Using the Nominal Group Technique to Evaluate a Chinese Medicine Basic Theory Course for Medical Doctors: A Case Study

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ABSTRACT

Aims: To evaluate the course of Chinese Medicine Basic Theory (CMBT) delivered to medical doctors for course improvement using an established Nominal Group Technique (NGT). Methods: 14 Iranian students with medical backgrounds at Beijing University of Chinese Medicine completed the two NGT sessions. Results: 20 prioritised items were produced. Of these, clinical relevance, quality of teaching and learning activities and English language proficiency were considered the most important areas. Conclusion: The quality of the CMBT course might be improved when it is implemented with clinically relevant content knowledge, constructively aligned teaching and learning activities with quality delivery in the classroom.

KEYWORDS nominal group technique, course evaluation, traditional Chinese medicine, education.

Introduction

It is important to evaluate a healthcare education program to gather feedback for quality improvement.[1] With the increased global usage of Chinese medicine (CM), CM higher education has been introduced in various institutions besides being incorporated into conventional curricula for medical students in China,[2] Australia,[3] the United States[4] and elsewhere[5] around the world.

As a fundamental course in a CM program, Chinese Medicine Basic Theory (CMBT) provides students with basic knowledge and skills for future learning. The importance of CMBT has been recognised widely;[6,7] some reports on CM education[8-11] have been published and a few of them indicate the challenge of teaching Western doctors about CM.[12] However, original studies on evaluation of CMBT teaching as an individual course to medical doctors are still rare.

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The nominal group technique (NGT) is an evaluation tool that has been extensively used in education evaluation[13,14] and other settings as a structured group activity to reach group consensus. It provides semi-quantitative, rank-ordered feedback[1] about a group of learners' perceptions of good and bad aspects of an educational program. The advantages of using NGT compared with survey, interview and interactive group techniques are that it can focus on student opinions and identify individual concerns while maintaining the group dynamics.[13] It is highly structured and easy to conduct. It has been proven to be effective when used to evaluate teaching in diverse higher educational settings.[15]

This study employed the NGT procedures to evaluate CMBT teaching using Iranian students with medical doctor background as sample participants. It aimed to provide feedback to lecturers for improving teaching of this course to overseas students.

Methods

The NGT method employed in this study consisted of five phases as described elsewhere.[14] An extra translation interval between voting and reassembly of the whole group phases was designed because different languages were used in the two separate sessions. Detailed procedures are summarised in Figure 1.

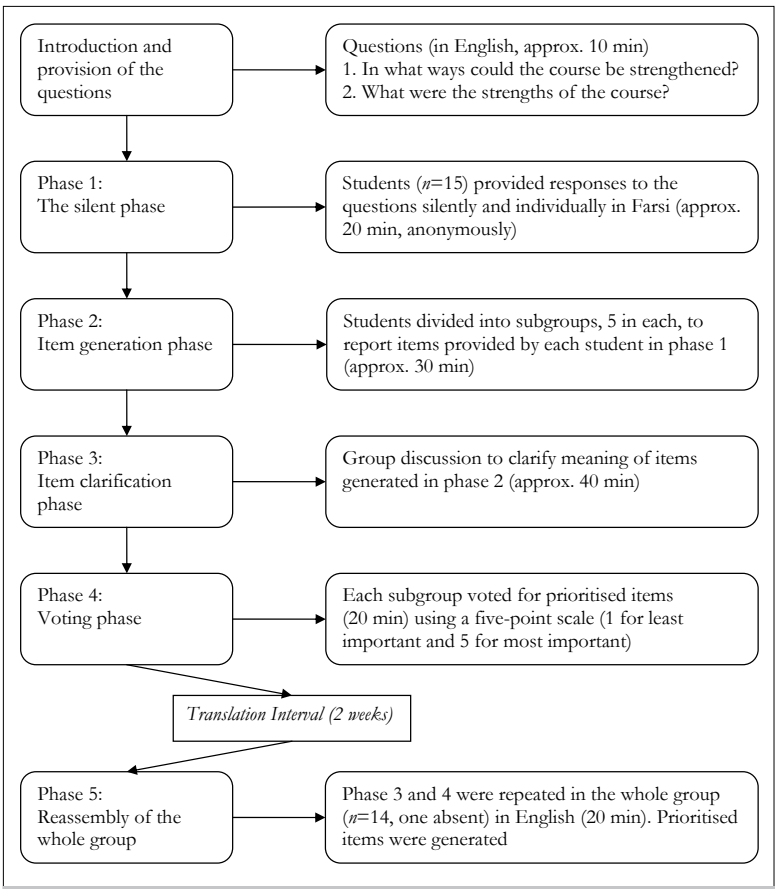

FIGURE 1 The NGT procedures for course evaluation

SUBJECTS AND SETTINGS

A cohort of 20 Iranian medical doctors who completed the CMBT course were invited to participate in the NGT sessions in late 2006. These students commenced their studies in a four-year PhD CM program in English at Beijing University of Chinese Medicine from 2005.

CURRICULUM DESCRIPTION

CMBT is a fundamental and the first theoretical course in the CM program, including 40 sessions with 135 minutes per session for these students. Traditional teacher-centred didactic lectures were the major teaching method employed although students were also involved in interactive questions and answers, tutorials, group presentations and discussions, both inside and beyond the classroom. The teaching language for this course was English. Assessment tasks included participation in class, oral presentations and a final written exam.

CONDUCT OF NGT SESSIONS

The NGT evaluation was conducted following the procedures outlined in Figure 1.

In the first session, instructions of the procedure were provided to participants in English while the following group activities by the participants were in Farsi.

Students were first required to respond to the following two questions in writing:
Question 1: In what ways could the course be strengthened?
Question 2: What were the strengths of the course?

Each student was then asked to rank, in order of priority, the five items most important to him or her, on a scale of 5 (most important) to 1 (least important) after item generation and clarification within each subgroup. The voting papers were collected by subgroup co-ordinators.

A break between the two sessions was used for translation of students' feedback from Farsi to English by the group co-ordinators. The translation was checked and reviewed by another native speaker of Farsi teaching English as a second language. Before the second session, a final list of prioritised items without editing were thus produced and in the final phase it was presented to the whole group assembly for group item generation, clarification and voting in English.

Results

Fifteen (5 females and 10 males, aged 32.64 ±2.41) of the 20 Iranian medical doctors volunteered to participate in the two NGT evaluation sessions. Fourteen completed both, which lasted 2 hours (Phases 1–4) and 20 minutes (Phase 5) respectively (Figure 1).

In the first NGT session, 18, 14 and 13 items were generated by the three subgroups in response to Question 1. Thirteen, 10 and 8 items were identified by the three subgroups in response to Question 2. Each subgroup voted five prioritised items for each question. By the end of the first NGT session, a total of 15 items (in Farsi) for each question were received from all the participants.

In the second NGT session after translation, phase 3 and 4 were repeated with the whole group. Fourteen and 11 non-redundant items for Questions 1 and 2 were presented to participants for voting. The top ten items for each question, the number of voting students and the total score for each item are summarised in Table 1.

Discussion

To the best of our knowledge, this is the first study to apply the established NGT method in CM course evaluation. Findings from this study showed that several changes are needed for improvement of the course: more clinical relevance of the course, quality of teaching and learning activities and better mastery of the teaching language.

Clinical relevance is the main concern from these medical doctors with working experience. This is consistent with other papers on similar topics[7] since involvement of clinical teaching is defined as a unique feature of medical education.[16] Although CMBT has long been considered a basic theory course, it is critical to provide more clinically relevant knowledge and skills to students with clinical medical backgrounds.

Quality of teaching and learning activities, including organisation of the course, teaching strategy, clarity, assessment, grading and enthusiasm, have also drawn attention. These items are shared by diverse disciplines. Appropriate teaching methods and assessments are required to be carefully organised

TABLE 1 The top ten NGT items in descending rank order

Rank order on question 1: In what ways could the course be strengthened?	No. of students (n = 14)	Score	Rank order on question 2: What were the strengths of the course?	No. of students (n = 14)	Score
1. More clinical knowledge	12	45	1. Well-prepared lectures with PowerPoint	12	39
2. Avoid monotone in speaking	10	32	2. Devotion of the instructor to improving teaching	9	35
3. More proper distribution of time among the chapters	9	26	3. Self assessments (quizzes)	8	30
4. Bridging the gap of English proficiency between the instructor and students	7	24	4. Punctual instructor	7	25
5. Use more attractive teaching methods besides lectures	6	17	5. Energetic, enthusiastic and concerned instructor	8	20
6. Use standardised exam questions	4	14	6. Fluent English competency	7	14
7. Speaking at a proper pace	3	11	7. Inviting a skilled professor for a lecture	5	14
8. Better explaining the contents with more examples	5	7	8. Providing supplementary materials to improve students' knowledge	5	12
9. Students' presentations are too early	4	7	9. Student presentations	4	8
10. Better informing of the scoring criteria at the beginning	1	5	10. Classes focus on the teaching contents	3	7

for medical doctors when they receive complementary and alternative medicine education,[17] including CM education.

English language was pointed out as another issue to be considered as it is a second language for both the instructor and students. Monotone should be avoided. The competency of English language is becoming recognised as a key barrier for sharing CM knowledge and promoting its globalisation. The level of mastery of the teaching language seems to contribute partially to the teaching quality.

In summary, it seems from this case study that a CMBT course might produce deeper learning among students with medical background when it is implemented with clinical-relevant content knowledge, constructively aligned teaching and learning activities with quality delivery. The NGT method used in this study showed that the selected procedures were effective for collecting students' opinions about their learning experiences, which is consistent with other reported studies.[1,13-15] The feedback generated from the NGT procedures covers a range of topics in the students' interest.

This is a small case study evaluating a CMBT course delivered to overseas medical doctors. As there is limited literature on evaluation of CM teaching,[18] future empirical educational studies with a larger sample size are needed.

Clinical Commentary

CMBT is critical to the overall learning and practice of this traditional healing art. The learning outcome of this course has a fundamental impact on the development of graduates' clinical capabilities. Findings from this study showed clinically orientated learning approaches as one priority among students with a clinical medical background when learning CMBT. This well-developed group technique may also be applied to evaluation of practitioner or patient perceptions of a specific condition/therapy in clinical settings as well as in educational evaluation.

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