

*The Interactive Method for Training Guangxi Medical University Professors
Teaching Medicine by Using English as Medium of Instruction*

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The Asian Conference on Language Learning 2018
Official Conference Proceedings

Abstract

Besides general ESL teaching in primary and secondary schools, universities, and adult education, training professionals for specific purposes is another alternative for thriving English language education in the rapidly changing era. However, very little research has been conducted for investigation of training medical professionals the effective EMI teaching of medicine. This paper reports the design and evaluation of the 2-week intensive course, which focused on enhancement of using English as medium of instruction (EMI) to teach medicine in different faculties, for 10 experienced professors, associate professors and lecturers from Guangxi Medical University located in South-western region of China in CUHK, SCS. The professionals came from Faculties of Anatomy, Biochemistry, Physiology, Microbiology, Pharmacy, Pathology, Epidemiology, Medical Statistics, ENT and Basic Medicine. As a pedagogical approach, basic methods for teaching medicine were taught and the professionals were required to implement two to three in their teaching practice, and then new methods such as Time-efficient ambulatory care teaching, Evidence-based medicine (EBM), Problem-based learning, Case-based reasoning (CBR), and New computer-based instructional programmes were introduced. Interactive method was employed as the participants had to finish some tasks through interaction, group discussion and brainstorming each lesson. While each of them presented 30-minute teaching medicine, the others played their roles as students. Whether this course is efficient -- all trainees participated in answering the questionnaire containing some questions in a 5-point scale, whereas some are open-ended for course assessment at the end. Hopefully, the findings benefit designing training courses to improve skills of professionals in other areas. (250 words).

Keywords: English as medium of instruction (EMI), teaching medicine, brainstorming, interactive, Time-efficient ambulatory care teaching, Evidence-based medicine (EBM), Problem-based learning, Case-based reasoning (CBR), New computer-based instructional programmes

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1. Introduction

English as medium of instruction (EMI) is summarized as a growing global phenomenon by Dearden (2014), after she conducted EMI study in public and private primary schools, secondary schools and universities in 55 countries. According to the research of Galloway (2017), the major reasons for the rapid growth of EMI courses in higher institutions are EMI courses ensure the social and economic upward mobility of the graduates as well as many governments believed that EMI programmes improve both English proficiency and knowledge of subject content of the students. Due to the fact that 94 % of international research with high impact is published in English especially in the fields of science, technology, engineering and mathematics (STEM), EMI courses in university enhance the students' writing of dissertation and publication of research papers. Meanwhile, some countries, such as China and Japan, expect to upgrade the quality of teaching and reputation of their universities, they recommend the academics to publish research papers in international English journals and attract more international English-speaking students from different parts of world. Besides general ESL teaching in primary and secondary schools, universities, and adult education, training professionals for specific purposes is another alternative for thriving English language education in the rapidly changing era.

This paper reports effectiveness of the tailored-made course, which focused on using English as medium of instruction (EMI) to teach medicine in different faculties, for ten experienced professors from Guangxi Medical University (GMU) in CUHK,SCS. The aims of the training course are to improve their English pronunciation, teaching plans, teaching methods and skills, oral presentation, and producing powerpoints (ppts) for teaching Mainland Chinese and international university students mainly from South East Asia studying medicine by using EMI. Although only ten professionals in the program, the impact of the two-week course affects the learning of medicine of thousands local and international students, who will become future medical doctors in hospitals in different countries, in the university located in the South-west region of China.

2.1. Design of the training course

As per discussion with the course coordinator, we understood the expectations of GMU for this training programme, and the background of the trainees. When we designed training course for medical professionals, the relevant vocabulary for the special areas, the new knowledge and ideas for the related topics and the appropriate approach of delivering messages through EMI should be under consideration. Formal classroom instruction in English (Huitt, 2003) was introduced for their reference and reflection of teaching medicine by EMI. Before teaching practice in class, each of them had to design a teaching plan with a special topic in his/her field. During preparation of the course, the only instructor, Dr. Sham had read 18 academic papers in international journals focusing on methods of teaching medicine, which were quite different from language teaching methods. Grasha's teaching styles with advantages and disadvantages, learning styles, teaching and learning style "Clusters" (Grasha, 1996) , as well as different teaching methods for more than ten were fully discussed (Vaughn & Baker, 2001). Lecturing by the instructor was just the first part of each lesson, there were interactions between participants and instructor, and the trainees

were required to present orally by applying their specialism in medicine and the knowledge they had learnt for teaching medicine by using EMI. Therefore, interactive method involving initiative, brainstorming, creativity, and interaction from designing lesson plan to oral presentation of teaching medicine in specific areas with ppts was implemented. The design of the course including (I) Content of this course and (II) Activities are listed as follows:

(I) Content of this course

1. How to write a teaching plan in English?
2. Classroom instructions and Methods of teaching medicine
Basic methods: Small group discussion, Role modeling, Role plays & concept mapping. New methods: Time-efficient ambulatory care teaching, Evidence-based medicine (EBM), Problem-solving learning, Case-based reasoning (CBR), New computer-based instructional programmes.etc...
3. Skills and visuals for oral presentation

(II) Activities:

1. Discussion, brainstorming and interaction with partners and the instructor for writing a lesson plan of teaching medicine in specific area by using EMI
2. Create a topic for teaching practice and the design of a lesson plan for 20-25 minutes for each one of the participants
3. Draft & format the objectives, procedure, activities, assessment & supplementary notes etc. in a formal lesson plan in English with attached ppts containing relevant scripts, pictures, photos and graphs, and even provide tapes and videos, and then hand in before teaching practice.
4. Teaching Practice: While one professional presents with ppts, the others play the role of students. Within the 20-25 minutes of each presentation, Q & A takes part in the last 5 minutes. After all participants finished their teaching practice, marks and comments are given by Dr. Sham, the only instructor, immediately.

2.2. The participants

In this two-week course in CUHK, SCS., there were six male and four female teacher learners ranking from Professor, Associate Professor to Lecturer in Guangxi Medical University (GMU). The professionals came from Faculties of Anatomy, Biochemistry, Physiology, Microbiology, Pharmacy, Pathology, Epidemiology, Medical Statistics, ENT and Basic Medicine. Their age varies: four are 41-50 years old and six belong to 31-40 age group. All of them have very strong academic background major in the specific areas in medicine and most of them had attended teacher training courses in local or overseas universities. Seven professionals have studied abroad in the famous universities in Europe and USA including Cambridge University, Harvard University, UCLA, Lancaster University, John Hopkins University, and Vrije Universiteit Brussel, except three without receiving overseas education. All participants are experienced teachers at the Medical University. Two most experienced professors have twenty-two years of teaching experience, whereas the youngest lecturers have only 2-3 years, and the rest are in between the two extremes. Besides teaching, one of them has been senior medical doctor in a hospital nearby. At the end of the training, each of them answered a both qualitative and quantitative questionnaire about the

course.

2.3. The questionnaire

There are 38 questions in each questionnaire which is divided into the following seven sections:

- A. Course Details
- B. Personal Data
- C. Design of the Course
- D. Instructor's Performance
- E. Teaching Methods
- F. General Evaluation
- G. Overall Comments

The quantitative data for the course evaluation are based upon Sections C to F, which contains 22 questions of 5-point scale: Strongly agree (SA, 5 marks), Agree (A, 4 marks), Neither Agree nor Disagree (NA, 3 marks), Disagree (D, 2 marks), Strongly Disagree (SD, 1 mark) from Q12 to Q34 with only one open-ended question in Q35. Whereas all three questions for Overall Comments are open-ended.

2.4. The results

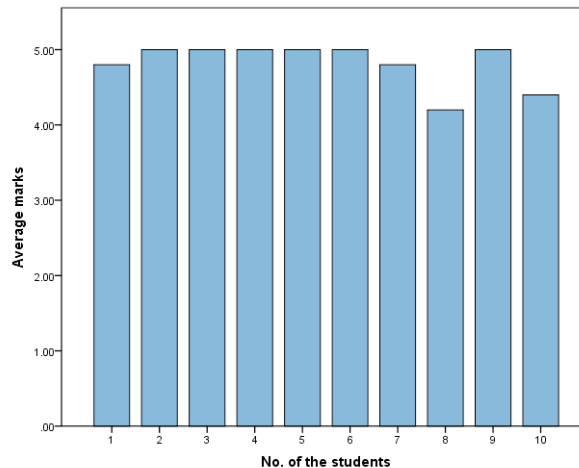
Table 1. The Guangxi Medicine University (GMU) Medical Professionals' Evaluation of the Course Using English as Medium of Instruction (EMI) for Teaching Medicine

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Q12	10	4	5	4.90	.316	.100
Q13	10	4	5	4.60	.516	.267
Q14	10	4	5	4.80	.422	.178
Q15	10	4	5	4.80	.422	.178
Q16	9	5	5	5.00	.000	.000
Q17	10	4	5	4.90	.316	.100
Q18	10	4	5	4.90	.316	.100
Q19	10	5	5	5.00	.000	.000
Q20	10	5	5	5.00	.000	.000
Q21	10	4	5	4.80	.422	.178
Q23	10	4	5	4.60	.516	.267
Q24	10	4	5	4.60	.516	.267
Q25	10	4	5	4.70	.483	.233
Q26	10	4	5	4.90	.316	.100
Q27	10	4	5	4.60	.516	.267
Q28	10	3	5	4.20	.632	.400
Q29	10	3	5	4.40	.699	.489
Q30	10	3	5	4.30	.675	.456
Q31	10	4	5	4.70	.483	.233
Q32	10	4	5	4.90	.316	.100
Q33	10	4	5	4.80	.422	.178
Q34	10	4	5	4.90	.316	.100
Valid N (listwise)	9					

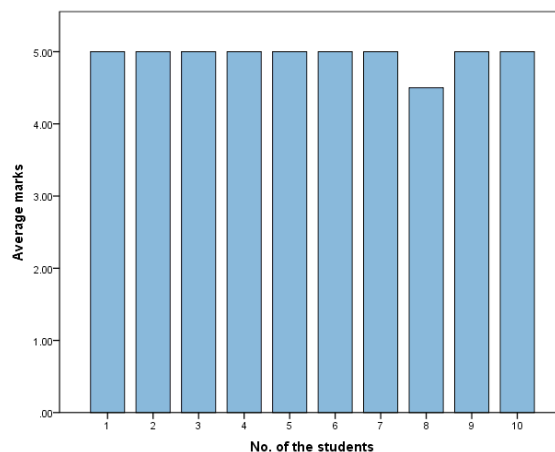
The above table shows the assessment of the course highlighting teaching medicine using English as medium of instruction (EMI) by the academics from Guangxi Medicine University. In table 1, the number of participants is 10, but one teacher learner did not answer Q16 for evaluation of the training course of teaching medicine by using EMI. The highest marks for all questions listed above are 5 (Strongly Agree), whereas the lowest marks vary from 3 to 5. Both maximum and minimum of Q16, 19 and 20 are 5. It indicates that all teacher learners strongly agreed that the course was well-organized and practical, the instructor's English was good, fluent and clear, and she was enthusiastic in teaching and giving feedback positively. Meanwhile, the lowest scores for Q28, 29 and 30 are 3, which represents that some teacher learners neither agreed nor disagreed that they applied skills and visuals effectively with appropriate classroom instruction, had good appearance and appropriate body language in teaching presentation, and could tackle students' problems effectively in

teaching practice. As the minimum for most questions are 4, it demonstrates the majority of the academic learners asserted with the major content of the questionnaire about the course evaluation. All the means are above 4 with the lowest 4.20, most above 4.60 and a 5 for Q20. Overall speaking, the professionals gave very high ratings on the evaluation of the training course. With one accord, they all strongly consented that Dr. Sham was enthusiastic in teaching and giving comments to the students' performance with positive attitude.



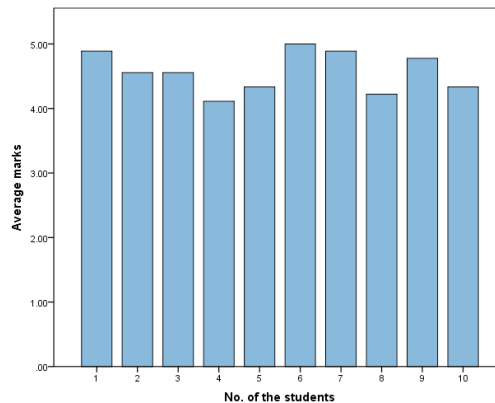
Graph 1. The Graph of the Guangxi Medicine University Academics' Average Scores for This Course Design

Representing Part C of the questionnaires, this graph indicates the average marks of this course design by the medical professionals of GMU. According to Graph 1, all learners gave marks above 4 and more than half up to 5 for the scores of the course design. In other word, the majority of professionals strongly consented and the other consented that the teaching materials help them to understand the course, and there were enough teaching materials. And also, the arrangement of different sections was appropriate, the time control was proper, as well as the course was well-organized and practical. As a whole, the feedback for this course design was very positive.



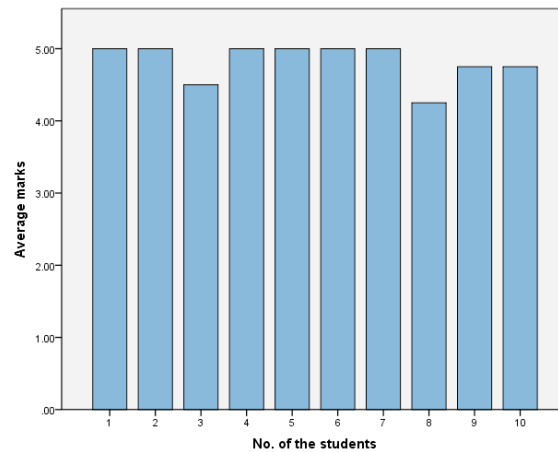
Graph 2. The Graph of the Guangxi Medicine University Medical Professionals' Evaluation of the Instructor's Performance

Furthermore, Graph 2 represents the evaluation of the instructor’s performance in Part D by the Professors, Associate Professors and Lecturers of GMU in the course. In this graph, nine participants gave 5 marks while only one had 4, which means that the overwhelming majority of nine participants strongly agreed and only one agreed that the instructor’s teaching style was innovative and creative as well as she enhanced interactive communication in the class. Meanwhile, the teacher’s English was good, fluent and clear, and she was enthusiastic in teaching and giving feedback positively. All of the academics appreciated Dr. Sham’s performance in the training programme.



Graph 3. The Graph of the Guangxi Medicine University Academics' average marks on Teaching Methods of this course

In the above graph, we report the average scores on Part E concerning the teaching methods of the course by the participants. It is clear that all scores on teaching methods of this course are above 4 as one score reaches 5. The assessment of teaching methods is divided into two parts containing I. Lecture; II. Teaching Practice. For Part I, most of the academics from Guangxi Medicine University agreed or even strongly agreed that the ppts, samples, notes and activities helped them to understand the topics, and the lectures strengthened their confidence in teaching medicine by English. They learned to think independently through designing teaching plan and ppts, as well as they could apply the knowledge and generate new ideas through teaching plan and practice. When concerning Part II for teaching practice, some strongly attested and most attested that they had clear objectives and overall planning in teaching after the lectures. From that time on, they had more confidence in teaching medicine using EMI in their department. Through teaching practice, they applied skills and visuals effectively with appropriate classroom instructions, had good appearance and appropriate body language in teaching presentation, and also could tackle students’ problems effectively. The majority of medical professionals felt very satisfied and some satisfied with both the lecture by Dr. Sham and teaching practice for all learners in teaching methods.



Graph 4. The graph of general evaluation on this course by Guangxi Medicine University participants

Moreover, Graph 4 demonstrates the general evaluation of this course in Part F by the medical professionals. As six of them scored 5, the rest were 4 or above. That means six academics strongly consented and four of them consented that they could apply what they had learnt in this course, which was different from traditional teaching style, matched their expectations and was useful in their future work or study. In other words, they got the benefits from this course for teaching medicine through EMI from the past expectations, the present knowledge and teaching practice to the future work or study. Besides, all the professionals agreed that the course was different from the traditional teaching style as it was vivid and interactive in Q.35 of this section which led to the overall comments.

Lastly, each participant answered three open-ended questions for overall comments in the last section of the questionnaire regarding A. Uniqueness of this course, B. Which part of this course benefits you most? and C. Inspiration from this course. The academics' responses are categorized in the following table (Table 2).

Table 2. Overall Comments of Training Course for Teaching Medicine by Using English as Medium of Instruction

A. Uniqueness of this course	No.	Sex (age group)	Percentage
1. The course is very interesting & useful	2	M(II),F(I)	20%
2. Teacher sums up her experience & all teaching skills in an effective way	2)	20%
3. Give very useful comments to everyone after presentation in details	2	F(I),F(II) M(I),F(II)	20%
4. Great! Professional background, teaching experience & medical knowledge of Dr. Sham	1)	10%
5. The teaching style is innovative & creative	1	M (I)	10%
6. Systematic training including oral skills, presentation & teaching plan	1	M(II)	10%
7. A well-designed lecture, abundant education theories with very professional comments	1	M(I)	10%
		M(I)	
B. Which part of this course benefits you most?			
1. Oral presentation skills &How to use powerpoints (ppts) effectively	4	M(I),M(I)	40%
	2), F(I)&F(I)	20%
2. Benefits from the whole course: Teaching plan, skills & visuals for oral presentation & teaching practice	1	I)	10%
	1	M(I),F(I)	10%
3. Comments and feedback after presentation in teaching practice	1	M(II)	10%
4. How to enhance enthusiastic expressions & give feedback positively in teaching	1	M(II)	10%
5. Communication & interaction		M(I)	
6. Pronunciation & teaching plan		F(II)	
C. Inspiration from this course			
1. Systematic teaching method: well-organized ppts, pronunciation, skills, teaching plan with teaching practice	3	M(II),F(I)	30%
	3)& F(I)	30%
2. Mimic a real teaching: Everyone has a presentation applying the learned skills	1	M(I),F(II)	10%
3. Learn not only how to teach international students, but also all other students	1)&F(II) M(I)	10%
4. A lot of inspiration: e.g. well-designed lecture employing media & teaching well is effective	1	M(I)	10%
5. The assessment & comments are useful & very detailed	1	M(I)	10%
6. Dr. Sham gives me feedback positively		M(II)	

Concerning the uniqueness of this course, 20% of the participants described that the course was very interesting and useful; another 20% reported that the teacher summed up her experience & all teaching skills in an effective way as well as same percentage of participants pointed out that she gave very useful comments to everyone after presentation in details. 10% appreciated Dr. Sham as “Great!” because of her

professional background, teaching experience and medical knowledge as another 10% treated her teaching style as innovative and creative. Meanwhile, 10% thought that this course was systematic training including oral skills, presentation and teaching plan, and 10% described it as well-designed lecture, abundant education theories with very professional comments are the uniqueness.

When being asked which part of this course benefited most, 40% of class, which contained two males in age group (I), and two females as one in age group (I) another in age group (II), agreed that the section should be Oral presentation skills and How to use powerpoints (ppts) effectively. One male and one female aged 31-40 (Age group I) medical professionals showed that they benefit from the whole course: Teaching plan, skills and visuals for oral presentation and teaching practice. As one male academic pointed out that comments and feedback after presentation in teaching practice, another one in the same age group (41-50 years old) preferred the section for How to enhance enthusiastic expressions and give feedback positively in teaching. Communication and interaction to one male participant aged 31-40 while pronunciation and teaching plan to one female of 41-50 years old were the most beneficial parts.

However, 30% of the medical professionals mentioned the systematic teaching method producing well-organized powerpoints, good pronunciation, oral presentation skills, teaching plan with teaching practice, while another 30% treasured the mimic of a real teaching -- Everyone had a presentation applying the learned skills as the inspiration from this course. One male aged 31-40 participant (10%) had learned not only how to teach international students, but also all other students. Meanwhile, another male of the same age group (10%) had a lot of inspiration: e.g. well-designed lecture employing media is effective. 10% stated the assessment and comments were useful and very detailed, whereas another 10% pointed out that Dr. Sham gave him feedback positively were the inspiration.

3. Conclusion

In sum, the systematic training course employing interactive method for the professionals teaching medicine using English as medium of instruction (EMI) with rich content consisting of writing lesson plan, classroom instructions, the relevant methods of teaching medicine, skills and visuals for oral presentation and teaching practice for every participant providing the instructor's useful comments is very effective. For the evaluation of the course, the medical professionals gave very high scores. When commenting on the performance of the only instructor, Dr. Sham, they all strongly attested that she was enthusiastic, knowledgeable with a lot of teaching experience and giving comments to the students' performance positively. Therefore, the whole class felt satisfied for what they had learned from the lecture and valuable comments of the instructor for their teaching practice. Furthermore, this course for teaching medicine through EMI matched their past expectations, and the present knowledge and teaching practice benefit their future work or study.

Comparatively speaking, the teaching style of this course was different from traditional teaching formats as it was unique, vivid and interactive. Some academics benefited from what they learned about skills and use of ppts for oral presentation during teaching, while others benefited from the whole course. For the inspiration

from this course, the majority of the professors either mentioned the systematic teaching method producing well-organized powerpoints, good pronunciation, oral presentation skills, teaching plan with teaching practice, or chose the real classroom teaching applying the learned skills.

Besides the questionnaire, here is another evidence demonstrating the benefits of this course. One year after this training course, a young and brilliant professor sent an email giving thanks to Dr. Sham about having received three championships and awards as “Outstanding teacher” in a number of National Teaching Competitions in China as result of what he had learned from Dr. Sham in this training programme.

For those interested in training professionals how to use EMI for their teaching, study and work, the trainers should understand the needs of clients first. And also, they are recommended to be well prepared for the related theories, new knowledge and vocabulary in English applicable in special areas in the target professions. Creating a vivid atmosphere and applying interactive method facilitate the trainees’ professional development and learning. Moreover, having a well-organized course design providing both lecture for teaching new knowledge and skills, and practice assembling real situation which employs what they have learned, of course, professional and useful assessment and comments for their presentation from the instructors are necessary. After attending the programme, if the learners feel satisfied, find the course matched with their expectations, and will benefit their future work or study, that means this is a successful EMI training course.

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