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Developing a competency-based education training programme for university tutors

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Abstract

Recently, there has been an increase in the adoption of competency-based approaches (CBA) in higher education and, for some practitioners, this involves modifying existing provision. This case study describes the development, delivery, and evaluation of a transnational training programme that was developed for Chinese university tutors who planned to implement CBA in to their teaching. The 25-hour training programme was designed to be experiential in nature, so practitioners learnt about and experienced CBA simultaneously. Although the participants rated the programme favourably, we identified two main challenges associated with the training course: anxiety around the CBA and the need to be aware of the learners' cultural climate. Recommendations for others who are developing similar training programmes that model a CBA are discussed.

Keywords: Competency based approach; transnational training; training; higher education

1. Background

The origins of competency-based approaches (CBA) to education have been traced back to the 1950s in America (Morcke, Doran, & Eika, 2013) with many iterations of the approach reported (Brown, 1994). However, as Nodine (2016) notes there has been a rise in the number of competency-based programmes in Higher Education over the last few years, especially in the United States. This rise in popularity may reflect Sturgis' (2016) observation that educators are implementing CBA when "they realise the traditional system isn't working for many students – and it is never going to work for *all* students" (p. 6, emphasis from the original source). CBA is underpinned by the key principles of mastery of learning and criterion-referencing of assessment with learning, teaching, and organisation supported by clearly specified competencies that learners must achieve (Lassnigg, 2017). Sturgis (2016) reported five key elements of CBA: (a) students advance upon demonstrated mastery, (b) explicit and transparent learning objectives empower students and improve instruction, (c) students receive timely and differentiated support, (d) aligned assessments are rooted in the cycle of learning, and (e) students develop and apply a broad set of skills and dispositions (Sturgis, 2016). Consequently, CBA empowers learners to take responsibility for their own learning by shifting the focus from grades to learning through having courses with defined competencies that are aligned to the learning outcomes so that the learners' mastery can be assessed (Educause, 2014).

When designing courses that integrate CBA, Gruppen et al. (2016) note that, although a clear framework is provided by the underpinning philosophy of CBA, the implementation of CBA presents a number of challenges. For example, Gervais (2016) argues that a considerable amount of time is required to develop competency-based programmes and that support from all key stakeholders including university staff and learners is crucial.

Consequently, in some cases, it is not always practical to develop degree programmes from scratch but rather integrate CBA in to existing courses as Johnstone and Soares (2014) propose. For courses in higher education adopting a CBA in to an existing course structure, Johnstone and Soares recommend that educators ensure that the degree reflects robust and valid competencies, students should be able to learn at a variable pace with their learning supported, effective learning resources should be made available, and assessments should be reliable and secure.

2. Project background

What follows is a case study of how a programme that teaches CBA was developed and delivered to Chinese university teachers. These teachers had planned to implement CBA in to their teaching during the following academic year by modifying their existing programmes. Developing effective training programmes and staff development to support the implementation of CBA for tutors is a crucial factor when moving towards a competency-based approached (Lowrie, Smith, & Hill, 1999; Smith, 1999). Therefore, underpinning the development of the training programme discussed in this case study are two principles: Ensuring tutors are appropriately briefed (Caverzagie et al., 2017; Hoogveld, Paas, & Jochems, 2005; Smith, 2010) and that traditionalists understand the potential benefits of CBA (Ferguson et al., 2017).

The training programme described in this paper was developed as part of the three-year TKCOM Erasmus+ capacity building project. The overall aim of the project was to instil capacity in Chinese higher education institutions (HEIs) to move towards a CBA in primary education courses with the ultimate aim of fostering competency-based education in primary schools. As Ding (2016) notes, Chinese educators tend to adopt teacher-centred teaching methods and knowledge-based evaluation methods in the delivery of primary-teacher training courses. However, evidence suggests that adopting competency-based approaches to

education improves student learning and outcomes (Rainwater, 2016). Therefore, this case study is an account of our experiences developing and delivering a face-to-face training programme on CBA for university teachers. The training programme was delivered at three Chinese universities as the first step in the implementation of CBA in the Chinese HEIs. Prior to implementation of this phase of the project, the Global Teacher Key Competency Framework (GTKC) was developed through undertaking a review of international documents that discussed teachers' professional competencies (TKCOM, 2018). Also, an online training package associated with the GTKC framework was designed and delivered to teacher trainers. The online training package was designed to introduce participants to the GTKC and CBA as a pre-requisite for attending the face-to-face training. However, it should be noted that not all of the participants attending the face-to-face training had completed the online training programme.

3. Training design

A 25-hour training course delivered over 3 days was developed. Lowrie et al. (1999) suggests that when designing training on CBA for staff who are new to the approach four general areas must be taken in to consideration. Specifically, Lowrie et al. argue training must include: (a) a description of CBA, (b) awareness raising of the challenges associated with CBA for the teacher, (c) warnings about the 'bad' aspects of CBA, and (d) suggestions about how to ameliorate the negative aspects of CBA. More recently, Sturgis (2016) proposed a design philosophy for educators adopting CBA including: (a) assessment for learning; (b) mastery based education; (c) flexible learning environments; (d) strong culture of learning for students and teachers; (e) focus on equity by ensuring every student gets what they need to thrive; (f) grading that helps students know where to focus and how they are progressing; (g) students have voice and choice on how they learn and demonstrate learning; and (h) students receive more instruction, support, and time when they are struggling.

Therefore, following Lowrie et al.'s and Sturgis' principles, a three-day face-to-face training programme, targeted at university level teachers, was developed by the authors to train tutors on incorporating CBA in to their own teaching contexts. In order to meet the brief of the TKCOM project, the training was designed with university tutors who taught Primary Education courses as the intended audience.

The overall goal of the face-to-face training was for participants to create a teaching plan[2] that integrated competency-based approaches to education that the participants would then integrate in to their own practice during the next academic year. A further output of the training was that participants would develop a resource database that could be used to support their practice during the next academic year. The resource database was an important part of the training because, as Smith (1999) notes, sharing good CBA practice is a significant aspect of staff development. In addition, we were also able to model aspects of competency-based tasks through the creation of the resource database.

The training had two specific learning outcomes: (1) To design teaching plans that are adjusted to a competency-based approach, and (2) To design, develop, and assess tasks from a competency-based approach. The learning outcomes underpinned the development of all of the activities and tasks that comprised the training; consequently, activities were designed so that they were aligned to at least one of the learning outcomes. Activities were also designed to model various CBA as is recommended for transnational learning and teaching of new concepts (Bovill, Jordan, & Watters, 2015). Table 1 outlines the content of the face-to-face training and the distribution of topics across the three days. Together, the schedule for the training was designed so that it enabled participants to: (a) revise an existing teaching plan to implement a CBA and (b) apply their new knowledge and understanding with each completed activity. The revised teaching plan, adapted to a CBA, formed the assessment for the course. Time was also built in to the course to enable the participants to receive peer

feedback on their teaching plan on the final day of the course. Following the course, the participants were required to submit the teaching plan for expert review. The plans were reviewed by experts in CBA and Chinese Education and feedback was given to facilitate the participants' use of the teaching plan in their practice.

Insert Table 1 about here

In line with the underlying principles of CBA, the training programme was designed to be experiential in nature such that the training modelled a competency-based approach to education. Drawing on experiential learning principles (Kolb & Kolb, 2005; 2009) learners were given concrete experiences that they could reflect on, with the reflections being used to drive abstract conceptualisation and active experimentation of the course content that could be applied to their practice. This also ensured that we followed Smith's (1999) recommendation that CBA training, as part of staff development, should be contextualised for the trainees' student groups, something that was particularly important given the transnational element of the project. The training was delivered through a combination of structured activities, group discussions, and tutor-led presentations. We deliberately included a number of group discussions and collaborative activities as collegial support has been found to enhance facilitators' engagement with CBA (Lowrie et al., 1999). Similarly, we included inquiry-based activities as these are routinely highlighted as a key technique to encourage deep learning through CBA (Colby, 2017).

An example activity, designed to enable participants to implement their knowledge of CBA and assessment, involved participants receiving a piece of student work (a 2500 word essay) and the accompanying assessment specification. In the first part of the activity, the participants worked in small groups to create an assessment tool of their choice (either a

rubric, checklist, or grading scale) that could be used to assess the sample student's work. Once the assessment tool had been created, participants then swapped their tool with another group. The participants then assessed the essay using the tool. Following marking the essay, the participants then fed back to the authors of the tool in terms of the effectiveness of the assessment tool.

When the training course had been developed it was then reviewed by five experts in CBA and the Chinese education system. The expert review focused on two main areas: to ensure that the course was (a) consistent with CBA principles and (b) culturally appropriate. Both sets of reviews suggested that the training followed the CBA and was culturally appropriate. The training materials were written in English and translated in to Simplified Chinese.

4. Training implementation

The training was delivered to 91 (61 female, 30 male) university and primary school teachers at three universities in China. Although the training had been designed to explicitly target university tutors, some primary school teachers who had completed the online training also participated in the face-to-face training. At University 1 and 3, the training was implemented as per the training schedule in a face-to-face setting over three days in July 2018.

At University 2, the training schedule was revised (See Table 2) due to a cancelled flight which meant that the training facilitators were unable to attend the university in person for two days. Therefore, the content of Day one was changed so that it could be delivered remotely. We used the videocall function through WeChat and our videocall was connected to a projector so that we were projected to the participants. Through the videocall function, we were able to deliver the tutor-led activities of the course. We also used WeChat to create a real-time text-based discussion group that all the trainees were members of. The

discussions primarily took place in Simplified Chinese and we used WeChat's inbuilt translation tool to constantly monitor the posts and respond appropriately. Throughout the day over 250 posts were made between us and the participants with participants asking questions, for clarification, and discussing the content with us. Although, Park and Bonk (2007) recommend students are trained to use such synchronous discussion groups, we found that our trainees did not require such training but rather engaged with the discussion activity from the start. Day two was re-worked so that the learners could complete activities independently, with any questions arising from the material then discussed on Day three. Day three comprised face-to-face training with a clear emphasis on the content covered in the previous days. Therefore, although the programme at University 2 was slightly different to what was initially planned, the participants still received all aspects of the course. In addition, the virtual delivery parts of the course confirmed that the material was flexible enough to be delivered via a range of media and in a blended manner. Throughout the training we encouraged students to feedback on their understanding of the content and also their experiences of the training, so appropriate modifications could be made.

Insert Table 2 about here

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5. Evaluation

Following the training, the participants at each of the three universities were invited to complete an online survey. Forty-one participants (73% female) completed the survey. Generally, all the participants gave very favourable reviews to the training (Table 3). Participants also had the opportunity to provide free-text comments on the training and these reflected some of the observations made by the team delivering the training. For example,

one participant highlighted their initial reluctance to the approach and then discussed how they could see the benefit of the training:

"*I learnt a lot and now need to apply it in my own teaching. At the beginning I didn't think it would be appropriate for me but the course was productive and useful*"

Similarly, a number of participants also commented on how they planned to integrate CBA and aspects of the course in to their practice. Participants also highlighted that the translation of the material should be more adjusted to the Chinese educational context with additional examples relating to the Chinese primary education system. There was also a desire for additional time to complete the activities and for more content to be explicitly delivered rather than using self-directed approaches. Although the mechanism of delivery was different for University 2, participants remained very positive about the course commenting that they had gained a lot of knowledge. However, a comment that was unique to University 2 was that the participants would have preferred additional interaction opportunities with the facilitators.

6. Conclusions and recommendations for implementing

The training programme was developed to ensure that tutors were appropriately briefed in CBA and that traditionalists understood the potential benefits of CBA. The feedback from participants suggested that the training course ensured that tutors were appropriately briefed in CBA. However, although we included a number of activities that highlighted the benefits of CBA to ensure that traditionalists could understand the potential benefits of adopting CBA, the feedback from participants did suggest an initial reluctance in engaging with CBA. Therefore, for those developing similar training programmes in the future, it may be appropriate to include more research evidence on the effectiveness of CBA as Ferguson et al. (2017) recommend. Ferguson et al. also recommend that when adopting new approaches

such as CBA, traditionalists are reassured that change is not being made for changes sake but rather CBA is being implemented for the many benefits that the approach affords learners.

We found that there were two main challenges associated with designing and delivering a CBA training course using CBA. First, we found that for some of our participants, adopting CBA initially caused anxiety which was particularly heightened during the first two days of the training and had abated by Day three. Specifically, there was a desire for the 'right' or 'perfect' answer for each of the activities. This desire for the 'right' answer may be reflective of the tendency for convergent rather than divergent thinking to be promoted in education systems (Colzato, Szapora, Lippelt, & Hommel, 2017) and educators' reluctance to accept that there is no single 'right' answer or best approach for most questions (Rothwell, 2001). Massey and Clapper (1995) argue that brain storming is one of the most effective ways to promote divergent thinking. Therefore, those delivering similar training courses to promote CBA and who want to promote divergent thinking may wish to integrate several brain storming activities.

In the context of our training course, we addressed the learners' anxiety directly by highlighting to the participants that there was no correct answer but rather they needed to consider how their new-found competency-based education knowledge could be applied to their own teaching context. As Ferguson et al. (2017) notes such resistance to change is one of the challenges that is often faced when adopting a CBA. In the context of our face-to-face training, a factor that contributed to participants' anxiety was time and the desire for extra time to complete tasks. Touchie and ten Cate (2016) recognise that organising time-flexible programmes is a common logistical challenge for CBA. Further, according to the principles of CBA learners should work at their own pace and only move on to new tasks once proficiency has been demonstrated (Colby, 2017). Therefore, we suggest that others who adopt such approaches for training expect such anxiety from their participants and think of

strategies that they could use to alleviate their learners' anxiety. Research suggests two types of strategies can be used to successfully reduce student anxiety in active participation: Explanation strategies and facilitation strategies (Tharayil et al., 2018). Explanation strategies involve explaining the: (a) purpose, (b) course expectations, and (c) activity expectations. Facilitation strategies involve: (a) approaching non-participants, (b) assuming an encouraging demeanour, (c) grading on participation, (d) walking around the room, (e) inviting questions, (f) developing a routine, (g) designing activities for participation, and (h) using incremental steps.

The second challenge applies to those who are developing CBA training programmes for learners in a different culture; specifically, the need to be aware of the cultural climate their learners are operating in. We found that confusion arose because of how some of the pedagogic terms had been translated from English to Simplified Chinese. Therefore, we would recommend that before implementing a training programme, the course facilitators are familiar with the local pedagogic terms used by the participants. Relatedly, the transnational teaching that we engaged in adopted the 'in country/flying faculty' model discussed by Smith (2009) whereby we flew in to deliver the training. Similar to the observations made by Smith, we found that the transnational teaching also gave us the opportunity to step outside of "comfort zones" where our pedagogic practice was developed. However, we would advocate those planning to undertake similar transnational teaching follow Smith's guidance.

When delivering training using a CBA, we would recommend giving trainees regular opportunities to provide feedback on their experiences. As noted in the training implementation section, during the training we encouraged participants to give us feedback on the content and style of delivery each day during the course. We found that providing participants with such a feedback opportunity helped to provide learners with choice on how they learn and to reduce any potential resistance to the activity learning and CBA following

previous recommendations (Sturgis, 2016; Tharavil et al., 2018). We also responded to the

feedback to highlight where we would and would not make changes to the course content or

delivery style and explained to the participants our reasons.

     In conclusion, our case study has provided a critical reflection on the challenges

associated with delivering a CBA training programme to transnational learners. We have

provided some recommendations for others who are developing training programmes that

model a CBA.

Footnotes

[1] This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

[2] Note we are using the term teaching plan to denote a scheme of work for a specific module/unit. This document would include information on module learning outcomes, degree learning outcomes, module/unit aims, assessment details, teaching and learning methods, contact hours, and module/unit content.

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Table 1. The topics covered during the face-to-face training

Day 1	Day 2	Day 3
• What is CBA? • How is CBA fostered? • CBA activities and characteristics • GTKC competencies that will be fostered through CBA • CBA Resource search • Strengths and weaknesses of CBA	• CBA teaching methods • CBA Lesson plans • Quality assessments • Constructive alignment	• Assessment tools • Self-assessment versus peer-assessment • Teaching plan adjustment • Peer review of teaching plans

Note: CBA denotes competency-based approach and GTKC denotes global teacher key competencies

Table 2. The revised schedule of topic for University 2

Day 1	Day 2	Day 3
• What is CBA?	• CBA Lesson plans	• Quality assessments
• How is CBA fostered?	• Strengths and weaknesses of CBA	• Assessment tools
• CBA activities and characteristic	• CBA Resource search	• Self-assessment versus peer-assessment
• Constructive alignment	• GTKC competencies that will be fostered through CBA	• Teaching plan adjustment
• CBA teaching methods		• Peer review of teaching plans

Note: CBA denotes competency-based approach and GTKC denotes global teacher key competencies

Table 3. Evaluation of the face-to-face training

	Average
The goal of the training is defined clearly	4.2
To encourage and mobile participation and interaction in face-to-face training	4.1
The topics and contents of the training are relevant to me	4.0
The content of face-to-face training is reasonable and easy to keep up with	4.1
The information provided in face-to-face training is helpful	4.2
The experience of face-to-face training is very helpful for my work	4.1
The trainer has a profound knowledge background to the topics and contents involved in the course	4.1
The trainers are well prepared	4.1
At the end of the training, the training objectives have been achieved	3.9
The face-to-face training time distribution is sufficient	4.0
The conference space and equipment for face-to-face training are well prepared and comfortable	4.1

Note: 1 very unsatisfied, 2 unsatisfied, 3 basically satisfied, 4 satisfied, 5 very satisfied