



Research paper

Development and delivery of an evidence-based medicine programme for Traditional Chinese Medicine students using an international collaborative approach: An action research project

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ABSTRACT

Introduction: Evidence based medicine (EBM) is increasingly embraced by complementary and alternative medicine. Academics from China, Australia and UK developed a Summer School EBM course for Traditional Chinese Medicine (TCM) students in China.

Methods: An action research approach was used to evaluate the effects of an international collaborative approach to improve learning and teaching. A systematic analysis of an EBM course conducted in 2015 with (66) students and (16) teacher/assistants was used to inform the 2016 course design. Before and after implementation of the 2016 course, (10) teacher/assistant and (20) student pre-/post-course survey responses were recorded to measure attitudes, knowledge and intention to apply EBM in TCM practice. Focus groups, teachers' diaries, field notes and survey data were analysed using descriptive statistics for quantitative data and thematic analysis for qualitative data.

Results: Changes made in the 2016 course include changing topic focus, catering for different language abilities and varying the learning format. Students and teachers found the course engaging and relevant. Chinese teachers adopted interactive teaching methods and believed they improved student engagement and learning. Teachers reported teaching EBM to TCM students in English was challenging but benefited from the experience. Students embraced the concepts of EBM and performed beyond their and their teachers' expectations.

Conclusions: Cross-cultural collaboration in teaching a culturally challenging topic in a foreign language using unfamiliar teaching methods is demanding. However, utilisation of an action research model can result in positive student evaluation and change in teacher beliefs and practice through sharing reflections and ideas.

1. Introduction

Evidence-based medicine (EBM) has been increasingly influential to clinical decision-making since the 1990s, highlighting the importance of integrating clinical expertise with best external evidence and patient values [1]. During the same time period, Traditional Chinese Medicine (TCM) has risen in popularity globally [2], but has relied heavily upon individual clinical expertise and patient values throughout its development, rather than research evidence. Under the growing influence of EBM, a great deal of importance has been placed upon generating research in TCM and educating healthcare students and professionals on

the role of evidence informed practice in TCM.

The extent to which EBM is taught within TCM training programmes varies globally and is influenced by the level of EBM training of TCM practitioners and teachers [2,3]. EBM training content includes research methods, critical appraisal of research, and evaluating and analysing research data. Although evidence is regarded as important for the continuing development of the TCM profession, the EBM approach remains under-utilised within TCM compared to its biomedicine counterparts [4,5]. Previous research has suggested that engagement with EBM could be improved with robust teacher development, engaging learning and teaching approaches, active participation in research

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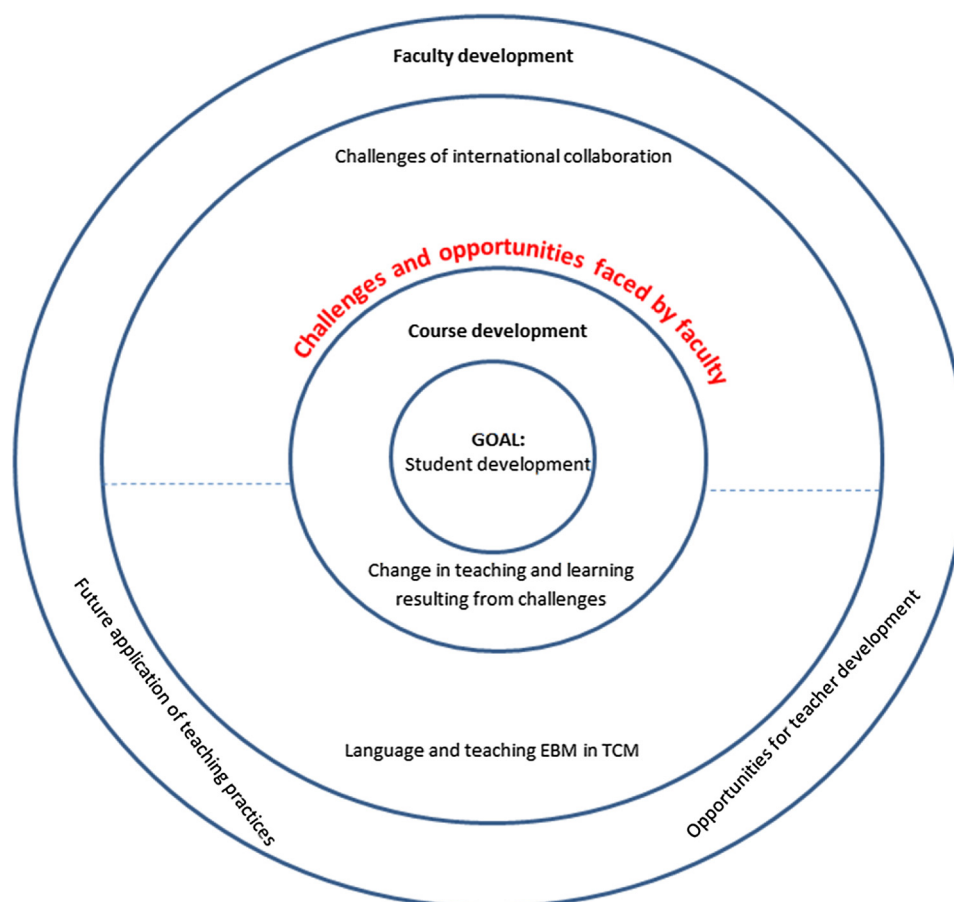


Fig. 1. Mindmap: Faculty development for enhancing student education in EBM in TCM.

activities and providing opportunities for applying research skills to areas of personal interest [5,6]. Higher education has also increasingly been focused on providing exposure to multiple disciplines as a way of encouraging students to develop greater proficiency in solving complex problems in their professional discipline [7]. Educational research suggests that incorporating an interdisciplinary approach can have a number of benefits, such as encouraging students and teachers to evaluate teaching content from multiple perspectives, presenting greater learning opportunities for both students and the teaching team, as well as development of communication and higher-order cognitive skills [8].

To maximise the impact of EBM education within TCM in China, we proposed that an international multidisciplinary teaching team could best facilitate student learning and faculty development (see Fig. 1–Mindmap). Since EBM is practiced internationally, our view was that drawing on a range of teaching practices from multiple disciplines and providing an international perspective on applying EBM specifically to TCM would create a richer and more stimulating environment from which both student learning and teaching practices could develop further. The importance of EBM internationally is further reinforced when international and local teachers promote the same values about evidence based practice.

It was felt that a course delivered by an international team would be attractive to students who may never have a chance to study abroad as it provides them with an opportunity to hear about what is happening in the medical and academic community outside of China, to interact with international teachers and experience new teaching practices utilising teaching styles that promote active learning and student engagement, and to practise and test their English ability, which is considered fundamental for university students in China. It was hoped that this would increase Chinese students' confidence in accessing English-

language EBM materials.

The international collaboration provided an opportunity for teachers from different countries and backgrounds to work together, learn from each other and inspire new ideas for teaching and research. Because of the international collaboration, teaching was delivered in English language.

Our primary research question was: 'How does an international collaborative approach to EBM education affect Chinese TCM students' learning in China?' Our secondary research question was: 'How does an international collaborative approach to EBM education impact on teachers' experiences of teaching TCM students in China?'

2. Methods

2.1. Action research methodology

A collaborative action research approach was used to evaluate how we, as a group of international teachers and researchers, could improve educational practice at the faculty level and enhance learning for undergraduate TCM students in China. Action research is an iterative, reflective and collaborative process that involves research in practice conducted by those involved in carrying out that practice [9]. Previous studies have demonstrated that teaching practices and behaviours can be influenced by incorporating an active learning approach involving teacher observation, active reflection, discussion with peers, problem-solving and student feedback [10–12]. Following Mertler's process of action research, our project consisted of four iterative phases of planning, acting, developing and reflecting [13]. First, the research and teaching team reviewed student feedback from evaluation questionnaires at the end of the 2015 workshop and shared personal reflections of designing and teaching the workshop. This process of

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