

ELT Research Papers 16.05

# **Exploring the role of recently-qualified English teachers in developing technology use in language classrooms through communities of practice**

Kevin Balchin and Carol Wild

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# Abstract

It is widely recognised that many experienced and well-qualified teachers struggle with using technology effectively in the English language classroom and even those with strong motivation to develop their technology skills can feel a lack of support in their efforts to incorporate it into their teaching.

This study explores the use of technology in English language teaching in six secondary schools across Malaysia, in particular focusing on how communities of practice might be useful in developing technology use in English classes within the schools and the potential role recently-qualified teachers (RQTs) might play in this. Data for the study was collected from questionnaires, online reflection tasks, interviews, focus groups and field notes.

Findings suggest that given the right conditions, such as opportunities for professional development and sharing this with a community of practice, and a group of teachers with a collaborative mindset, then such a community, focused on developing technology use, can flourish. This in turn will generate greater use of technology in the classroom. In addition, the study indicates that recently-qualified teachers are capable of taking on a guiding role within such a community. However, for their potential in this role to be maximised, some level of formal recognition of the role seems beneficial in terms of empowering them to take a lead, even among more senior colleagues.

# About the authors

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# 1

## Context and background to the study

This study explores the use of technology in English language teaching in six secondary schools in Malaysia. The schools, a mixture of urban and rural, are situated in four states, Terengganu, Kelantan, Melaka and Johor.

Malaysia, like many educational systems worldwide, is strongly committed to promoting and developing technology use in English language classrooms to facilitate learning. The Malaysian Ministry of Education aims to develop technology use across all schools such that it 'will be a ubiquitous part of schooling life, with no urban–rural divide and with all teachers and students equipped with the skills necessary to use this technology' (*Malaysian Education Blueprint 2013–2025*, 2013, E-20).

Initiatives taken to achieve such aims have included the installation of data projectors and computer laboratories in schools, projects promoting mobile technology, the establishment of a nationwide virtual learning system (FROG), provision of training for existing teachers in using technology in the classroom, and support for teachers through the Malaysian English Language Teachers' Association (MELTA) Technologies Bureau. Despite these initiatives, significant challenges in using technology to its full potential remain, with non-use or a basic level use of technology a common occurrence in schools.

# 2

## Literature review

In this section issues relating to the use of technology in the language classroom and the conditions that might facilitate this are discussed. Developing technology use in the language classroom requires substantial change in both classroom practice and teachers' mindsets. The conditions necessary for this change, and in particular the potential roles of collaboration and collaborative environments, are explored.

### Creating conditions for change

Discussions on technology integration into classroom practice have been well documented (e.g. Ertmer et al., 2012; Walker and White, 2013), with a number of studies on technology integration focusing specifically on barriers to incorporating technology into language teaching (e.g. Yunus, 2007). In these studies, barriers are often divided into internal barriers, such as teachers' attitudes to, or competence with, technology, and external barriers, such as the availability of resources or institutional and governmental directives on technology use (e.g. Ertmer, 1999). Studies on technology integration and use in the language classroom do not, however, seem to focus on RQTs, thought by many to be the 'digital residents' (White and Le Cornu, 2011) within the teaching profession and therefore as having relatively low internal barriers towards advances in technology and being potentially more likely to help make technology integration happen in practice.

The starting point for the study thus stems from two key beliefs: that teacher learning is very much a social process, with learning achieved through 'creating conditions for co-construction of knowledge and understanding through social participation' (Burns and Richards, 2009) and that every person has potential to be a change agent and therefore 'it is only by individuals taking action to alter their own environments that there is any chance for deep change' to take place (Fullan, 1993). Also central to this study is the idea that, if more technology is to be incorporated into English language teaching in Malaysia, then there needs to be a fundamental change in educational practices.

Educational change may require new teaching approaches and new beliefs among teachers. Although strategies for changing approaches and beliefs are complicated, Fullan (2007) highlights that one strategy should include addressing the issues of approaches and beliefs 'on a continuous basis through communities of practice'. He also cites several studies which suggest that teachers often work in isolation and struggle with problems privately rather than discussing issues with colleagues. Cohen and Hill (2001) similarly note that collaboration among teachers is often weak and that it needs to be focused and sustained in order to improve an existing situation. Further, as Fullan (2007) comments, success in implementing a change within a school is 'strongly related to the extent to which teachers interact with one another', arguing that 'there is no getting around the primacy of personal contact. Teachers need ... to have one-to-one and group opportunities to receive and give help and more simply to converse about the meaning of change'.

Aside from the importance of positive collaborative relationships between colleagues, Fullan (2007) also reminds us of the importance of a positive working environment when trying to make change happen, commenting that 'a teacher cannot sustain a change if he or she is working in a negative school culture'. On the subject of school cultures, he also notes that strategies for change tend to focus on structures, formal requirements and professional development events, rather than with existing school cultures 'within which new values and structures may be required', that is, the focus tends to be on restructuring 'whereas *reculturing* (how teachers come to question and change their beliefs and habits) is what is needed'.



Other reasons why change might not occur include failure to consider 'local context and culture' (Fullan, 2007), the absence of a critical mass of teachers who are committed to the change (Huberman and Miles, 1984) and the level of continuing support, such as technical support, provided. With regard to teacher education and technology, Motteram (2014) highlights that the professional development to allow teachers to use technology effectively in their classes is an area in need of urgent attention. Arnold and Ducate (2015) also state the need for ongoing professional development of teachers in technology use, suggesting that long-term success in using new technologies depends on the ongoing encouragement of collaborative activities among teachers.

Linked to this, Fullan (2007) highlights the need to establish conditions for the 'evolution of positive pressure' in order for change to occur, removing barriers that might prevent change, for example, providing sufficient resources and support, and limiting unnecessary paperwork.

### **Developing a collaborative environment**

In recent years, discussion of spaces for collaborative practice have focused on communities of practice (CoPs), which Wenger et al. (2002) describe as a group of people who 'share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis'. Wenger (1998) cites three elements that need to be present for a CoP to form: a specific community, a shared domain, and for the community to be engaged in some kind of practice. Relating these elements to the study, the teachers within the English language departments of the six secondary schools might constitute the communities; their desire or perceived need to develop and improve their teaching and their students' learning of English through the use of technology provides the shared domain and their resulting actions constitute their practice.

These three elements form the roots from which a CoP may sprout. However, further conditions are needed if a CoP is to successfully emerge and flourish. Wenger (1998) describes these as:

- *mutual engagement* – persistent and active involvement and sharing between members
- *joint enterprise* – working together to realise the group's aims
- *shared repertoire* – the community's products and outputs

Unwrapping these terms in relation to the study, *mutual engagement* relates to how members of the community may interact together, for example sharing ideas, problems and experiences of teaching English with technology, both formally in staff meetings and informally face-to-face and/or online. *Joint enterprise* suggests teachers, as practitioners, working together and agreeing goals for technology use within their English classes and how these may best be achieved. This may take the form of identifying common technological knowledge gaps, choosing the most appropriate technological tools to develop teaching and learning in their context, engaging in peer observation, problem-solving, and assuming or allocating roles for members. This also involves a sense of 'joint accountability', with every member having a part to play, large or small, in realising the aims of the CoP (Wenger, 1998). Finally, *shared repertoire* comprises the artefacts the community might generate in the process of seeking to realise their goals, such as the production of lesson plans where technology is integrated, technology-based materials and good practice guides, stored communally for all group members to make use of.

In terms of the development of the CoP, Wenger et al. (2002) discuss various stages that the CoP needs to go through in order to be successful. These involve:

- *planning and launching the CoP* – in particular, launching a CoP can mark its creation and provide an impetus for engagement and action.
- *growing the CoP* – expanding the activities of the CoP, and fostering CoP members' collaborative practice.
- *sustaining the CoP* – that is, reaching the point where the CoP becomes self-sustaining.

One form of CoP is a professional learning community (PLC). PLCs are prevalent in educational settings with Kruse et al. (1995) citing five key elements of PLCs: reflective dialogue, sharing of practice, collective focus on student learning, collaboration and shared values and norms. They also identify two conditions in creating PLCs: 'structural', such as time to meet and physical proximity, and 'social and human', such as openness to improvement, trust and respect, and supportive leadership.

However, Fullan (2007) does caution that PLCs can run into difficulty for three reasons: policymakers do not believe or invest in them, teachers do not want to risk opening their doors to other teachers, and most fundamentally, the difficulty in developing PLCs, noting in this respect that ‘the large-scale development of PLCs is hard – very hard – because we are talking about changing culture, one that has endured for at least a century.’

Fullan also laments that ‘teacher education contains huge gaps in the very things needed to work in professional learning communities ... constructivists’ pedagogies, understanding diversity, learning to be collaborative’.

There has been a growing emphasis in developing collaborative environments, such as PLCs, in Malaysian secondary schools. This is in keeping with the Malaysian Education Blueprint 2013–2026 Wave 3 goal of establishing a ‘peer-led culture of professional excellence wherein teachers mentor and inspire one another, share best practices and hold their peers accountable for meeting professional standards’. Each of the schools in the study were at least aware of and in some cases actively participating in PLCs within their school or departmental setting. These PLCs tended to be led by senior staff, such as the head of department.

In terms of this study, although there are arguments for using either the term CoP or PLC to discuss the creation of collaborative environments that can facilitate change, the term CoP is favoured to differentiate the local understanding of the term PLC in the setting, as generally led by a senior figure, from the idea that a CoP can be led by any member or members, as discussed below.

### **Guiding collaboration**

Some explicit means of launching a CoP that marks its creation and provides an impetus for engagement and action has been noted to be beneficial (Wenger et al., 2002).

Following its formation, a CoP requires maintenance in the form of actively paying attention to the elements of mutual engagement, joint enterprise and shared repertoire if it is to survive and thrive. Wenger et al. (2002) offer a horticultural analogy for a CoP’s survival, growth and productivity:

A plant does its own growing ... however you can do much to encourage healthy plants: till the soil, ensure they have enough nutrients, supply water, secure the right amount of sun exposure, and protect them from pests and weeds.

A successful, healthy and therefore thriving CoP will thus be one that is subject to conditions and opportunities that promote mutual engagement, support joint enterprise and enable shared repertoire, with CoP members assuming or being assigned roles that guide the community to promote its well-being.

As Wenger et al. (2002) note, the vitality of its leadership is very important for a successful CoP, describing the role of a leader within a community of practice as a combination of community co-ordinator and thought-leader. Webber (2016) sees the role of a leader as important throughout the life of the CoP, from planning and launching it through to it becoming self-sustaining. She also considers the leader’s role as including managing people and group dynamics, providing support to community members, shaping the direction of the community and representing it outside the organisation.

In terms of discussing leadership in relation to technology-based communities, Wenger et al. (2009) label this leadership role as one of ‘technology stewardship’, with technology stewards described as ‘people with enough experience of the workings of a community to understand its technology needs, and enough experience with or interest in technology to take leadership in addressing those needs’. They also emphasise that this ‘stewardship is something anyone can do’, and something which can be individual, shared among a small group or shared across the whole community. This highlights that ‘stewards’ need not hold an official leadership role, such as being a Head of Department, nor be an expert user of technology, it being more important that they understand their community and its technology needs. This perspective sees the activities of a technology steward as including ‘supporting new members in their use of the community’s technology, ... identifying and spreading good technology practices, ... (and) supporting community experimentation’.

Along similar lines, Fullan (2007) notes that:

The teacher in a collaborative culture who contributes to the success of peers is a leader; the mentor, the grade-level co-ordinator, the department head ... are all leaders if they are working in a professional learning community.

This may require a new approach to leadership where all CoP members have the potential to be leaders regardless of seniority or age. Indeed, Wenger (1998) laments that ‘the young are not given a chance to invest their fresh energy in pushing histories of practice forward’. This resonates with one of the key aims of this study, to explore the potential for RQTs to take leading roles within a CoP.

This is not to say that those already in official roles have no role to play. Indeed, the importance of leadership from principals and other senior figures can be an important factor in implementing change and developing CoPs. As McLaughlin and Talbert (2001), for example, note, effective principals are able to ‘leverage teacher commitment and support for collaboration’, ‘broker and develop learning resources for teacher communities’, and ‘support transitions between stages of community development’.

### **Harnessing the potential of CoPs**

From the above, it can be seen that CoPs have the potential to benefit teachers and their students. Teachers can flourish professionally through the dynamic and collaborative atmosphere CoPs may engender, encouraging positive, purposeful and productive working environments (Wenger et al., 2002). Students’ learning experience and subsequent learning can benefit from the resultant teachers’ upskilling and positive teaching environment, informed by good practice. Indeed, it could be argued, as Wenger (1998) notes, that:

As a locus of engagement in action, interpersonal relations, shared knowledge, and negotiation of enterprises, such communities *hold the key to transformation – the kind that has real effects on people’s lives*.

With this in mind, the focus of the study is on exploring the role of CoPs and the potential of RQTs to take a lead in these CoPs to effect change in how technology is used in English language classrooms.

# 3

## Research methodology

The study is underpinned by ethnographic principles. In line with Hammersley and Atkinson's (2007) view of ethnographic work, it involves research in everyday settings, collecting data from a range of sources, and small-scale but in-depth investigation, and offers explanations based on interpretation rather than statistical analysis. Further, following Holliday (1997), who notes that ethnographic investigation within the field of education tends to investigate specific issues and so be more guided, this study focuses on how CoPs might be useful in developing technology use in English classes within secondary schools and was guided by the following research questions:

1. To what extent can a CoP play a role in effecting change in technology use in English language classrooms?
2. Within a CoP, to what extent can a RQT take on the role of change agent in developing technology use in English language classrooms?

As stated earlier, the setting was six secondary schools across Malaysia, specifically the English departments within those schools. Within each of the schools, there was a key contact person, an RQT. These RQTs were known to the researchers prior to the study as they had completed part of their BEd TESL programme at the researchers' institution. They were selected by initially contacting all 93 former trainee teachers from the same programme, who have subsequently started working in schools across Malaysia, and finding out which of them were, to some extent at least, using technology in their classes, and who thought their colleagues might be interested in developing the use of technology in the classroom. Through this process a number of potential schools for this study were identified.

The size of the English departments within these schools ranged from six to 16 teachers. Prior to the first visit to each school by the researchers, the RQT was asked to evaluate existing technology use in English language classes. In each school, every teacher in the English department, and those teachers from other departments who had been asked to teach some English classes, were invited to attend a workshop on using technology in the language classroom, to be carried out by the researchers. Bespoke workshops were created for each school, with teachers from the school choosing technological tools, according to their perceived needs, from an illustrative list of tools, highlighted by the researchers as potentially beneficial. The workshops themselves were organised by the RQT in each school.

To this end, workshops to introduce the chosen tools were then conducted by the researchers in each school, with the RQT in each school organising and facilitating the workshop.

In terms of gaining access to the schools, although the relationship between the researchers and key contacts was felt to be strong, it still appeared necessary to go through a complicated, bureaucratic and time-consuming process in order to carry out the study. However, by working closely with these RQTs, along with their district education offices, and by adapting our research design to include professional development for the local teachers in the form of workshops relating to the themes of the study, access to six schools was arranged.

In carrying out the study, ethical procedures were followed. In particular, informed consent was gained, and anonymity and confidentiality assured for all those involved in the study.

## Data collection

Data was collected during two two-week visits to the setting five months apart, with further data collected online, prior to and between visits. The data consisted of pre-visit questionnaires, online reflection tasks, interviews, focus groups and field notes.

Pre-visit questionnaires were sent to the RQTs in each school, before the first visit to the setting, in order to develop the focus of the study and guide the first visit to the setting. Five online reflection tasks were given to the RQTs during the five months between visits to the setting. Interviews with the RQTs were carried out during both visits to the setting. The interviews were semi-structured, based on a general interview schedule for the first visit, and on school-specific interview schedules during the second visit, following up on each RQT's online reflection tasks and exploring the role of each RQT with the CoP. Focus groups, involving the English teachers at each school who attended the workshops, were carried out during both visits. Field notes were kept during both visits. These took the form both of descriptive notes on what was happening in the setting, and what Hammersley and Atkinson (2007) refer to as 'analytic notes', which allowed 'progressive focusing' during the study, by providing an 'internal dialogue, or thinking aloud, that is the essence of reflexive ethnography' and facilitating preliminary analysis of the data.

## Data analysis and writing up the study

In line with Hammersley and Atkinson's (2007) view of data analysis with ethnographic work, the process of data analysis during this study was not a distinct stage in the research process but an ongoing and iterative process, with broad themes initially generated from the data, and then, through continual reflection and review, more precise themes and subthemes were identified.

In terms of coding the data, the six schools are coded S1 to S6 (in no particular order), the RQTs at each school are accordingly referred to as T1 to T6, field notes referring to particular schools are coded as FN1 to FN6, and focus groups are similarly coded FG1 to FG6. Data from T1 to T6 includes a pre-visit questionnaire, an interview and online reflection task data.

# 4

## Findings and discussion

In this section the potential of CoPs to effect change in technology use in English language classrooms is considered. As the literature review highlighted, a CoP can be a means for facilitating change, yet it requires certain elements in order to form and subsequently to grow and thrive. This section will thus begin by considering the findings in the light of planning and launching, growing and sustaining a CoP. This will be followed by an exploration of the roles of the RQTs within the CoPs.

### Planning and launching a CoP

#### Establishing the need for a CoP and its membership

Prior to the start of the study, use of technology in English classes ranged from 'occasionally, probably once in two months' (T1) to around a third of teachers within a school using technology more than once a month 'but a very simple activity such as listening to songs/audio recording, watching clips and finding information' (T4), to a school where all teachers used, for example, PowerPoint and YouTube more than once a month (T5). The tools being used were generally basic, such as songs, video clips and information websites. Recognition of the potential of technology for helping students learn was also apparent, as T5 noted, 'it can also enhance students' learning in reading, writing, speaking and listening skills', and as T2 suggested, 'perhaps it could sustain students' interest.' (T2). Thus, there seemed to be a recognition of the value in establishing a CoP to develop technology use in the schools, both to increase its use per se and to develop more creative and cognitively demanding uses of technology in the language classroom.

#### Identifying common needs within a CoP

As stated earlier, each CoP identified three or four tools they felt might be useful for developing their use of technology in the classroom. These choices were made, for example 'based on what we think are best for our students and the facilities we have in our school' (T3) and on what might 'have a significant impact on students' learning' (T6). The choices are shown in the table below, with CoPs often opting for tools that could be used offline, reflecting what they felt was appropriate for their setting, and in particular the resources and facilities available to them.

**Table 1:** Choice of tools to develop technology in the classroom

Tools offered	Schools' choices
Apps and websites	1
Blogs	
Images sites	1
Infographics	3
Listening sites	4
Kahoot	
Padlet	1
PowerPoint	2
QR codes	
Quizlet	4
Video	2
Voki	2
Word clouds	2

#### Creating an impetus for the CoP to grow

Responses from five of the six CoPs to the first workshop, which acted as a launch event for the CoP, suggested a positive effect of energising interest and provoking discussion:

*They were really excited and eager to try the tools/items introduced... The English panel had a discussion on decorating our board and English room with infographics. It was a wonderful experience, better than a mundane meeting (T4).*

Some CoP members were also galvanised into trying out the new tools immediately within their lessons:

*My colleagues were very positive about the workshop you did for us here. Some of them even tried the activities out the very next day (T6).*

One of the CoPs, however, appeared less affected by the workshop: 'They were apprehensive about the workshop but obliged anyway. Thus the poor response from the crowd' (T1). This response, indicating limited enthusiasm and engagement, suggested that the necessary impetus to help the CoP to grow might have been missing.



## Growing a CoP

### Valuing the goals of the CoP

In order to grow the CoP once it has been launched, the broad goals of the CoP, that is, to develop technology use in English language classes, need to be seen as useful and beneficial, and as a result time set aside for and dedicated to achieving these goals. It was clear in S3 and S5 that the goals of the CoP were seen as a priority. For example, in both FN3 and FN5, it was noted that 'all teachers within the English department attended the workshop and focus group'. In S4 and S6, there was evidence that the goals of the CoP were seen, if not as a priority by the whole CoP, as something being worked towards. As noted in FN4:

*Several people, including those not at the workshop, had tried different tools demonstrated in the last workshop – Padlet, Quizlet, Infographics – with generally positive outcomes, though rooming issues are a frustration.*

T6, who had attended several additional technology workshops and training programmes, saw potential uses for sharing the knowledge and skills gained from training in her school, and mentioned times when what had been learned from the training could have been shared, but at the same time noted that this had not been given priority within the school. As she explained:

*We do meet every Thursday for our school sit together ... it's like a professional learning network ... PLC. It is supposed to be that on that particular day we sit together we share ... but most of the time we talk about what sort of questions we want to put in our examination ... it's more of administrative work rather than how to improve in terms of teaching or anything like that ... everything is about how the school functions and not very much about ... teaching.*

There were schools that did not seem to value the goals of the CoP. T1 suggested that some teachers preferred to avoid using technology, suggesting that it was because of:

*...a fear of new things, they are already in their comfort zone ... they have been teaching using a certain method, and think 'why should I change if I can use the same thing, why should I create more work for myself'. That's probably holding them back from using technology or wanting to learn new things, and probably they feel they are too bogged down with other works, so they don't see why they should bring more work to themselves.*

It is perhaps not surprising therefore that, when asked whether teachers in her school had used any technology in their classes since the workshop on technology use that they had attended a few weeks earlier, T1 responded: 'No, as far as I know, they haven't. I haven't either. We were busy with sports, then it was school holidays, and soon it will be exam week'. Although these may be good reasons, the overall message here seems to be that the teachers in S1 were not valuing the goals of the CoP, and therefore the CoP itself.

Similarly, it was noted in FN2 that:

*...nothing happened since last visit – no technology used in class except by T2, and she said she'd been using it less, reasons given were needing to book and bring students to the computer room, lack of time to explore tools and being burdened with clerical duties.*

### Valuing and actively seeking collaboration

One aspect of growing a successful CoP seems to be that teachers both value and actively seek collaboration with their peers to help achieve the goals of the CoP. This collaboration can take different forms and can involve, for example, creating forums for sharing ideas, team teaching and peer observation, with the overall emphasis being on encouraging mutual engagement and developing a group mentality. The presence of a positive culture within the CoP, and within the school, where teachers feel a desire to continue to develop professionally and are supported in this desire, seems to be an important factor in helping to create a collaborative environment.

Within the study, particularly in S3, S4 and S5, the launching of the CoP via the workshops given in the schools served as a means of helping to foster a collaborative environment in terms of developing technology use within the schools (T3, T4, T5).

The need for this collaborative environment was appreciated by T3, who suggested that:

*It would be better if teachers were encouraged to work collaboratively in teams. For example, they can help each other in preparing materials and sharing effective teaching ideas that use technology in teaching.*

She further noted the importance of having ‘a sense of togetherness ... as in school you cannot conduct or lead a programme by yourself, you need supportive colleagues’.

There was evidence of this ‘sense of togetherness’ in the collaboration taking place in several schools. For example, in S5, peer observations specifically relating to using new technology had taken place. This school was also in the process of establishing forums for sharing ideas, with, for example, feedback from conferences attended being shared, as well as various online sharing mechanisms being employed. In S6, teachers had engaged in some team teaching when trying out new technology in their classes, as T6 noted, ‘me and another teacher, we combined our classes and used PowerPoint, videos and so on’.

However, this sense of togetherness and valuing of collaboration seemed much less evident in other schools. For example, in FN1, it was observed that:

*Although quite a small department, there seems to be very little collaboration, the lower form and higher form teachers hardly seem to mix at all, apparently seeing little benefit in it.*

Although, during FG1, these teachers did acknowledge that they ‘could share pictures, songs, handouts, materials, knowledge and ideas on how to conduct lessons’ incorporating technology use, by implication the message is that it was not happening to any great extent at that time. Similarly, it was highlighted in FG2 that they could ‘share websites, experiences, materials and ideas’. However, it seemed that at these schools, collaboration was seen as a burden, as T1 revealed with respect to collaboration:

*No one wants to initiate it ... in our school we have so many meetings going on, so we don't want to hold back teachers' time as well, so we try to minimise them, if we don't need to meet we don't meet.*

Without a sense of togetherness and shared vision, even feeding back on useful external training programmes seemed to become a burden. For example, T1 had been on a training programme concerning technology in the English language classroom but following this had been unable to share what she had learned, explaining that ‘I was supposed to have in-house training sharing with them, however I couldn't due to time constraints, I haven't managed to share with them’. Along similar lines, T2, who is both interested in and able to use technology to good effect in her classes, was concerned about the extra burden that working together might entail, commenting that in her department teachers could collaborate more, but if it did happen then she was likely to be the one doing most of the work.

Clearly then, there were some schools with a more collaborative culture. Further, this seemed to go hand-in-hand with the presence of a positive atmosphere among teachers in the school, department and/or CoP. T5 highlighted this sense of positivity, remarking:

*I am looking forward to having more training workshops so I can share this kind of technology with my colleagues, because they are quite senior compared to me, I mean they have more experience in terms of teaching generally, but in terms of technology they are still kind of adapting to it.*

### **Having an active interest, passion, and energy**

There was a sense that schools with a positive disposition towards learning English generally seemed to be more willing to keep abreast of and to explore more recent developments in English language teaching, such as how to develop technology use in their classes. In FN4, it was observed that:

*There seems to be a particularly positive attitude to English here – among both teachers and students – and attention given to English, such as through the ‘English Week’ event that was happening at the same time as our visit was taking place ... this fed through into the workshop and the focus group at the school, which were well attended, with participants seeming keen to learn new knowledge and skills.*



Further, in FN3, it was commented on that:

*Despite its rural setting and barriers such as the limited internet connectivity, the teachers here seem to look on the bright side and wanted to highlight what they can do such as use songs and videos.*

This contrasts with FN1 where it was noted that:

*Today, a disinterested impression was given by those attending the workshop with teachers seeming keen to point out things they couldn't do with technology because of barriers such as the difficulty in booking an IT room.*

T1 suggested that further reasons for the apparent apathy towards technology use might be 'teacher ego', meaning teachers not wanting to risk showing a lack of knowledge of specific technology in front of their students, 'lack of interest in using technology for teaching' and 'lack of passion for teaching [generally]'. T2 cited attitude as a reason for the scant use of technology by CoP members, with teachers 'reluctant to spend more time or invest more time, even on some recyclable materials'.

### **Resources and facilities**

The availability of appropriate resources and facilities also appeared to affect how a CoP grows. Lack of rooms with Wi-Fi connectivity, a scarcity of projectors and laptops and related issues of maintenance, as well as waiting lists to use the computer labs, were cited by five of the six CoPs as issues that restricted use of technology within English lessons, reducing motivation to develop use of technology and consequently the goals of CoPs not being fully realised. T6 explained some of the difficulties facing her by contrasting her resources and facilities with a teacher from another department in her school:

*She can use PowerPoint and videos and everything because the lab that she's working in ... has everything and you have people supervising it and you can ask assistants. ... we have to bring our own stuff; we don't have a lab of our own so that does give one factor whether we use technology or not.*

T2 elaborated further on the difficulties related to resources and facilities, citing time needed to set up the technology and student behaviour as additional issues:

*When we need to use a laptop or Chromebook we have to go to the computer lab so there's time spent ... and then the internet connection speed will be another problem ... and I think what worries the teacher in charge is about the students' attitude... so there are like student behaviour problem issues.*

T4 explained the negative effect a lack of resources could have on teachers' attitudes to teaching English with technology, 'when they are not tech-savvy, it will be a bit demotivating for them if they do not have enough equipment'.

Whilst the limited resources and facilities featured strongly in five of the six CoPs' views of the extent to which they used technology in their classes (T1-4, T6), an abundance of resources and facilities was conversely not considered to guarantee the growth of the CoP. Other constraints, such as heavy workloads, administrative responsibilities and lack of time still remained problematic, as T5 pointed out:

*So many things to submit ... clerical works, reports, accommodation. We are very keen on designing very wow lessons but we have limitation of time.*

Thus, regardless of the level of resources and facilities, developing the three features of a CoP discussed earlier – mutual engagement, joint enterprise and shared repertoire – is vital for the successful growing of a CoP. As T5 explained, 'I think we should work smart and share ... collaborating with others, not me only'.

### **Institutional support and professional development**

Returning to Wenger et al.'s (2002) horticultural analogy, for a CoP to thrive it needs nourishment. In all of the schools in this study the value of institutional support and opportunities for professional development were viewed as means of providing some of the nourishment needed to help grow a CoP.

Support from within the school from Heads of Department and Principals was viewed as significant by RQTs. As T3 explained, 'we are very lucky to have a supportive principal, senior teachers and district English language officers', whilst T4 highlighted the part played by those in authority in helping the CoP to grow, noting that 'the head of English is very helpful'. Conversely T2, in discussing some of the obstacles holding back the growth of the CoP in her school, commented that some senior teachers within the school had some reservations about the use of technology in teaching, believing that 'technology is considered as a bad thing'.

The importance of opportunities for professional development to build teachers' skills in using technology in the classroom was mentioned by all RQTs, for example T4 remarked that:

*The first step needed in order to create a technology-based environment in my school would be by educating the teachers all about technology tools. Putting aside the practical issues, another problem that should be taken into consideration is teachers' lack of exposure to the know-how on using technology in the classroom.*

Providing professional development opportunities, such as technology workshops, courses and conferences, could provide nutrients for helping to grow CoPs by expanding the knowledge base of the CoP members, as well as increasing their motivation and confidence as to what they can achieve. As T4 commented, following the workshop on technology use: 'it is much easier than we thought it would be'.

However, in order for such training opportunities to benefit the CoP as a whole, so that the CoP might grow, opportunities need to be provided for individual CoP members to feed back and share the technological knowledge they gain, thereby also fostering 'mutual engagement' in the CoP.

Informal discussions appeared to be a common method of sharing knowledge gained through professional development opportunities in all six schools. For example, chatting in the canteen or staff rooms during breaks formed a significant part of how feedback was conducted. Several of the schools also made use of a WhatsApp group for sharing ideas and information related to their day-to-day teaching and to some extent for sharing new knowledge and skills:

*For daily basis and communication/discussion among the members, we use our English department WhatsApp group to share information related to school, students and teaching English. Not all my colleagues take part in the WhatsApp groups as some of them prefer to discuss directly (face-to-face) and the discussions posted are normally seasonal, which depends on the occasions or events happened at school. (T3)*

However, whilst these means might be useful in developing relationships within the group and promoting mutual engagement, they did not appear to be an adequate means of sharing and transferring a body of knowledge to a CoP if it was to reach its full potential. This was evident in the comment from T6 that:

*I have been told by my head of department to try and provide as much information as I can, you know, about the course, what tools I've learned, but I haven't had a chance to sit down and tell them about it.*

This underlines the importance of support being offered by the leadership within the school which extends beyond simply providing training opportunities for individual members of the CoP to ensuring that giving feedback is prioritised and conducted systematically. This was happening or beginning to happen in some schools. For example, T4 explained the procedure following conference attendance – 'people happily attend that feedback', and T5 similarly referred to a formalised forum for feeding back:

*I conducted a feedback session to my colleagues because I attended an international conference in KL ... is a digital education conference ... basically the use of technology in classroom ... principal wants me to present what I gain from the conference to my colleagues. It was a kind of new experience, it really somehow developed me ... I think it's a very good platform for everyone to sit together and learn from each other. (T5)*

While there are existing spaces where this type of sharing could occur, both online and face-to-face, such as via PLCs, this did not appear to be happening systematically in some of the schools, perhaps because professional development was not sufficiently embedded within the department's practice. As T2 noted, 'we haven't seen much PLC in this school as well'.

Significantly, it was in the schools where this provision of space and opportunity for professional development combined with mutual engagement in the field of technology use in the classroom was occurring that the CoPs appeared to be thriving.

## Sharing materials

A further aspect, and perhaps consequence, of close collaboration and sharing of ideas is the sharing of materials within a CoP, which is where CoP members pool not only ideas and experiences but begin to share lesson plans and materials that they themselves have created. Within the focus groups, several of the schools identified this as a means of developing technology use in lessons (FG3, FG4, FG5, FG6), with T3, T5 and T6 noting later that this had begun to take place to some degree. They referred to sharing of lesson plans and some materials with other CoP members, although this appeared to be occurring on an informal and random basis rather than formally or systematically.

## Sustaining a CoP

Fundamental to sustaining a CoP is continuing to build those elements discussed above, as CoPs require routinised, purposeful care if they are to persist and become self-sustaining.

Formalising and embedding those practices that foster aspects of mutual engagement, joint enterprise and shared repertoire in areas such as institutional support, professional development and sharing materials appears to contribute to a CoP's sustainability. For example, in S5, where this had to some degree occurred, T5 talked relatively confidently about her CoP and the progress CoP members had made in using technology in their lessons. Indeed, in the four CoPs which appeared to be continuing to thrive, the majority of CoP members had tried out one or more of the tools introduced at the launch event, and two of these four CoPs were identifying and experimenting with additional new technology, namely Wattlepads and iPad apps.

In contrast, T2, whose CoP had made less progress beyond some initial informal sharing of experiences and whose members on the whole were rarely using technology in their classrooms, was less optimistic about the future of the CoP and members' use of technology in teaching. More pessimistically, T1 felt the CoP had already failed, noting that informal sharing and collaboration was minimal even prior to the launching of the CoP, and that little had changed after the launch event, with none of the teachers apart from T1 using any of the tools introduced at the launch event.

It is worth noting that in both these schools, where the CoPs appeared to stall in the growing stage, there were, nevertheless, CoP members who were 'tech-savvy in a personal sense but not in a professional sense' (T2) or who had shown initial interest in using technology in their English language teaching, including T1 and T2 themselves. However, as noted earlier, this was clearly not enough. For a CoP to grow and sustain, it appears to need a critical mass of members who are persistently engaging in shared practice and developing systems that support this.

Recognition by the CoP members themselves of the importance of routinisation and formalisation of the sharing process was also evident from the plans they made towards the end of the study period, which included action points such as building a Google Drive for storing materials for the group (FG6), creating buddy systems (FG5), and standardising procedures, with respect to which FG5 expressed a desire to:

*create modules/sets of worksheets for a specific technology tool that is agreed to be used for certain target groups. A module for each form that suits the level of the students as well as their exam format (PT3 examination).*

## Assuming guiding roles within the CoP

An overriding theme across the planning, launching, growing and sustaining of a CoP is the need for it to be guided. A guiding role may be acquired simply through members' enthusiasm or positivity towards technology use in the classroom, through members assuming these roles within the CoP, or through members being assigned such roles in a more formal sense. Such a role provides what Wenger et al. (2009) refer to as 'technology stewardship'.

All those involved in the CoP can potentially have a guiding and supporting role to play, even in relatively simple ways. For example, T6 highlighted 'I had a colleague who put up the list of websites she was given on the information board'. Further, if it is the case that there is a high level of engagement from several members of the CoP, this may point towards these members sharing responsibility for guiding the CoP, in a 'shared leadership' (Webber, 2016) type model. As noted in FN3:

*There is some degree of shared leadership here, two of the five teachers are acknowledged as being more advanced in terms of technology use in the classroom, but all of them are sharing ideas and opinions via a social media group.*

This study focused in particular on whether RQTs could assume a guiding role. Several RQTs had assumed leading or guiding roles in terms of technology use in their schools and beyond, including leading by example, showing enthusiasm for and being positive about the benefits of technology use. T2 had presented technology-based workshops at conferences and training events. T3 was part of a group of teachers who were sharing responsibility for developing technology use in their department, and T3 herself seemed to be leading by example. T4 could also be said to be leading by example within her school, and had also been given a training role within her district that involved technology use in classes. T5 had been assigned the role of iPad co-ordinator within her school, while T6 had become a focal point for observations from external visitors, which often involved the use of technology in classes, and was again someone who was leading by example in terms of technology use in her classes.

Where the RQT had been given some kind of formally assigned technology-related role within the department or school, the potential for them to lead in terms of technology use generally was greater. For example, T5, because of her role of iPad co-ordinator, felt empowered to offer support, not only in encouraging colleagues to use iPad apps in their classes, but also in a wider sense. As she noted, 'when it comes to how to use technology in classes, I have the trust of my colleagues'. Thus, having this specific technology-based role seemed to act as an enabler for T5 in terms of allowing her to share her knowledge of technology use. For example, she 'conducted a training session for colleagues after attending an international conference in KL'.

Furthermore, although T6 had no specific technology-based role, she was designated as a '21st-century teacher', a role which brought with it a responsibility for advising teachers on how to deliver classes in, for example, more interactive ways. She believed that this role encompasses encouraging and developing the use of technology in English classes in her school, and so to some degree felt empowered to lead in this respect.

However, where no role had been formally assigned, there was a reluctance among RQTs to overtly guide technology use within a department or school, even when they would have been able to do this. For example, T4, who had no specific role in terms of technology use within the school but was very interested in developing her knowledge, and her department's knowledge, of technology use, suggested that, in terms of developing the use of technology in her department, she played 'a minor part such as through informal discussion, and sharing of ideas and tools'. Furthermore, although her actions within the department suggested that she was leading by example in terms of technology use, she was 'not sure' of what role she had within the CoP/department in this sense. The point being made here is that, without being assigned a specific role within the CoP, T4 seemed to place a limit on how far she could lead within the CoP, in terms of developing technology use within the department, not wishing to assume a role that she had not been formally given.

Despite this, as suggested earlier, T4 did seem to be leading by example, and when asked if she felt her efforts in using technology were rubbing off on others, she responded: 'I believe so because they were talking and asking me about things, about technology and the tools I've been using, not just the English teachers'.

Further, although T3 also had no formal role in terms of guiding technology use, she also seemed to be leading by example, believing that:

*The best way to encourage my colleagues to use technology is by having informal sharing sessions. For example, when I had a free time in the staff room, I shared how effective the methods (using technology) I used in my teaching were.*

T6 similarly tried to use her own successes in using technology in the classroom as a means of encouraging others to do the same, noting that 'by showing a high level of enthusiasm, I believe others would be more encouraged to try things out for themselves'. However, she was also keen not to be seen as a 'show off' and 'wouldn't want them to think I'm ahead of anyone else in any sense' and so tended not to share how she was using technology in her classes unless specifically asked to do so.

T2 was also trying to lead by example, however, in her words, 'it just doesn't work' in terms of developing technology use within the department. This was possibly because of a lack of colleagues with a shared interest in developing technology use, or more widely because of a lack of a sense of shared goals or sense of togetherness within the CoP. In other words, the lack of a critical mass of like-minded colleagues within the CoP seemed to be a barrier to a single enthusiastic member trying to instigate change. This seems to be borne out by the comment in FN2 that:

*An obvious resigned attitude seemed to prevail, except for T2, the view seemed to be that things are the way they are and there's nothing that can be done about it.*

This resonates with Fullan (2007) who noted that a teacher's psychological state is an important factor in determining whether changes will be implemented.

From this, it can be seen that some kind of acknowledged leadership is necessary, though this leadership need not be the more traditional top-down hierarchical type with instructions given to be followed, but a more guiding and supporting style of leadership, for example creating opportunities for peers to collaborate with and help each other.



# 5

## Implications

This section will consider the implications arising from the findings above. For a CoP to flourish and RQTs to be enabled to take on roles within the CoP, there are a number of issues that need to be considered: the need for locally appropriate technology, the importance of having a critical mass of teachers committed to developing technology use, the need to cultivate a collaborative mindset within the CoP, the need to nurture the CoP in terms of, for example, promoting professional development, the necessity for sufficient resources and facilities, and the need to rethink the approach taken to leadership. These issues are explored in turn below.

### Locally appropriate technology

One thing that characterised the six schools and English departments used in this study was the variation between them, which in turn could impact on the implications of this study within the broad setting of Malaysia and more widely. There was variation from urban to rural, from schools with a number of students highly proficient in English to those with only a small minority of students proficient in English, schools where all of the English classes were predominantly taught in English, to schools where the majority of English classes were taught in Malay, the national language of Malaysia, schools with a number of Wi-Fi connected rooms, projectors and laptops for students, to schools with a single IT room to which the English teachers had limited access.

Because of this variation in types of school discussed above, it is particularly important that the technology used within a setting should be 'locally appropriate'. That is, it is unrealistic to suggest that all schools use the same tools. Schools, and more specifically the CoPs within them, need to have a key role in deciding what technological tools will work for them. This is also important in terms of improving teachers' motivation to implement technology, and will strengthen mutual engagement within the CoP. Once CoPs have identified appropriate technology for their setting, professional development activities and opportunities to explore the chosen tools within the setting can be put in place.

### The importance of critical mass

In terms of developing technology use in language classes, there is a sense that 'success breeds success', and further that in order to make success sustainable it is necessary to have a critical mass of teachers within a department who value the use of technology in their classes and who are committed to engaging in the activities of the CoP. Once this critical mass is achieved, the use of technology in classes can become part of the routine of the department rather than something that one or two teachers do from time to time. In several schools, this critical mass had already been achieved. For example, all of the teachers in the English department in S5 had bought into the CoP in the sense of valuing the creation and development of their community in terms of exploring further how they might use technology in the classes. The teachers had all used technology in their classes to some extent and several had used it extensively. As a department, they had reached and gone beyond the critical mass of active participants in the CoP necessary to make the CoP successful and had begun to routinise the use of technology in their classes.

### Cultivating a collaborative mindset

Another issue is the need for both a collaborative mindset and a positive outlook within a group of teachers if a CoP is to thrive. In some schools, this collaborative mindset and positive outlook were present and this seemed to be reflected in the growing technology use in classes. However, in other schools, where these were less apparent, technology use did not appear to change significantly during the study. Cultivating a collaborative mindset in such schools may depend on addressing related issues, as discussed in this section, such as dealing with issues of limited resources and facilities. Further, this mindset might be encouraged within a CoP through activities that help create a sense of shared experience, for example having feedback sessions after particular members of the CoP attend external training events.

### **The need for nurture**

CoP members' professional development in the use of technology in language classes and opportunities for the subsequent sharing of their learned knowledge and skills good practice with the CoP needs to be an integral part of the CoP's activities if it is to be sustainable. This will include both formal training and creating space for more informal professional development, such as time to explore different technologies for classroom use. It also requires both an ethos of and commitment to these forms of professional development within the CoP and within the school. In some of the schools involved in this study, time only seemed to be available for this type of professional development when other duties had been completed, and in some cases it did not happen at all.

Another factor which seems to be important in terms of the long-term sustainability of the CoP is to establish formal procedures and roles within it, such as procedures for sharing of technology-based materials. This clearly requires support from senior figures within the department and school to facilitate implementation.

### **The importance of infrastructure**

It perhaps seems obvious to say, but technology-based CoPs such as those discussed here will rely on having the resources, facilities and technical support necessary to thrive in the long run. Indeed, directives to increase technology use are difficult to sustain without this. In S5, there were a number of classrooms not only with projectors but with Wi-Fi connectivity. It was clear that this infrastructure was changing classroom practice through both enabling and encouraging technology use. It was having the effect of creating the kind of positive pressure that Fullan (2007) recognised as a key element in making change happen. Other schools fared less well in terms of resources, facilities and technical support, which in turn limited technology use. While, as noted in the findings, plentiful resources and facilities do not guarantee technology use, and as T4 also commented 'if the teacher wants to use it [technology], they will find ways to use it', the implication is clearly that any attempt to instigate change in technology use must be supported by adequate resources and facilities.

### **Developing a new approach to leadership**

Another key aspect of the study concerns the roles within the CoP, and in particular the idea that for the CoP to be successful some form of guidance is necessary. This guidance may well come from less experienced members of the department where those members have a particular interest in technology, and indeed all six RQTs involved in this study seemed capable of guiding their CoPs. However, being able to guide the CoP in theory did not mean they were able to do so in practice. Other factors came into play – in particular, if the RQT's role as some kind of leader or co-ordinator in terms of technology use was formally recognised, either in the department or within the school, then they felt emboldened to more formally act as a guide within the CoP. Without this formal recognition, offering guidance was still possible, but in this situation RQTs seemed to feel concerned about being seen to be going beyond what they ought to be doing, and felt reluctant to be seen as knowing more than their more experienced colleagues.

There is perhaps a need, as Fullan (2007) notes, for new styles of leadership in order to facilitate change in a technology-based CoP. The more traditional structured forms of leadership, with a Head of Department seen as the leader, may not be the most suitable way to guide this kind of CoP, which relies on other knowledge and skills that the Head of Department, though very experienced as a teacher, may not have. To guide a technology-based CoP seems to require not only a tech-savvy member of the department, but also those with a passion for developing technology use in the language classroom. This guiding role can also take different forms such as leading by example and being generally supportive to colleagues, or if sufficiently empowered, providing more formalised training and feeding back on external technology-based workshops or conferences attended. What may be necessary is the kind of 'reculturing' that Fullan (2007) discussed, so not just focusing on the structural changes to the way particular teachers' classes and more widely their professional lives are organised, but focusing on changing the way they think about what they are doing, considering areas such as the extent to which they value collaboration or the way they view leadership.

# 6

## Conclusion

In concluding, the research questions which have guided this study are revisited.

Firstly, considering the extent to which a CoP can play a role in effecting change in technology use in English language classrooms, the study suggests that, given the right conditions, as discussed above, in terms of, for example, sufficient resources and facilities, teachers with a collaborative mindset, opportunities for professional development and sharing this within the CoP, and appropriate leadership, a CoP focused on developing technology use can flourish, which in turn will generate greater and more effective use of technology in the classroom. By contrast, where these conditions were less evident, this seemed to curtail attempts to grow the CoP and therefore to limit change in technology use.

Secondly, considering the extent to which a RQT can take on the role of change agent within a CoP in terms of developing technology use in English language classrooms, the study indicates that RQTs are capable of taking on a guiding role. However, in order that their potential in this role be maximised, some level of formal recognition of the role seems to be beneficial. This appears to empower them and give them the freedom to take a lead, even among more senior colleagues.

Further, if the department itself values the CoP and values and enjoys collaborating, then again, the potential for the RQT to successfully take on a guiding role in the CoP is increased. However, if the department as a whole does not sufficiently value either the CoP or collaboration with colleagues, then it becomes difficult for the CoP to succeed, regardless of the efforts and technical knowledge of the RQT.



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