which includes methodical considerations, and implications and recommendations for medical education practice and research.

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