

Supporting professional learning and development through international collaboration in the co-construction of an undergraduate teaching qualification

Sal Jarvis*, Julie Bowtell, Lynn Bhanja and Claire Dickerson
School of Education, University of Hertfordshire, Hatfield, UK

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Abstract

This article explores one thread from a larger, longitudinal research project that investigated the views and experiences of teacher educators in Malaysia and from the UK who were involved in collaboration for the co-construction of a Bachelor of Education (Honours) in Primary Mathematics, with English and health and physical education as minor subjects. The article examines the impact of the approach taken to collaboration, which included the development and sharing of a pedagogical model for teacher education (ARM: action, reflection, modelling) and reflects on the value of this to professional learning and development.

The research findings suggest that this co-constructive approach was effective in enabling senior managers and teacher educators involved in the project to critique their own practice and to further develop their understanding of effective teacher education. These findings have implications for developing the pedagogy of teacher educators in other contexts: the co-construction of a programme with colleagues who had different understandings of the nature of teacher education enabled new insight into participants' own practice.

Keywords:

Co-construction; pedagogy; international collaboration; teacher education; professional learning; professional development

Introduction

This article presents a Malaysia-UK collaboration involving senior managers and teacher educators from two higher education institutes in Malaysia and a university in the UK who worked together to co-construct a Bachelor of Education (Honours) in Primary Mathematics for student teachers in Malaysia (Dickerson et al. 2011, Jarvis et al. 2014). This initiative was funded by the Ministry of Education Malaysia to support implementation of the Ninth Malaysia Plan 2006-2010, including enhancing 'the quality and professionalism of teachers' and achieving a target of 25 per cent graduate primary school teachers by 2010 (Government of Malaysia 2006, p. 256).

Drawing on participants' experiences of working together, this article examines ways in which the collaboration impacted on professional learning and development. It outlines the Malaysian education and teacher education setting and uses learning on cross-national collaborations in higher education to contextualise the study. Literature on Southeast Asian and Western education systems provides a theoretical framework and together with a brief review of literature on professional learning, development and pedagogy enables a critique of the research findings. The article concludes with some implications for practice in co-construction of teacher education programmes in cross-national settings and contributes to the literature on professional learning from such activities.

Context

Southeast Asian and Western education systems

There are commonalities in the vision and goals of educational provision worldwide, where success is characterised by high levels of pupil achievement; a model impacted by colonialism and currently reinforced by internationalisation (Broadfoot 2000). Despite the similarities, there are interesting diversities that provide a complex picture regionally,

nationally and locally in school and classroom practice. Broadfoot notes that studies within Europe (Broadfoot et al. 1993, Broadfoot et al. 2000) reveal important differences in national philosophies, educational priorities, traditions and professional values, providing evidence of the importance of cultural influences and their manifestation 'in the nature of learning itself' (2000, p. 362). These differences can present challenges for transfer of educational policies and practices between settings. For example, in Southeast Asia and the West, there are similarities and differences between the processes of educational development and reform, and different cultural contexts can provide an obstacle to implementing education developments from Western nations in Asian countries (Hallinger 2010) or vice versa. As Hallinger (2006, p. 23) notes in relation to Southeast Asia, 'Different cultural values and norms concerning the role of authority, expertise, and group behavior had led to a qualitatively different approach to education in the region'. Whilst Kapoor (2002), in a comparison of dependency and postcolonial theory, considers the idea that in any postcolonial nation it is not possible to have a discourse that is unaffected by colonialism, a comparative rather than postcolonial focus is used in this article.

Within the context of exploring approaches to teacher development in Malaysia and Thailand, Hayes (1995) noted that 'power-coercive' and 'rational-empirical' strategies put forward by Chin and Benne (1969) had not been successful, where the latter involved providing information and seeking to persuade teachers of the benefits of change. Hayes (1995) considered that Chin and Benne's (1969) third strategy, 'normative-re-educative' that engages teachers as active participants in change, had greater potential for achieving behavioural change. Basing his suggestions on the experience of teacher education projects in these two countries, Hayes (1995) put forward some principles for teacher development that included: collaborative programme development; examining new and existing practices; modelling new practices and exploring the underpinning principles; and providing opportunities for participants to share ideas and knowledge.

Education and teacher education in Malaysia

Education in Malaysia seeks to respond to economic and technological developments, and the Malaysian Government's emphasis on education is demonstrated by the inclusion of an educational focus within its five year plans (Prime Minister's Department/United Nations Country Team, Malaysia 2011). The Ninth Malaysia Plan 2006-2010 set out phased development towards achieving its aim to become a developed nation by 2020 (Government of Malaysia 2006). Of particular relevance to this collaboration was the Education Development Plan for Malaysia 2001-2010 (Ministry of Education Malaysia 2001) and the Education Development Master Plan developed in 2006, designed to support implementation of the Ninth Malaysia Plan (Prime Minister's Department/United Nations Country Team, Malaysia 2011). The Plan set out a range of quality enhancement measures for education and training including those relating to teacher development, designed to support development of 'knowledgeable, skilled and innovative human capital' (Government of Malaysia 2006, p. 237). International cooperation and partnership would be fore-grounded (Government of Malaysia 2006) and it was recognised that soft skills or 'people skills' such as team work and communication, critical thinking, problem solving and leadership skills should be included in undergraduate programmes (Shakir 2009).

These goals were aligned with Malaysian primary school curriculum specifications, for example, those for mathematics, which acknowledged that learning mathematics involves more than acquiring concepts and skills, it also requires an understanding of the underpinning mathematical thinking, problem solving abilities and appropriate communication (Ministry of Education Malaysia 2006). Cheah (2010) highlights the challenge of developing teachers able

to implement a curriculum which engages students in continuous active involvement in constructing and using mathematical concepts and ideas. Suggestive of active learning approaches (Niemi 2002), such classroom practice may have been at variance with existing Malaysian practices, which tended to feature teacher-centred approaches (Ali 2007). Koo (2008, p. 124) referred to 'the dominant models of transmissive, top down learning as the key model of learning', and argued that:

‘...Constructivist, task based, genre-oriented pedagogy engaging learner interests in terms of their life experiences would arguably, help the global workers of the future to become problem-solving, flexible, innovative and creative thinkers. A knowledge based society would have to hone such thinkers. An information-based society limits its learners to accumulation of facts, without the critical skills of applying and critiquing it in relation to theoretical and practical issues/problems’ (2008, p. 126).

Thus, as well as knowledge, students would need skills in communication, problem solving, creativity and critical thinking (Effandi and Zanaton 2007). A 21st century workforce would need the potential to respond flexibly to challenges and it was expected that raising the standing of primary school teachers in Malaysian society would contribute to producing agents of change in education and society. From 2003, mathematics and science teachers were also expected to act as change agents in implementing the Malaysian Government's policy of using English as the teaching medium, *Pengajaran dan Pembelajaran Sains dan Matematik dalam Bahasa Inggeris (PPSMI)* (Ong and Tan 2008). This policy was in place for the duration of this project; however in 2009, the Government announced that it would be reversed because of challenges relating to implementing the policy and the impact on students' performance (Singh and Sidhu 2010).

Cross-national collaborations in higher education

A recent study involving senior higher education leaders and researchers from South and Southeast Asia noted that participants identified several perceived benefits and risks from cross-border collaborations between higher education institutions (Asian Development Bank 2012). The participants' view was that the most effective approach involves cooperation between foreign and local institutions that requires sharing learning and teaching practices, so that collaboration 'constitutes a learning experience for the local institution' (Asian Development Bank 2012, p. 8). The purpose of engagement varies, and whilst Asian universities which developed such partnerships with their counter-parts in Australia, Europe and the United States now tend to enter regional and cross-border collaborations within Asia, challenges associated with political, social, economic and linguistic diversity often persist (Asian Development Bank 2012). Despite this, greater cultural alignment between partners is likely to have important implications for collaborations and the nature of the learning and exchange of practice.

Professional learning and development for teacher educators

In the classroom setting, Loughran (2006, p. 57) emphasises the importance of the role of teachers' collaborative working practices in providing support that leads to improvements in professional practice, as the process of sharing and learning from each other 'offers meaningful ways of framing and reframing existing practice'. This project provided opportunities for participants to share knowledge and develop professional learning (Dickerson et al. 2014) where the term 'professional learning' can describe both formal

opportunities to support learning and 'more informal processes of teachers' learning associated with thinking about and reflecting on aspects of their practice' (Mitchell et al. 2010, p. 536).

Goodwin and Kosnik (2013, p. 334) have identified recently what they term 'essential domains of knowledge' for teacher educators, drawing on five knowledge domains for teaching (see for example, Goodwin 2010). These domains overlap with Shulman's (1987) previously suggested categories of teacher knowledge, which include content, pedagogy, curriculum, learners, and wider contextual issues including educational settings and ends, purposes, values and their historical and philosophical bases. Basing their insights on earlier work by Goodwin, Goodwin and Kosnik (2013) explore each of five domains (personal, contextual, pedagogical, sociological and social), in relation to teacher and teacher educator preparation. Personal and pedagogical knowledge includes the experience of being taught, understanding teaching about teaching and being active in educational reform. Contextual knowledge comprises many areas including the student teacher as learner, the physical and cultural context, and relevant research; and sociological and social knowledge focus on issues such as diversity and preparing teachers now to be able to work in the current context and have the ability to implement change. In this article these five domains, informed also by Shulman's (1987) categories, are used to consider participants' expertise at the beginning of the project and as 'frames of learning' within which to examine their professional learning and development.

Pedagogy for teacher education

Loughran (2006) argues that teacher education is unlike other disciplines in higher education because of the importance of lecturers' teaching methods in developing students' professional practice. While a student of chemistry is affected by lecturers' teaching, the subject focus is on chemistry. Students of education, however, need simultaneously to attend to the lecture content and to the teaching approaches, which model the ways in which they might work in professional practice. If the Malaysian pupils of tomorrow were to be innovative, creative, problem solvers then this UK-Malaysian collaboration needed to operate in ways which enabled the Malaysian teacher educators to model this way of working for their students.

This study

Overview

In 2005, the University of Hertfordshire, UK, was successful in its bid to the Ministry of Education Malaysia to become part of a collaborative, capacity building, teacher education project in Malaysia. A second UK university and two Australian universities were also invited to work with different higher education institutes in Malaysia to develop undergraduate, primary teacher education programmes in support of the implementation of the aims of the Ninth Malaysia Plan (Government of Malaysia 2006). Senior managers and teacher educators from the authors' university worked with counterparts from two Institutes of Teacher Education, one in the north and one in the south of peninsular Malaysia. This project involved changing practice at different levels, from diploma to graduate level teacher education and towards using more constructivist, active learning pedagogies in schools. Preparatory discussions included the change in teacher education and the development of necessary and relevant graduate skills to enable Malaysian aspirations to be achieved.

Participants: senior managers and teacher educators

The Malaysian and UK senior managers and teacher educators engaged in the project were all experienced professionals with unique expertise, which Eaude (2014, p. 6) suggests for teachers 'entails a mixture of domain, craft and personal/interpersonal knowledge'. This, together with their different roles and responsibilities, affected the nature of their contribution and project-related professional learning and development. There are concerns in generalising; however, whilst acknowledging Malaysian and UK team members' individual uniqueness and within-team differences, some broad similarities and differences between the teams in terms of expertise and project learning can be visualised using Shulman's (1987) categories of teacher knowledge and Goodwin and Kosnik's (2013) domains of teacher educator knowledge. For example, it is probable that members of each party differed in their experiences of being taught as pupils (personal knowledge), with Malaysian colleagues likely to be more familiar with teacher centric approaches and those from the UK, certainly more recently, with constructivist approaches derived from the theories of learning put forward by Piaget, Bruner and Vygotsky among others (Piaget 1954, Bruner 1974, Vygotsky 1978).

Whereas most Malaysian colleagues were former secondary school teachers with expertise in diploma level teaching and first-hand experience of working within the physical and cultural context for the project, UK team members had extensive experience of teaching in primary schools in the UK and were familiar with the structure and curriculum of UK higher education teacher education programmes. Their experience of teacher education varied from one colleague being new to the role to other colleagues having considerable years of experience. Their experiences were set within a national initial teacher education agenda that emphasised achieving specified competences and standards. However, social constructivist approaches to learning, involving students working in groups with peers and engaging in learning activities together, were widely used to inspire passion and achieve excellence in the University School of Education. In addition, UK staff encouraged student teachers to develop 'a critical reflective stance' (Senese 2007, p.52) which they could apply when working with children in school to encourage them to reflect on, and evaluate, their own learning. Modelling was used extensively by the UK teacher educators to make explicit links between the theories they were explaining and classroom practice (Jarvis et al 2014).

Participants derived their own contextual knowledge of students as learners and pedagogical knowledge, involving understanding teaching about teaching, from their own experience as teachers and teacher educators. The Malaysian Education Philosophy includes a religious component (Ministry of Education Malaysia 2014), which is not present within the UK, and Malaysian teachers are seen as examples or 'models' for their pupils in terms of behaviour. There were also relevant differences in subject content, such as the inclusion of teaching of the abacus within the curriculum in Malaysia but not the UK. Sociological knowledge, particularly experience of diversity, also differed between members of the two teams. Malaysia is both multicultural and multilingual (Ong and Tan 2008) so this setting was familiar to the Malaysian participants, all of whom were either bilingual or multilingual, whereas members of the UK team were not used to learning and teaching practice in Malaysian schools, working in multilingual contexts or speaking Bahasa Malaysia. Whilst members of both teams had 'social knowledge' in terms of experience of preparing student teachers as change agents, there would have been areas of similarity and difference in their own experience of involvement in and implementation of change that influenced their expectations of the management of this project. Developing collaborative working practices would provide new areas of expertise for all of the participants.

Co-construction

Drawing on cognitive psychology and social learning theories, co-construction assumes that learning is an interactive process, realised by and occurring through social and cultural, as well as personal and interpersonal, activity (McNaughton 1995). Distinguishing co-construction from other forms of collaborative activity, Chi (1996) suggests that co-construction can be said to occur in situations where a solution is achieved through collaboration and co-operation, where crucially no solution previously existed. Co-construction therefore involves not simply collaboratively reaching a solution to a problem, but also maintaining 'a joint problem space' (Reusser 2001, p. 2059), requiring constant negotiation and co-operation to arbitrate meaning.

Given the differences and areas of overlap between the teams one of the challenges for participants was to develop working practices that allowed them to develop and maintain that 'joint problem space'. Two aspects of the project involved co-construction: the need to develop shared working practices and the perceived need to develop an appropriate pedagogical model; both required new solutions. Models of collaboration and pedagogy being considered at this early stage aimed at establishing contacts between teams that were 'self-reflective and critical of their processes and effects' (Atweh and Clarkson 2002, p. 7). How this might be achieved was initially unclear. Many aspects of the Malaysian and UK social and cultural contexts were unknown to the other team: establishing trusting relationships would be incremental and staged (Reid 2009). Gaining intercultural knowledge and awareness which addressed initial concerns relating to perceived hierarchies and existing educational approaches and experiences were immediate priorities. Malaysian and UK participants hoped that both parties would learn from each other and mutual benefits would accrue.

Developing a pedagogical model

One driver to develop a pedagogy which would inspire Malaysian teacher educators to modify existing practice was the recognition that this change would require a substantial shift in practice, approach and pedagogy. UK participants felt that an emphasis on 'learning to learn' would be helpful in resolving potential differences in pedagogy, and reference was made to the work of many commentators in establishing an appropriate model (King 1993, Claxton 2002, Flutter and Rudduck 2004, Loughran 2006). Thus, 'learning to learn, acquiring the skills of independent thinking and reasoning and inculcating a positive attitude to the need for life-long learning are what matters most' (Chee 1997, p. 81). Developing students as graduate level investigators, researchers and thinkers meant emphasising higher-order thinking skills. Learning can be difficult, and resilience would be needed to cope with feelings such as 'fear and frustration' (Claxton 2002). Elements of Flutter and Rudduck's (2004) 3Rs and 3Cs (responsibility, respect, 'real' and choice, challenge, collaboration) highlighted pertinent personal qualities and overlapped with aspects of the 4Rs identified by Claxton (2002): resilience, resourcefulness, reflection, relationships. Both models emphasise the co-operative qualities of being willing and able to learn alone and with a range of others (Claxton 2002), and both fit with agreed ideas of relevant graduate skills.

A pedagogy was sought which saw teacher educators as a model and a guide (King 1993). Modelling can be seen at the surface level as showing what to do and providing a demonstration, and at this implicit, informal level it can be said to happen all the time. However, for modelling in teacher education to be effective there must be a deliberate and explicit attempt to provide an accessible model (Loughran 2006). All utterances and actions, both planned and accidental, combine to provide beginner teachers with insights into their new role. This type of modelling can reveal thought and decision-making processes by the teacher educator to the student teachers, deepening awareness and understanding. This

required a pedagogical approach which moved beyond transmission - telling the teachers of tomorrow what to do and how to do it (Ball and Wells 2006) - and beyond assumptions that the skills, knowledge, values and beliefs of teachers could be explained and transmitted by instruction, and then checked and certified (Claxton 2008). The UK participants considered that a model was needed which enabled everyone involved to critique their own practice and to develop a shared pedagogy of teacher education (Loughran 2011). Active learning, reflection and modelling coalesced into a model with the acronym ARM (Dickerson et al. 2011, Jarvis et al. 2014) and provided the pedagogical approach used in this project. This ARM model, which could be represented both visually and practically, was accessible to bilingual academics.

Research methods

Research aims and management

The overall aims of the longitudinal research programme that spanned the length of the collaboration were to explore participants' views and experiences in relation to pedagogical aspects and the collaborative way of working. The research was developed and managed by academics from Malaysia and the UK. Responsibility for day-to-day management of the research process lay with the UK research team. This team comprised the University Programme Director for the BEd degree programme, the Head of Professional Learning and Development and a research fellow.

Participants and data collection

This article explores one thread of the research: that relating to senior managers' and teacher educators' reported views and experiences of the collaboration and the impact of the co-constructive approach taken on professional development. Unless otherwise specified, findings in this article are taken from the full project report that includes data collected at different stages of the study and from additional participants including student teachers and school mentors (Dickerson et al. 2011). The article follows on from initial research which explored the benefits of the collaboration (Warren and Rawlings 2010).

A qualitative research approach was taken and data were collected through interviews (Merriam 2002) with a systematic sample of key informants (Mays and Pope 1995) in years 3-4 of the four-year degree programme. Informants included two senior managers from the UK University and four from the Institutes of Teacher Education in Malaysia, some of whom were also teacher educators and were interviewed again among the cohort of eight Malaysian teacher educators, four from each Institute. The interviews with teacher educators were used to gain understanding of issues raised in a previous survey of Malaysian teacher educators completed anonymously by 23 respondents. For each set of interviews, interviewees were apprised of the nature and purpose of questions and that they were free not to take part or to withdraw at any time. Each interviewee was assigned a unique code for each set of interviews irrespective of their involvement in more than one survey. The research fellow conducted all interviews face to face in Malaysia and the UK, taking comprehensive notes throughout but not recording the sessions. Questions were open-ended in order to gain richly descriptive data that would aid understanding, emphasising 'the meanings, experiences, and views of all the participants' (Pope and Mays 1995, p. 43).

Data management and analysis

Interview notes were transcribed and checked against original field notes. Analysis of data was completed in consultation with members of the research team, other experienced researchers and teacher educators within the School of Education. Data presented here are excerpts from transcriptions, coded for individual respondents: senior managers (SM) and teacher educators (TE). These excerpts are used to illustrate and gain greater understanding (Corden and Sainsbury 2006) of the participants' views and experiences.

Research findings

The findings presented here include responses to four questions in which interviewees focused on aspects of the collaboration and professional learning and development. Some findings illustrate co-construction, drawing on the work of Reusser (2001, p. 2059), cited earlier, who suggested 'Common to most theoretical contexts of co-constructivism is the implication of some kind of collaborative activity and, through joint patterns of awareness, of seeking some sort of convergence, synthesis, inter-subjectivity, or shared understanding, with language as the central mediator.' Emerging themes include: changes in the nature of the relationship between UK and Malaysian colleagues and resulting changes in practice; and professional benefits arising from working together, including knowledge of a different education system and the opportunity to explore their own practice and learn about degree programme development. Interviewees' examples of collaboration and final reflections draw attention to soft skills (Shakir 2009) such as communication skills and teamwork as well as mutual contribution and sharing knowledge, ideas and module ownership. Some of these findings are interpreted in relation to the literature in the Discussion section.

Changes to the collaboration

At this stage in the programme the senior managers were asked 'Has the collaboration changed/developed since it started? If yes, how has it changed/developed?' Responses suggest that there had been a significant shift in the way the collaboration was viewed by colleagues from Malaysia and the UK. The early view that UK participants were 'experts' that Malaysian participants could copy seemed to have been mostly replaced by perceptions of a more equal partnership with shared authority and joint responsibility for the development of structure (Mattessich and Monsey 1992). This was emphasised particularly by UK managers, one of whom noted that their Malaysian colleagues were demonstrating greater independence and acknowledged the dilemma they had faced early in the programme when they were positioned as both learners and equal partners: 'Although at first it was meant to be collaborative they wanted to do what we wanted to do' (SM06).

'...in terms of relationship with senior management team, I think much more a feeling of equality if you like in the relationship.' (SM05 – UK)

'I think the main change is probably that our partners are taking much more action themselves – they have become more independent. I think it is a more equal partnership now – that's how I think it has changed. Although at first it was meant to be collaborative they wanted to do what we wanted to do. It's much more equal – healthier than it was.' (SM06 – UK)

Malaysian managers exemplified the change in the collaboration as the development of personal relationships and friendships between participants in addition to the professional relationships that might be expected:

‘Initially we just worked together as colleagues but more as a personal friend a much close relationship now rather than just professionally.’ (SM03 – Malaysia)

‘The structure/methods are still the same but they go better together now – the rapport is much better, more on a personal basis now. But the enthusiasm, the hard work is still there, the interest in the project is still very evident. People are still very enthusiastic about it. The rapport has increased.’ (SM04 – Malaysia)

Respondents from both parties reported changes in practice that had arisen through working together. One Malaysian manager explained that ways of working within the department had changed and referred to the introduction of the ARM model, the 'new' pedagogical approach that was used throughout the programme.

‘...We knew it would be quite challenging. We were sure we would have some changes and some differences. The collaboration has tremendously changed the systems of working in the department. The programme has brought us some new ideas in teaching and learning especially in what UH has supplied, especially ARM. ARM is a very good tool. ARM is carried out throughout the 4 year BEd programme. Changed for the better, getting more close. Better understanding...’ (SM01 – Malaysia)

Programme development also resulted in changes in practice for UK participants, illustrating the co-constructive approach to working together. For example, one respondent (SM05) affirmed that although there were established assessment procedures within their University setting, these were refined to suit the Malaysian context, implying collaborative activity and a 'convergence, synthesis' that commonly features in literature on co-construction (Reusser 2001, p. 2059). A benefit of this was that procedures were clarified for new staff from the UK.

‘...One of [the] ways it has worked in practical terms is that the various processes in the degree, for example, marking and moderation we have had to be much clearer about it on this programme but we have also had to introduce some refinements, for example, cross module moderation and also the feedback for students to respond to tutor feedback. Consequence – sharper about own procedures, beneficial especially for new staff – so clearly set out...’ (SM05 – UK)

Professional benefits of collaboration

Participants were invited to reflect on the benefits of working together: 'What are the professional benefits to you of the collaboration? What have you got out of it?' Learning about a different education system through working in a cross-cultural context enabled participants to compare aspects of their system with those in a different setting, a feature noted by members of both parties. For one UK manager this knowledge was seen as the main professional benefit of working on the programme. For UK participants the opportunity to interrogate their own practice by working with new colleagues in a new cultural context was

key to their learning. As Race (2005, p. 135) suggests 'Explaining something a few times to different people leads to a deeper understanding in the mind of the explainer'.

'It has opened up a new perspective. Now we know education system in UK better I am able to compare what happens in UH and [the Institute] ...' (SM02 – Malaysia)

'...The biggest thing I have gained is knowledge of a completely different education system and...the opportunity to understand the differences – what it's given me is a deeper understanding of why they do some things in completely different ways. Some understanding of their principles and philosophy and compare them with ours. Also an opportunity to look at some of our procedures, for example, moderation and planning and be able to step back and see them through a different lens.' (SM05 – UK)

'...Better insight into how programmes work and into University practices and procedures. It's given me a lot of professional confidence knowing that we can go out and can do this work. Some of that then feeds back into how you deal with people and situations back in the UK... ' (SM06 – UK)

Malaysian participants identified benefits relating to using different quality assurance processes (types of assessment and the validation process), and one (SM03) recognised and felt confirmed by the alignment of an aspect of their teaching practice with the ARM approach.

'...Assessment. Really something very new. Normally we were seeing exam as total assessment. We now carry out formative and summative assessment. Students find it strange not to have exam. We say it is better – the guidance is important [using assessment]...' (SM01 – Malaysia)

'One thing is the validation process; we learn the rules and regulations. The way we mark assignments and give comments and areas for improvement. We don't do that in Malaysia. Terrific for the students – one of the things we learn from this project...' (SM04 – Malaysia)

'Professionally, before was teaching local post-graduate programme. Started to use a lot of high level questioning techniques, more student centred approach. Try to use this to become more efficient. Later the ARM model, very similar to what I was practising before. Before I was singing alone, but now I am singing in a choir. Now very comfortable because everyone is doing the same thing.' (SM03 – Malaysia)

Examples of collaboration

Senior managers were asked 'Can you give examples of the collaboration in action for you? If yes, what example(s) can you give?' At the time of data collection Malaysian interviewees referred to learning about degree programme development and management from UK partners, one of the purposes of the project, discussed in the previous section as professional benefits of participation. One Malaysian participant had expected a transmission (Askew et al. 1997) model of staff development (SM03), which might have involved UK teacher educators lecturing, explaining procedures, offering resources and providing a complete programme. At

this stage Malaysian respondents perceived that, in practice, there was more emphasis on sharing, teamwork and two-way communication. For one interviewee (SM02), collaboration had resulted in a sense of 'shared ownership of the module'; and another experienced 'a sharing of our professional knowledge' (SM03). They acknowledged the contributions of both parties, recognising that there had been a two-way exchange or 'Transfer of knowledge and experience' (SM04). The reference to preparing modules together and sharing professional knowledge (SM03) suggests that participants were engaging in co-construction, developing and holding 'a *joint problem space*' and collaborating to solve the problem, requiring 'constant negotiations and recreations of meaning' (Reusser 2001, p. 2059, emphasis in original).

'The marking is a real collaborative effort and the module preparation. Because personally from year 1, year 2, year 3, I realise I can contribute a little more as time went on, so from year 2, year 3, I feel a shared ownership of the module. Year 1 – not sure how my ideas will be looked upon when I put forward any suggestions because we have this top down approach by tradition.' (SM02 – Malaysia)

'During the year we have preparation week to prepare modules for the coming semester. We prepare them together (for example, module outline, handbook). Before this started we thought we would receive everything from UH. Sometimes we get more input from the University, sometimes less – anyhow it is a sharing of our professional knowledge.' (SM03 – Malaysia)

'Transfer of knowledge and experience from UK and Malaysia. We learn how to set up a degree course which is new for us. Our own degree programme is based mainly on this model ...' (SM04 – Malaysia)

A UK participant equated greater equality in contribution with a more collaborative approach, consistent with their reference to 'more a feeling of equality' in their response to the earlier question about changes to the collaboration.

'I think arrangements and practical difficulties are now tackled much more collaboratively. For example, in the planning sessions there is a more equal contribution now...' (SM05 – UK)

Teacher educators' final comments

Although the interviews with teacher educators focussed mainly on the ARM pedagogical approach, several interviewees referred to aspects of collaborative working and consequent learning from the project when asked 'Finally, do you have any further comments about your teaching on the BEd and other programmes or about any other aspects of working with colleagues from the University of Hertfordshire?' Interaction with colleagues from a different education system was noted:

'...I'm not well exposed to the British system. There is a lot of things I look forward to learn, to get more experience. Besides interaction with this programme I have opportunity to be in a group of teachers that discuss standards in education. Give me more exposure about how the teachers train in UK compared to what we have here.'

That give me – looking forwards to see what’s next, what’s out there that I can learn, what skills I can acquire to make myself a better person...’ (TE02 – Malaysia)

Other Malaysian respondents referred to soft skills, the more personal aspects of working with each other and with UK colleagues that were highlighted in the senior managers’ examples of collaboration. Once again, activities involving sharing, teamwork and two-way communication featured in the responses.

‘I appreciate that the module is done is a collaborative and there is mutual respect. Our opinion is accepted particularly when applicable to our local needs before it is implemented...’ (TE05 – Malaysia)

‘...It’s wonderful working with the team. I like the sense of the family unit we have created – it is very informal, we are free to share ideas especially when we were doing our syllabus, scheme of work and also when we we[re] preparing the questions/assignments...’ (TE07 – Malaysia)

‘...So far our interaction with lecturers from UH is close. There is not much of a gap there. We are able to say what needs to be said...Before we start each semester UH come and discuss the topics for the module. It doesn’t come totally from UH they are willing to hear what we like to put in...’ (TE08 – Malaysia)

Further developments: from ARM to RAiL: developing a Malaysian model of pedagogy

As noted, one of the drivers for using the collaborative approach was the need to support Malaysian teacher educators in developing a pedagogy which would enable graduate teachers to teach in a way that developed creativity, innovation and critical thinking skills in their pupils. The impact of operating within a postcolonial relationship was considered: would Malaysian participants be able to make changes that might enable them to move away from acquisition of a model from a UK university to develop a model more suited to their context (Kapoor 2002)? During the final preparation week, two mathematics teacher educators at one of the Malaysian higher education institutes (one of whom was also a member of the senior management team) presented a paper on the pedagogical model that they had developed from the ARM model, which had the acronym RAiL (Reflective, Active Learning) (Gan and Su 2009). They argued that differences between the UK and Malaysia, for example, ‘a culture that does not promote opened expression of ideas... a schooling system that does not emphasise training to express ideas freely [and] student teachers uncomfortable with a free interactive learning environment’ (Gan and Su 2009, p. 4), required the development of a model which was designed specifically to support active learning and reflection in Malaysian student teachers in the classroom.

The RAiL model provided a specific set of classroom activities and focused particularly on the use of a reflection protocol and on an interactive and questioning structure to give student teachers a framework for developing their ability to engage in reflective active learning. The framework was well received by student teachers: ‘... it encourage student to think and it is more effective compared to just listening to teacher explanation’; ‘... because at first I have to think on my own. It give me the opportunity to think and collaborated with other student’; and ‘students can involve in the activities and give their ideas’ (Gan and Su 2009, p. 20-21). One of the UK participants has since used aspects of the RAiL framework with non-

traditional students in the UK to encourage active participation and critical reflection. She said:

'RAiL has provided an effective way of supporting the engagement of students not familiar with UK higher education approaches to learning. I would never have thought of this if it had not been for my involvement in the collaboration.'

Discussion

Developing and learning from collaborative working practices

Irrespective of cultural context, international engagements in which one party seeks to work with another in order to effect change in practice are likely to inform the roles of participants in the interaction. Here, the hierarchical nature of the initiation of this educational programme by the Ministry of Education Malaysia, a common feature of such programmes in Southeast Asia (Hallinger 2010), implicitly positioned the Malaysian and UK participants as 'learners' and 'teachers' respectively. Such positioning was at variance with the co-constructive approach preferred by the UK team, and this might have imposed additional uncertainties for their Malaysian colleagues who were used to a hierarchical management structure ('we have this top down approach by tradition' - SM02). Thus, at the beginning of the project, the question of how both UK and Malaysian participants would develop a two way partnership to co-construct a change in teacher education was central for both groups. A member of the Malaysian team recognised that 'it would be quite challenging' (SM01), and findings reveal that the challenge experienced by Malaysian participants was underestimated. Whilst they could see a need to move towards a graduate teacher workforce, a change high on the Malaysian Government's agenda, they were being expected to change their practice in significant ways. Hallinger's (2010, p. 408) research into educational change in Southeast Asia highlights a 'process of hierarchical, top-down initiation' as one of the barriers to change. Fullan (1993, p. 12) describes four key capacities needed to embrace change effectively: 'personal vision-building, inquiry, mastery, and collaboration'. The Malaysian participants were being asked to build visions which were not necessarily personal, and may well have been difficult to visualise, as they could be '*seen as implementers of the reform without any contributions upward to shape or decide on reform initiatives*' (Malaysian correspondent quoted in Hallinger 2010, p. 408). It was therefore important that early conversations in the project set out parameters for the inquiry and eventual mastery. In this respect, the potential 'de-skilling' effects of being asked to work with a group of people regarded as 'experts' were not an easy start to the collaboration, and trust had to be built carefully if power was to be more equally balanced.

As the collaboration developed, there was 'better understanding' (SM01), 'rapport...increased' (SM04) and friendships and professional relationships grew; as one Malaysian respondent expressed it: 'more as a personal friend a much close relationship now rather than just professionally' (SM03). Balance developed in power structures within conversations, for example, 'Our opinion is accepted particularly when applicable to our local needs before it is implemented' (TE05). Working in an international, intercultural context required all participants to explore 'taken for granted' assumptions about the nature of education and the role of teacher educators. As participants established trusting relationships, it became clear that a two way process was developing, where all participants could articulate, analyse and improve their own practice: 'we are free to share ideas' (TE07); 'We are able to say what needs to be said' (TE08). These responses suggest elements of Hargreaves and Dawe's (1990, p. 227) 'Collaborative cultures' which 'comprise evolutionary relationships of openness, trust, and support among teachers where they define and develop their own purposes as a

community'. These relationships meant that new solutions to shared problems were developed (Chi, 1996).

Learning conversations took account of differences between participants' roles or functions within the project. As Coronel et al. (2003, p. 131) suggest conversation 'is considered a means of avoiding tensions besides providing the development of non-hierarchical relations. Through conversation a consensus can be achieved from amongst differing goals, and a balance of participation in the different individual focuses, collaborating on the same topic'. Malaysian educators commented that they were contributing to degree development and not being given the 'answers' as they had anticipated: 'It doesn't come totally from UH they are willing to hear what we like to put in' (TE08). They began to see themselves as experts and this growing confidence enabled them to change both thinking and practice. Minnett (2003) defined the features of effective collaboration as being the balance between the two roles of leader and follower, where each partner feels able to take either role as necessary. The interviewees' responses from both teams suggest that over time concerns about the 'transmission from experts' model became less of an issue as equality within learning conversations became a feature of the style of working which developed. This suggests that in their approach to working together participants were learning in areas that fell within Goodwin and Kosnik's (2013) social domain.

Participants from both countries referred to the professional benefits of contextual learning, finding out about a different education system. For one Malaysian teacher educator finding out about the British system encouraged him/her to be proactive in outlook: 'looking forwards to see what's next, what's out there that I can learn, what skills I can acquire to make myself a better person' (TE02). A Malaysian senior manager suggested that 'It has opened up a new perspective' (SM02) and a manager from the UK commented that it had provided 'the opportunity to understand the differences... Some understanding of their principles and philosophy and compare them with ours...an opportunity to look at some of our procedures...and be able to step back and see them through a different lens' (SM05). As Phillips (2000, p. 299) suggested, the most obvious result of this learning and understanding is that it might lead to 'borrowing' or 'copying successful practice' from elsewhere. Atweh and Clarkson (2002, p. 4) report one educator's 'distinction between "copying" and "appropriating" ideas from outside the country', and whilst the Malaysian team members might have anticipated that they would be copying materials and techniques: 'Before this started we thought we would receive everything from UH' (SM03) this respondent acknowledged rather 'a sharing of our professional knowledge'. Another colleague commented on feeling 'a shared ownership of the module' (SM02), which Hayes (1995, p. 261) suggests is important for continuing development and achieving what he terms 'a "sense of plausibility"' that is important for the effective implementation of change.

Developing and learning from programme development and the pedagogical model

Constraints imposed by the project meant that the UK teacher educators pre-prepared the action, reflection, modelling (ARM) approach (Jarvis et al. 2014), which suggests a tacit acceptance of a 'teacher' role. However, using ARM as a model was critical in creating a focus for discussion whilst working together and it acted as a vehicle for critiquing and adapting thinking, values and beliefs and a mechanism and a language for talking about the process of co-construction. Malaysian participants commented on how potent collaborative learning around the ARM model had been for them. In collaboration in teacher education it is important to recognise the power of making the tacit more explicit, enabling 'the development of knowledge, skills, and expertise in practice' (Loughran 2006, p. 57). For some Malaysian educators, learning and teaching approaches used during the project were in line with their

thinking and practice: 'high level questioning techniques, more student centred approach... Later the ARM model, very similar to what I was practising before... Now very comfortable because everyone is doing the same thing' (SM03). For other colleagues it meant a greater change ('new ideas in teaching and learning...especially ARM' - SM01), and some participants engaged more in the project as they gained confidence and became more experimental in their teaching. For UK participants, because the ARM model was developed specifically for the Malaysian project, UK team members also had to become familiar with using it as an integrated approach. Of all the skills and ways of thinking emphasised in the model, the most innovative and different aspects for the Malaysian participants were the ideas of active learning and, in particular, the questioning and analytical approaches being advocated. They were keen to see how this worked, but were not at first comfortable with being involved in many of the interactive ways of working. The co-construction of the model in practice was critical in development of 'growth mindsets' for both Malaysian and UK participants (Dweck 2010), which led to a willingness to embrace new challenges to everyone's ways of working. An outcome for some UK participants was how much they had learned whilst co-constructing the modules, 'it surfaced what I did intuitively and made me question it' (Dickerson et al. 2011, p. 150).

Members of the Malaysian team focused on personal as well as pedagogical learning; in addition to referring to the ARM model, they focused on learning associated with other aspects of the curriculum: 'We learn how to set up a degree course which is new for us' (SM04). Particular aspects included the validation process and approaches to assessment and feedback such as the inclusion of formative as well as summative assessment, and providing students with 'comments and areas for improvement' (SM04). Whilst Malaysian participants suggested that they had adopted some UK practices, senior managers from the UK benefited from having to clarify and, in some cases, refine their processes: 'the various processes in the degree, for example, marking and moderation we have had to be much clearer about it on this programme but we have also had to introduce some refinements' (SM05), 'Better insight into how programmes work and into University practices and procedures' (SM06).

Developing a Malaysian model of pedagogy

Participants' references to sharing knowledge and shared ownership cited earlier suggest a move towards Atweh and Clarkson's (2002, p. 7) view that:

‘...Not only should they [international contacts] reflect on the benefits and gains in knowledge by the different parties involved but also on how different parties can be actively involved in developing their own voice and taking increasing control...’

One way in which this happened in one of the Malaysian higher education institutes was the development of the RAiL model (Gan and Su 2009). The classroom activities in the RAiL model, which enabled students to be confident in questioning both their peers and their tutors, were a good example of how the teacher educators developed what was not a traditional part of Malaysian education practice and constructed approaches to support students' learning. This was evidence of Malaysian teacher educators acting as leaders in developing teacher education, and some of their strategies are now being used in the UK to help students there. Thus, not only did some of the Malaysian teacher educators use the ARM model to develop their own model for use by colleagues and students, but the Malaysian model in turn influenced practice among UK participants.

Strengths and limitations of the research

The research explored the perceptions of a small group of senior managers and teacher educators, which should be contextualised within this complex international project and limitations related to the research methods. The findings make a useful contribution to the understanding of different approaches to cross-cultural international programme development in teacher education, providing valuable insights into the views and experiences of selected participants from Malaysia and the UK who each played an important role in developing this degree programme. Interviews were carried out by the research fellow; not a member of the programme development team. The UK teacher educators' views were sought at the beginning of the project and again at the end following the student teachers' graduation when several members of the team reflected on the professional and personal benefits of taking part (Dickerson et al 2011). However, interviewing them at the same time as their Malaysian colleagues during years 3-4 would have enabled an interesting comparison of the views of the members of both the Malaysian and UK teams at that late stage in the collaboration.

Conclusion

The findings suggest that co-construction of a programme can provide an effective approach to developing teacher education. This is most relevant to an international context, but there are implications for any higher education institute working to develop practice in teacher education. The findings suggest the value of establishing trusting relationships that recognise the expertise of educators in all contexts, and that the development of shared understanding and a co-constructive approach to collaboration takes time to achieve. Co-construction was valuable because different starting experiences and assumptions enabled all participants to re-examine their own practice and engage in the type of conversation that Haigh (2005, p. 8) notes 'can evoke reflection that results in learning'.

In this collaboration, because the two elements of trust and shared understanding were achieved, the teacher educators in both countries were empowered to analyse critically what the UK participants brought in the context of local practice. Some of the Malaysian participants used parts of the ARM model which transferred easily, because these were already an aspect of their current practice (such as reflection), and critiqued and adapted new elements (such as questioning and critically analysing) in order to develop their own pedagogy of teacher education. UK participants, through interaction with another culture of learning and teaching, and through being faced with the need to explain, model and justify their own practice, were able to critique their own pedagogy in a way that had lasting impact.

The findings from this research contribute to the literature on professional learning and development from cross-cultural collaborations in teacher education. Insights into the benefits and difficulties associated with the approach used in this project would support improvements in teacher educators' professional development and future collaborative ventures. There is also value in the learning in relation to capacity-building work with partners.

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