

8 Developing the Reflective Practice Capabilities of Pre-Service Trainees in TESOL Through Online Means

Mark Brooke

National University of Singapore

elcmb@nus.edu.sg

Abstract: This study was an exploration and analysis of the online virtual learning environment (VLE) as a vehicle for developing the reflective practice of pre-service ESOL teacher trainees during practicum. The practicum period is an essential part of their training, as neophytes are encouraged, through reflection, to link theory and practice by applying the learning from their Bachelor of Education programmes to the dynamics of the classroom. The objective of this study was to facilitate the reflective processes by guiding participants to apply the ‘double loop learning model’ from Argyris and Schön (1978) and to share their reflections online through e-journaling and collaborative discussion forums. Using participatory action research methodology over eighteen months, three case studies were conducted, and a systematic training model scaffolding processes of thinking to facilitate the application of the Argyris and Schön (1978) model, constructed. Eleven forums were set up and moderated by this researcher for six to eight participants during each case study. Results suggest that pre-service ESOL teacher trainee deep reflection can be facilitated by exploiting the asynchronous and collaborative characteristics of the online environment.

Key Words: initial teacher education (ITE) programmes; practicum; reflective practice; virtual learning environment (VLE); double loop learning cycle; asynchronous, written collaboration (AWC).

Literature review

Practicum in student-teacher learning

TE programmes have long considered practicum in schools as quintessential for teacher learning (Johnson, 1996; Richards, 1998; Derrick and Dicks, 2005; Imig and Imig, 2006; Darling-Hammond, 2006; Liston et al, 2006; Otero, 2006; Furlong et al, 2008; Black and Plowright, 2010; Melville, Bowen and Passmore, 2011). Richards and Crookes (1988) describe practicum as the ‘major opportunity for the student teacher to acquire the practical skills and knowledge needed to function as an effective language teacher’ (p. 9). During this time, neophytes are encouraged to reflect on practice and to carefully consider the teaching and learning provided by the tertiary institute to which they belong. Thus, they are encouraged to critically assess teaching strategies, how their own schooling experiences may affect their classroom techniques and beliefs, and to consider the wider social implications of classroom dynamics. It is not surprising therefore, that some (Derrick and Dicks, 2005; Darling-Hammond, 2006) have likened the teaching practicum experience to clinical placements for the medical profession.

Reflective practice in pre-service teacher training

In the last decade, reflective practice in teaching has been growing in significance in initial teacher education (ITE) programmes resulting in its establishment as a performance competency for teachers and an accreditation standard for teacher education programmes (Council for the Accreditation of Educator Preparation, 2013). Through the development of reflective practice in these programmes, it is surmised that trainees can construct links between the attributes that define quality teaching to form an increasingly complex mental schema. This was evidenced by Melville, Bowen and Passmore (2011) who report that reflection helped to build what they term ‘alert novices’: trainees who were better able to absorb course content, and to link this to their own personal experience as well as their classroom practice. However, despite its invaluable benefits (Weiner, 2001; Korthagen, 2001, 2004; McAdams, 2004; Brandt, 2006; Grant and Gillette, 2006; Ostorga, 2006; Davis and Wise, 2008; Furlong et al, 2008; Black and Plowright, 2010; Melville, Bowen and Passmore, 2011), it seems that current trends in school practice today seek not to enable reflection but to coerce trainees to implement prescriptive curricula and teaching methodology; what has been termed a

'predetermined standards-based instructional delivery system' (Weiner, 2001: 29). This trend led Furlong *et al* (2008) to condemn the Teaching Agency (TA) in England (linked to the National Partnership Project from 2001 to 2005, which professed to maintain innovative state-run educational training policies), as overwhelmingly practice-oriented. They (2008) state: 'the essential contributions of higher education to professional formation - the consideration of research, of theory and of critique - all of these have been expunged as important components of professional education' (p. 318).

This lack of reflective practice in novice teacher training is part of a continuing and widely-spread teacher education malaise reported in the academic literature, not only in the UK (Furlong *et al*, 2008), but also in America (Weiner, 2001; Etscheidt, Curran and Sawyer, 2012), Australia (Newhouse, Lane and Brown, 2007) and other developed educational systems in South-East Asia such as Hong Kong (Ng, 2012), which is the context for this paper. Two central tenets of the malaise are proposed. The first is that prescriptive curricula (in particular, pre-selected text books and heavy exam-syllabi) and generic training courses are limiting teacher-decision making in the classroom. This creates a uniformity which is in stark contrast to child-centered education methodologies as top-down mandates neglect the potential of individualized tailor-made education at the local level (Defalco and Weiss, 2005). The consequence of this is student disinterest and classroom deviance (Weiner, 2001; Coskie and Place, 2008, Jewett and MacPhee, 2012). The second tenet is that this system is not adequately supportive of teacher research, and this fundamentally removes teacher engagement from innovative practices.

Defining reflective practice in teacher education

To its detriment, the term 'reflective practice' is very broad and as Korthagen (2001, 2004) warns, lends itself to multiple interpretations. There are some shared notions of a cyclic process of planning, acting, assessing and planning again creating a spiral of change, however, the literature in the field differs greatly with regard to the exact praxis-oriented nature of reflective practice and to what should constitute the content of reflection. Two of the most prominent thinkers in this field, Dewey (1933) and Schön (1982), both advocate the importance of reflecting on experience as it occurs, using Schön's terms, 'reflection-in-action' and constructing post-event understanding through retrospection, or 'reflection-on-action'. However, as Van Manen (1977) argues, neither of these concepts considers 'anticipatory reflection' or the envisaging of experience prior to the event. Schön (1982) is further critiqued because his model portrays reflective practice as a solitary act and this belittles sociocultural perspectives of learning as participation

in socially-constructed communicative acts (Bandura, 1986; Vygotsky, 1978; Bruner, 1983; Hawkins, 2004; Grant and Gillette, 2006), and growing work in the field of the social dimension in developing reflective practice in teacher education through online means (Murillo, 2002; Borko, 2004; Davis & Roblyer, 2005; Locke, 2006; Crawley, 2009; Yang, 2009; Salazar, Zenaída Aguirre-Munoz, 2010; Fox and Nuñez-Lucas, 2010; Gleaves and Walker-Gleaves, 2010; Brooke, 2012a, b, c).

In addition to the processes of reflection, diverse views exist regarding the content or main focus of reflection. Two prominent characteristics argued to be essential components of reflective practice are critical reflection and experiential reflection or 'assumption analysis' (Brookfield, 1995). According to a great number of teacher educators (Carr and Kemmis, 1986; Smyth, 1989; Sparks-Langer *et al.*, 1990; Valli, 1993; Korthagen, 2001, 2004; Hatton and Smith, 1995; Brandt, 2006; Grant and Gillette, 2006; Pollard, 2008), critical reflection with the aim of improving society should be the goal of the reflective process. Reflectors should therefore be fully aware that what goes on in the classroom is inextricably linked to the social, political and cultural institutions of any particular society. Other teacher educators (Brookfield, 1995; McAdams, 2004) posit that the most important content of reflection should be the focus on one's own school life experiences as a student, on the grounds that processes of transference from schooling (for example, role model or bad teachers), are extremely significant in the construction of one's own identity, beliefs and subsequent practices as a teacher. Thus, the faculty to reflect on one's assumptions and ideologies is essential and it is argued that moving from this process of identification to entertain emerging and counter-intuitive ideas to these is possible and fruitful through reflective practice.

With this diversity, it is difficult to relay definitions of reflective practice. Black and Plowright's (2010) is an effective one as it can be interpreted to contain elements regarding both reflective processes and content as outlined above:

'Reflection is the process of engaging with learning and/or professional practice that provides an opportunity to critically analyze and evaluate that learning or practice. The purpose is to develop professional knowledge, understanding and practice that incorporates a deeper form of learning which is transformational in nature and is empowering, enlightening and ultimately emancipatory' (p. 246).

Paper journaling as a vehicle for developing reflective practice

One effective, traditional tool for developing reflective practice is open book or paper journaling (Calderhead and Gates, 1993; LaBoskey, 1993;

Ballantyne and Packer, 1995a; Ballantyne and Bain, 1999; Daloglu, 2002; Borko, 2004; Uline, Wilson, and Cordry, 2004; Clarke and Jarvis-Selinger, 2005; Hussein, 2006; Chitpin, 2010, 2011). Traditionally used for humanistic and dialogic purposes, paper journaling provides first, a space in which users may express their thoughts, offering themselves, and restricted stakeholders, glimpses into their emerging beliefs; and second, to create dialogue, which is often quite personal, for the purpose of constructing significant understandings and developing beliefs through social, normally asynchronous, collaborative, discourse.

However, despite the apparent benefits, paper journaling is critiqued for its limitations. Three predominant reasons are provided. First, too often the personal journal is a closed space, neglecting opportunities for collaborative learning (Hatton and Smith, 1995); second, entries are product-oriented rather than process-oriented (Sparks-Langer, et al., 1990) as these tend to be read by tutors on submission of a reflective portfolio assignment for grading (as is the case in this researcher's context); third, training in reflection is seldom offered prior to paper journaling, and trainees are often not aware of how to go about undertaking processes of reflection (Daloglu, 2002).

The online environment as a vehicle for developing reflective practice

In response to the disadvantages of paper journaling, a new, more open and collaborative tool in teacher education has been increasingly utilized and researched (Murillo, 2002; Galanouli and Collins, 2000; Simonsen, Luebeck and Bice, 2009; Crawley, 2009; Yang, 2009; Salazar, Zenaida Aguirre-Munoz, 2010; Fox and Nuanez-Lucas, 2010; Gleaves and Walker-Gleaves, 2010; Brooke, 2012a, b, c). This is e-journaling (often referred to as blogging) and collaborative communication through online discussion forums. It is argued that asynchronous communication leads to a more reflective product as users have more time to compose their thoughts compared to face to face interaction. In addition, many users learn vicariously, through observing. These two significant features are summed up in the term 'transactional distance', which is the freedoms in time and space that the online environment provides.

In 2013, virtual learning environments (VLEs), in particular, Blackboard and Moodle platforms, were utilized in over four thousand tertiary institutions in more than sixty countries. Murillo (2002) along with Simonsen, Luebeck and Bice (2009) discovered that during block practice, a great number of postings were shared between online participants, constructing highly-focused topic-related dialogue and problem-solving offering important professional insights via this new medium. In addition, Yang (2009) found that

teacher educators helped to raise student-teacher participants' levels of critical reflection through responding to online, asynchronous postings. In spite of these positive reports, however, as Salazar et al (2010) state, further work is needed in the field of developing reflective practice in this environment, particularly on increasing the depth of reflections.

The study

Context, researcher roles and trainee participants

Over eighty percent of Hong Kong's primary school teachers and thirty percent of its secondary school teachers are graduates of the Hong Kong Institute of Education. As part of the third year of the Bachelor of Education programme in English language education, teachers, training to work in both primary and secondary fields, are asked to spend a period of eight weeks' block practice in state schools. This researcher, in his dual capacity as Field Experience Supervisor and Senior Teaching Fellow in English language at the Department of Linguistics and Modern Languages, investigated how these trainees' reflective practice capabilities could be developed using the online environment. Three groups of six to eight trainees participated in each case study, and these took place over one semester (approximately twelve weeks). The entire collective case study approach was conducted over a period of eighteen months. The participants were selected randomly and were not acquainted with each other or this researcher prior to the study. Participants were aware of the intended objective and participated collaboratively to develop their reflective capabilities.

Research purpose, objective and question posed

One overall purpose framed this investigation: *to analyze and enhance the reflective practice capabilities of student-teachers on block practice in Hong Kong primary and secondary state schools.* Proceeding from the study's purpose, the objective was: *to construct a process exploiting the online environment to develop reflective practice capabilities.* In order to meet this objective, the following research question was posed: *how can the reflective practice capabilities of pre-service teacher trainees be developed through online means?*

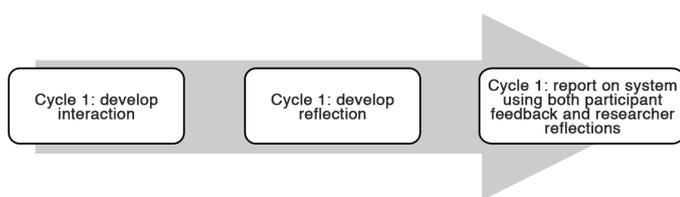
Research methodology design

There is a diverse understanding about what the term 'action research' actually signifies. Any definition of action research methodology will commonly be carried out by a participant as agent for change in a project through a systematic process of planning, action, and reflection on action creating a complex spiral of exploratory change. For this to occur, there is a constant interplay between the gathering of evidence about practice and reflection on this data, as the researcher seeks proof for planned change in the research design.

This evidence-gathering may involve multiple sources and methods.

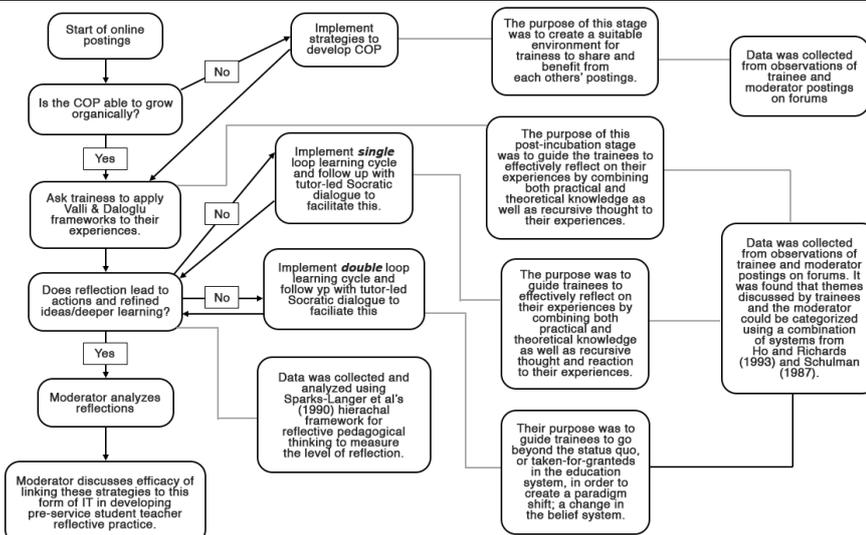
A diagram explaining the preliminary action research plan is given below (figure one). This is then followed, in figure two, by another explaining the final research process implemented by the end of case study three to achieve the main objective of the study. It can be observed that, although these processes embody the same fundamental stages, they appear quite different. This is because whereas cycles in figure one can be seen to represent the preliminary purpose and broad objectives at the outset of the research, figure two represents the strategies actually conducted in order to achieve these. Thus the differences that can be observed between figures one and two represent the learning journey of this researcher.

Figure 1: the initial action research plan



Cycle one in figure one is related to ‘start of online postings’ and ‘is the COP able to grow organically?’ in figure two. Cycle two in figure one is related to ‘ask trainees to apply Argyris and Schön’s (1978) double loop learning cycle’, ‘are trainees able to apply the double loop learning model?’ and ‘does reflection lead to refined ideas/ deeper learning?’ in figure two. Cycle three in figure one is related to ‘post-case study: interview participants to ascertain their perceptions with regards to the development of their reflective practice having used e-journaling and online discussion forums in this way’ and ‘moderator discusses efficacy of system in developing pre-service student teacher reflective practice’ in figure two. Cycle one does not fall into the scope of this paper but can be read in another publication (Brooke, 2012c).

Figure 2: the final action research process



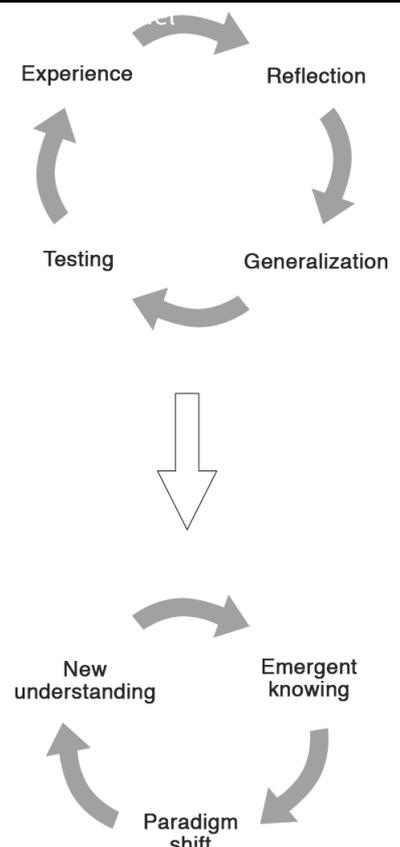
This action research process can be seen as a learning curve from ‘unconscious incompetence’ (more or less unaware of the knowledge required to achieve the aims) to ‘conscious incompetence’ (emerging awareness of requirements to achieve aims) to ‘conscious competence’ (a newly-found competence in achieving aims with a constant monitoring of these strategies) to relatively ‘unconscious competence’ (a use of strategies as naturalized or second nature). Through an ongoing process of action based on self-directed reading of literature in the field promoting structured mechanisms for facilitating reflective practice capabilities (notably work by Argyris and Schön, 1978; Kolb, 1984; Valli, 1993; Daloglu, 2002; Korthagen, 2001, 2004) as well as literature on the moderation of online virtual learning environments (notably Wenger, 1998; Salmon, 2002, 2004; Lewis & Allen, 2005), a conceptual framework (figure four) and a facilitator model was constructed which was found to effectively develop reflective practice capabilities. This model can be seen as the product of this research (see figure six).

Conceptual framework adopted to facilitate reflections

Argyris and Schön’s (1978) reflective cycle model

By creating a visual representation of the stages of learning, it is said that learners can be guided through the processes of reflection moving from one cognitive structure to the next. The Argyris and Schön (1978) model was selected for this purpose (see below):

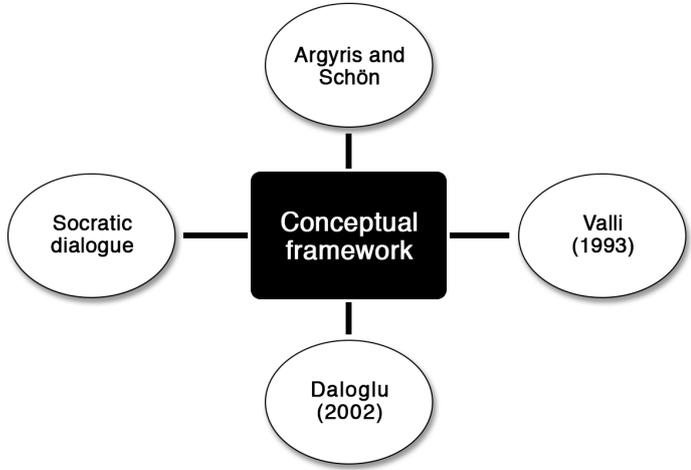
Figure 3: Argyris and Schön’s (1978) double loop



The first stage of learning is the single loop learning cycle: this learning process is similar to an action research cycle which is attempting to improve the status quo. The second stage of learning is the double loop learning cycle. Reflection here is more fundamental, going beyond working with meaning within the present governing variables. This may lead to the changing of one's perspectives and the formulation of a 'paradigm shift' resulting in a 'new understanding' of an event. As its description suggests, this is commonly a notion that turns a way of thinking on its head, or, as the colloquial term puts it, 'a thinking outside of the box'. One clear example of a shift in perspective leading to transformative learning might be for a trainee to radically change her perspective to question what the students are doing rather than the teacher-supervisor during a classroom observation.

At the outset of the first case study, it was soon made evident that trainees found it difficult to apply the Argyris and Schön (1978) model. Feedback generated through its application made it evident that participants found it complex and that it required scaffolding. As a result, a conceptual framework was constructed to scaffold (see figure four).

Figure 4: final conceptual framework applied



Daloglu's (2002) questioning framework
 Daloglu's (2002) framework was designed for pre-service teacher-trainees during block practice. She notes the success of her relatively simplistic four-category framework as guidance in paper journaling. These categories are:

- What did I already know but benefited from observing/ teaching in school?
- What did I not know but learnt from observing/ teaching in school?
- What would I like to implement in my own teaching?
- What are my comments on and reactions to the experiences I have had?

Daloglu (2002) reports that, by using this framework, trainees were able to conduct mini-action research projects and write about a diverse set of issues. In other words, this framework could enable participants to follow the single loop of the Argyris and Schön (1978) model. The inclusion of observations as an important aspect to the framework is also a reason why this model was chosen as it is believed that neophytes should be encouraged to observe peers and more experienced trainers, and share knowledge and experiences as often as possible during block practice in order to develop professionally.

Valli's (1993) typology of reflection

Valli (1993) proposes five characteristics of reflection: technical; in-action; on-action; dialectical (experiential); deliberative (conceptual and theoretical); and critical. From these, one was used for this conceptual framework because the others are present in the Daloglu (2002) framework and the Argyris and Schön (1978) model. This is 'deliberative reflection' in contrast to dialectical (experiential) reflection. This distinction is similar to that put forward by Korthagen (2001, 2004), who relates the Aristotelian terms 'episteme' and 'phronesis': 'phronesis' is 'theory with a small t' or dialectical, non abstract practical knowledge tailored to the specific needs and concerns of the teacher and the concrete situation under reflection; 'episteme' or 'theory with a capital T', is conceptual knowledge based on expert literature from the field constructed over time, and which can be generalized to help to understand diverse learning and teaching situations. In examining reflection content, Valli (1993) thus argues that it is quintessential for neophytes to synthesize both practical and conceptual content. Therefore, when analysing a practical problem in the field, the application of theoretical perspectives is required. Conversely, when examining an educational principle or theory, implications for practice must be generated and explored. With regard to the Argyris and Schön (1978) model, 'deliberative reflection' is associated with the notion of 'generalization' of the single loop learning cycle, thus the Valli (1993) construct was applied to facilitate this aspect of the cycle.

Socratic dialogue

For the scaffolding of the double loop learning process, a more interactive strategy, in the form of Socratic dialogue, was required. The term appears to have its origins in Ancient Greece through Plato in the Socratic Dialogues. The Sophists would seek the truth about a matter by rationally working to study each other's views so as to better understand the topic of discussion. The ultimate objective was thus to understand the truth of the matter not to persuade an opponent. This is a technique that has been used in distance education by Holmberg (see 'Theory and Practice of Distance Education, 1989), Laurillard (see the 'Conversational Model, 1993) and

more recently by Ros, Sol and Truman (2007) and Yang, (2009). Unlike the Argyris and Schön (1978) cycles and the Daloglu (2002)/ Valli (1993) hybrid, this strategy is applied after reflections have been recorded. It is thus an intertextual technique: comments and prompts are embedded into postings to enable collaborative interactions asynchronously. These are then responded to by the original author thus constructing dialogic communication. The ‘discount categories’ in the table below, represent an exploration of the different types of embedded communications that an online tutor may choose to use when engaged with trainees in Socratic dialogue. These are referred to as ‘moves’. These moves are based on the DISCOUNT coding system developed by Pilkington (1999; 2001). In her research with student teachers, Walker (2004) found that the most common types of move were probe (asking questions to elicit more information from a student) and challenge (questions to encourage a student to justify an opinion or argument). She reports that ‘probe’ moves followed by ‘challenges’, used in sequence, were most effective in guiding students to develop an argument thread in their reflections. She also notes that ‘counter’, although used sparingly, might be effective in furthering discussions as long as students perceive this as a hypothetical ‘game tactic’ (2004: 181) rather than as a strong critique or even a correct answer.

Table 1: Walker’s (2004) discount categories based on Pilkington’s (1999, 2001) coding system

Move	Discount categories
	Description
Open	Start a new topic or sub-topic
Instruct	Provide information that constitutes a teaching point
Probe	Ask a question to elicit more information about a fact or opinion
Challenge	Ask a question to elicit a defense of a line of argument
Counter	State an opinion or ask a question containing an alternative line of argument
Inform-fact	State a fact
Inform-opinion	State one’s personal opinion
Encourage	Monitor progress and give encouragement and/ or positive feedback
Critique	Give constructive criticism
Ask/clarify	Ask a clarification question
Metastatement	Ask a question or make a statement about the task (rather than the topic)

Yang (2009) and Davis (2003) report that interactions with instructors applying Socratic dialogue enabled trainee reflections to increase in depth. Similarly, Magee (2001) found that through empathizing with trainees’ reflections online and gradually guiding

trainees to a proper understanding of an issue through Socratic dialogue, there was a marked increase in in-depth analyses. Further, Yang (2009) demonstrates that instructor intervention created a shift from merely twenty percent to over forty percent of student reflection productivity, enabling more sharing and collaborative learning to occur.

Data collection and content analysis conducted

The total number of postings collected was three hundred and ninety seven. Postings ranged from fifty to three hundred words. The average posting was one hundred and forty words. Personal writings and more objective research notes based on observations in addition to analysis of salient textual material and interviews comprised the research instrumentation. The content analyses for reflections were conducted using a well-established instrument from Sparks-Langer et al (1990). This was selected because Hussein (2006), in a similar study, found it very suitable for grading reflections. There are seven levels to the reflective hierarchy. These are given below with examples from this researcher’s data to facilitate conceptualization:

- i. No descriptive language;
- ii. A simple, layperson description: *“I brought up a website in class”*.
- iii. Events labeled with appropriate pedagogical terms or concepts: *“I brought up a concordancing website in class.”*
- iv. Explanations with traditional or personal preferences given as the rationale. The above plus: *“I have found that a concordancing programme can be useful for teaching collocations”*.
- v. Explanation of an event using pedagogical principle(s). The above plus: *“I tried to show my students how this software can be used for discovery-based learning strategies.”*
- vi. Explanation with principle/theory and consideration of contextual factors such as student characteristics or community factors. The above plus: *“Then, my students tried this method in one of the school’s computer rooms. I found that they were very interested in this. We observed verbs such as ‘suggest’; ‘recommend’; ‘require’ to see if they were followed by a ‘that-clause’ or not. I am now striving to work out some activities in order to increase students’ incentive to do this at home too”*.
- vii. Explanation with consideration of ethical, moral or political issues. The above plus: *“Also, next week, I want my students to learn to work cooperatively together in groups to do these activities. This way,*

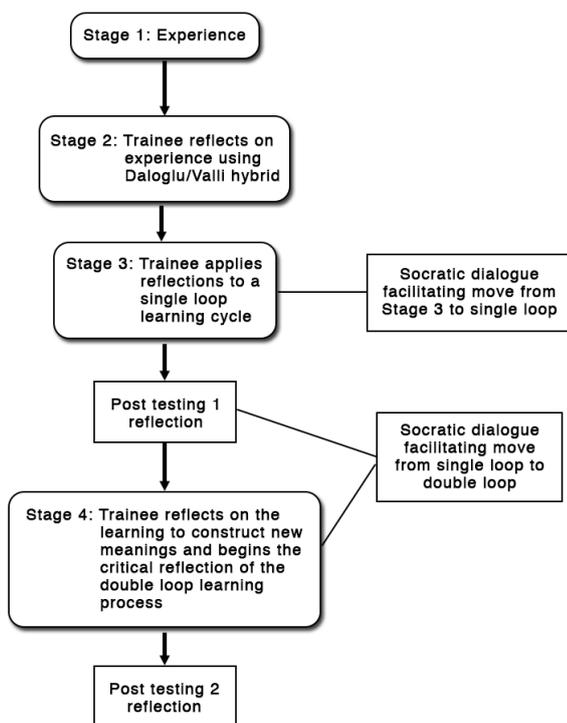
they can also help each other in the discovery process and learn to value each other's work”.

It can be observed that the levels presented by Sparks-Langer *et al* (1990) range from layman to professional descriptive reflection; from professional descriptive reflection with added personal value to the incorporation of a wider scope by elaborating contextual factors; and then finally, to wider implications and thus higher levels of critical reflection, implementing ethical, moral or political issues related to education.

As the data grouping for the thematic analyses conducted might be critiqued for objectivity, postings were subjected to inter-rater reliability. Inter-rater reliability is the degree to which raters share agreement. This demonstrates homogeneity and is useful in determining whether variables or scales are effective or deficient. An informed rater was asked to classify ten random samples for levels of reflection. The inter-rater reliability was high for this as agreement was reached for the coding of nine from ten decisions. The area of discordance was based on an interpretation of Sparks-Langer *et al*'s (1990) terminology. Once this inter-rater variation had been discussed, the rater and this researcher agreed absolutely with the content analyses. Results

The application of the conceptual framework resulted in the following reflective practice procedure which has been entitled the 'Model for developing reflective practice online' (see figure five below).

Figure five: 'Model for developing reflective practice online'



In the next section, a transcription of online postings is provided to illustrate how the model above was applied to facilitate reflective content at Sparks-Langer *et al*'s

(1990) level 7.

Stages one, two and three (single loop learning)

Stage one, as indicated in the diagram, is the first stage. Trainees experience something during block practice that they perceive warrants further attention. Trainees are aware that they are agents for change at this stage. At stage two, students are asked to reflect on the nature of this experience using the framework from Daloglu (2002) and applying deliberative reflection (Valli, 1993) to it; in other words, they are required to search out readings about similar experiences or methods to deal with these from outside expert sources. In relation to the Argyris and Schön (1978) model, this is 'experience', followed by 'reflection' and 'generalization' on the single loop learning cycle. Using the Daloglu (2002) questioning framework as a scaffold, the 'reflection' stage became a period of time during which trainees were successfully comparing their knowledge or lack of knowledge about present and past personal educational experiences. This relates to Daloglu's (2002) questions: *What did I already know but benefited from observing/ teaching in school? What did I not know but learnt from my observations/ teaching in school* ('Reflection-in' and 'reflection-on-action')? An example of a reflective posting at this stage from Helen is provided:

"After the first week's teaching, my original teaching philosophy: making the students' learning as enjoyable and meaningful as possible, wavered a little bit. Under the pressure of frequent assessment, my teaching plans need to include quite a lot of vocabulary items and grammar exercises to prepare students for the exams" (Helen).

The next question in the Daloglu (2002) framework is 'what would I like to implement?' in response to this puzzle. Thus, a potential solution is imagined ('anticipatory reflection'). Interestingly, it was another student (Rain) who instigated this part of the reflections:

"I think we can still use interesting materials (e.g. songs, movies etc.) to teach our students. I think the problem is how we strike the balance between 'drilling' and 'meaningful tasks". Nunan (2004) has proposed a continuum of tasks - on one end is the very open, authentic communicative task whilst on the other is some "drilling" or rote learning tasks. In his opinion, it is possible to make 'drilling' tasks communicative and meaningful" (Rain).

Rain answers Helen's posting by applying the Daloglu (2002)'s third question. She also aids Helen to move through the 'generalization' phase of the single loop by citing Nunan (2004) as useful further reading. Thus, the puzzle has now become a potential idea for collaborative investigation (collaborative reflection-on-action). Trainees followed on from this point to the 'testing' stage. Therefore, they applied interventions (reflection-

in-action) and considered their efficacy using Daloglu's (2002) last question: *'What are my comments on and reactions to the experiences I have had'* (reflection-on-action)? This makes up post testing one in the 'model for developing reflective practice online'. Helen writes several days later about how she developed an activity to make drilling more student-centered:

"In my class, I tried a new activity 'New Words of the Day' because some students showed me English words that they wanted to learn from our text book. I whisper the word to a student who takes the courage to describe the word in front of the class. If the class guesses the word, the describer gets one point. The reaction of the students to the game was great. They were motivated and attentive in class. A lot of students raised up their hands to answer" (Helen).

Rain was very praising of Helen's effort in her response even stating that she too would trial this idea. Using this extract, there is thus a refinement of practice to improve the educational system in place (status quo) - this is the goal of the single loop learning model and it has been facilitated through a process of collaborative enquiry and a construction of knowledge about an aspect of practice.

Stage four (double loop learning)

Stage four marks the transition to the double loop learning cycle. This involves the development of a 'paradigm shift' through further reflection-on-action and a resulting 'new understanding'. It was found that embedded tutor Socratic dialogue could help to scaffold this shift. This researcher's comments are underlined below and are embedded in the posting as it was done online. The names later given to the communicative moves are in bold and in brackets.

In my class, I tried a game: 'New Words of the Day' because some students showed me English words that they wanted to know from our text book. They must feel at ease with you if they are able to do this so early on (comment). I whisper the word to a student who takes the courage to describe it in front of the class. If the class guesses the word, the describer gets one point. The reaction of the students to the game was great. They were motivated and attentive in class. A lot of students raised up their hands to answer" (Helen). *'I think it's important to find ways of making learning activities interesting (empathize). Engaging the learner is essential in teaching (restate). What conclusions might you draw from this? Why do you think this activity was so successful (Probe)?'*

The 'comment', 'empathy' and 'restating' are designed to demonstrate a good understanding and appreciation of the issue. The 'restating' also consolidates the process of 'generalization' adding to Valli's (1993) 'deliberative reflection' construct. Following this, the 'probe'

scaffolds the uncovering of potential deeper, underlying meanings implicated in this event, and these belong in the realm of the double loop learning cycle. In her reply the following day, Helen shifts her understanding away from interest and engagement to focus more on the student-centeredness of the learning activity. This demonstrates an 'emerging knowing' which is followed by a 'paradigm shift' and ultimately, a 'new understanding' of the event.

"I think students were very motivated and attentive in class because they chose the words we could learn from the textbook. This gave them more responsibility. In Hong Kong, students are too often given vocabulary lists to learn relatively passively, and these are commonly tested through whole class dictations. I will try to let students have more responsibility to choose what we learn. This is much more student-centered and I think more motivating" (Helen).

To round off Helen's interactions, promote collaborative discussion and to offer some input as to why this might be in the realm of the double loop learning cycle, this researcher then posted the following:

"So this is a whole new way of looking at your teaching. We might say it is a 'paradigm shift' because we are moving away from a continuous teacher-centered and exam-oriented focus in which students are relatively passive (as you say), to one in which students take the lead and responsibility to choose a portion of the language syllabus to be learnt. This is very innovative; a characteristic of promoting learner autonomy, which is, I think, an ethical issue: our students should have a say in what they are expected to learn; after all, they must work very hard to learn the language (Inform/fact). Have the others had a similar experience? What do you all think about this (Eliciting other trainees' comments)?"

From this point a brief discussion involving three other participants was held, reiterating the importance and difficulty of empowering students.

To sum up, through the data, it can be seen that the focus is turned on its head in the extract above. Rather than discussing how to make teacher-fronted activities more engaging, the interaction considers how to decrease teacher-control and increase student-responsibility in course content. The discourse shifts from existing assumptions, and structural norms, to challenge what is a fundamental issue: instead of a top-down, transmissive educational approach which focuses on pre-fabricated, exam-oriented language syllabi, teachers might strive to facilitate, at least in part, a more bottom-up, process-oriented approach to course design by encouraging student-participation. This may be transformative as its development could

aid in the growth of the child as a more responsible, critical and ultimately, more independent being.

Discussion

Less than ten percent of postings were effectively applying the double loop learning cycle. However, students revealed a great propensity for action research, with twenty-five percent of the postings based on an effective application of the single loop learning cycle, in particular, 'what have I learned from the intervention?' Thus, the Daloglu (2002)/ Valli (1993) hybrid combined with the single loop learning graphic offered by Argyris and Schön (1978) was found by participants to be accessible and applicable. The overall objective of the research was to facilitate genuine, transformative, critical reflection. The double loop learning cycle was found to be difficult for trainees to apply as a graphic aid. In particular, the conceptual difficulty of the notion of a 'paradigm shift' was communicated as problematic by participants, some asking if it meant that they were required to describe their personal teaching philosophies and if these had changed during reflections. To scaffold the notion of a 'paradigm shift', it was found that offering concrete examples such as the one previously described about a shift in classroom observation practices was quite effective. However, in general terms, these results demonstrate the difficulty neophytes have in attaining this level of reflection. Indeed, Moon (1999) even goes as far as to propose that it might be an innate skill. She states (1999): 'whether or not the capacity to function in this manner can be coached is an interesting issue' (p. 145). In this researcher's opinion, it seems that explicit, extensive guidance over a longer time frame than that used in this context might prove more successful. In addition, the lack of related academic papers and empirical data in this field offers little research with which to compare these findings.

Future research

First, research facilitating paradigmatic shifts in neophyte reflections could be more prevalent to enable the field to evolve. This would particularly be useful in understanding the actual process of the paradigm shifts that occur, in particular, if these can be solely facilitated by the guide, or whether they require a form of personal "conversion" experience, and if the latter is the case, how this occurs as reported by the trainees. Second, future research might focus on increasing the forms of online Socratic dialogue by adding embedded hyperlinks to appropriate readings or other media, such as videos of trainers to construct a more sophisticated learning environment. Third, it might be more fruitful to implement a form of blended training in order to facilitate double loop learning cycle reflections. One disadvantage of the written tutor and peer asynchronous discourse online is that it is time

consuming to conduct and therefore, there tends to be less content than there might be if a face to face conference was also conducted. In this way, the input might be more extensive. Evidently, this runs the risk of overloading trainees during practicum; however, an experienced trainer, based on an evaluation of the trainee's situation and level of expertise, should be able to judge what an adequate amount of input is.

Conclusion

It is evident that this project impacted on participants' reflective practice capabilities. Although, new understandings of classroom dynamics based on paradigm shifts were rare, the fact that trainees were able to conduct their own mini-action research projects (post-testing one) to improve the status quo, and to reflect on the efficacy of these interventions, demonstrates this. It is therefore believed that there is a strong case for this genre of online practice for training pre-service teachers on practicum. However, more research is required if these trainees are to become highly-adept reflectors and able to observe experiences from differing standpoints. It is thus hoped that further research in this field will be conducted to increase the benefits of the practicum experience.

References

1. Argyris, C., & Schön, D. (1978). *Organizational learning: A theory of action perspective*. Reading, Mass: Addison Wesley.
2. Ballantyne, R., & Bain, J. (1999). Using journal writing to enhance student teachers' reflectivity during field experience placements. *Proceedings of the Annual Conference of the Australian Association for Research in Education, Brisbane, Queensland. November, 30 - December 4, 1999*.
3. Ballantyne, R., & Packer, J. (1995). *Making connections: using student journals as a teaching/learning aid*. HERDSA Gold Guide 2: Canberra.
4. Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice-Hall.
5. Black, P.E., & Plowright, D. (2010). A multi-dimensional model of reflective learning for professional development. *Reflective Practice, 11*, (2), 245-259.
6. Borko, H. (2004) Professional Development and Teacher Learning: Mapping the Terrain. *Educational Researcher, 33*, (8), 3-15.
7. Brandt, C. (2006). Allowing for practice: a critical issue in TESOL teacher preparation. *ELT Journal 60*, (4), 355-364.
8. Brooke, M. (2012a). Why asynchronous computer-mediated communication (ACMC) is a powerful tool for language learning. *Open Journal of Modern Linguistics, (2)*, 125-129.
9. Brooke, M. (2012b). Enhancing pre-service teacher training: The construction and application of a model for developing teacher reflective practice online. *Open Journal of Modern Linguistics, (2)*, 180-188.
10. Brooke, M. (2012c). A series of case studies exploring how to develop and maintain a community of pre-service trainee ESL teachers on field experience practicum in Hong Kong. *International Journal of Applied Science and Technology, 10*(2), 42-52.
11. Brookfield, S. (1995). *Becoming a critically reflective teacher*. San Francisco: Jossey Bass.
12. Bruner, J. (1983). *Child's talk: Learning to use language*. New York: Norton.

13. Calderhead, J., & Gates, P. (1993). Introduction. In J. Calderhead & P. Gates (Eds.) *Conceptualizing reflection in teacher development* (pp.1-10). London: The Falmer Press.
14. Carr, W., & Kemmis, S. (1986). *Becoming critical: Education, knowledge and action research*. Lewes: Falmer.
15. Chitpin, S. (2010). A critical approach for building teacher knowledge. *The International Journal of Education*, 2(1), 1-14.
16. Chitpin, S. (2011). Can mentoring and reflection cause change in teaching practice? A professional development journey of a Canadian teacher educator. *Professional Development in Education*, 37(2), 225-240.
17. Clarke, A., & Jarvis-Selinger, S. (2005). What the teaching perspective of cooperating teachers tell us about their advisory practices. *Teaching and Teacher Education*, 21(1), 65-78.
18. Collier, L. (2011). The need for teacher communities: An interview with Linda Darling-Hammond. *Council Chronicle: The National Council of Teachers of English*, 21(2), 12-14.
19. Coskie, T., & Place, N. (2008). The national board certification process as professional development: The potential for changed literacy practice. *Teaching and Teacher Education*, 24(7), 1893-1906.
20. Crawley, J. (2009). Much technology, but limited impact. What progress has been made with Learning Technology in the Post Compulsory Education (PCE) sector? *Teaching in the Lifelong Learning Sector 1*, 1.
21. Daloglu, A. (2002). Fostering reflective teaching from the start: journal keeping in pre-service teacher education. In J. Burton & M. Carroll (Eds.), *Journal writing: Case studies in TESOL practice series* (pp. 87-101) Alexandria, VA: Teachers of English to Speakers of Other Languages.
22. Darling-Hammond, L. (2006). Constructing 21st-century teacher education. *Journal of Teacher Education*, 57(3), 300-314.
23. Davis, N.E., & Roblyer, M.D. (2005). Preparing teachers for the "schools that technology built": Evaluation of a program to train teachers for virtual schooling. *Journal of Research on Technology in Education*, 37(4), 399-409.
24. Davis, S.C., & Wise, W.S. (2008). GPS: Global Position Statements that define achievement. *Proceedings at the Southeast Region of the Association of Teacher Education*, October 17th, 2005. Myrtle Beach, SC.
25. DeFalco, A.A., Weiss, E.M. (2005). "Progressive = Permissive? Not According to John Dewey- subjects Matter!" in *Essays in Education*, 14. <http://www.usca.edu/essays/vol142005/defalco.pdf>
26. Derrick, J., & Dicks, J. (Eds.). (2005). *Teaching practice and mentoring: The key to effective literacy, language and numeracy teacher training*. Leicester: National Institute of Adult Continuing Education.
27. Dewey, J. (1933). *How we think*. Boston: D.C. Heath and Co. Publishers.
28. Etscheidt, S., Curren, C.M., & Sawyer, C.M. (2012). Promoting reflection in teacher preparation programs. A multilevel model. *The Journal of the Teacher Education: Division of the Council for Exceptional Children*, 35(1), 7-26.
29. Furlong, J., McNamara, O., Campbell, A., Howson, J., & Lewis, S. (2008). Partnership, policy and politics: initial teacher education in England under New Labour. *Teachers and Teaching*, 14(4), 307-318.
30. Galanouli, D., & Collins, J. (2000). Using unmediated computer conferencing to promote reflective practice and confidence-building in initial teacher education. *Journal of Information Technology for Teacher Education*, 9(2), 237-254.
31. Gleaves, A., & Walker, C. (2010). Student teachers' situated emotions: a study of how electronic communication facilitates their expression and shapes their impact on novice teacher development during practice placements. *Teacher Development*, 14(2), 139-152.
32. Grant, C.A., & Gillette, M. (2006). A candid talk to teacher educators about effectively preparing teachers who can teach everyone's children. *Journal of Teacher Education*, 57(3), 292-299.
33. Hatton, N., & Smith, D. (1995). Reflection in teacher education: towards definition and implementation. *Teaching and Teacher Education*, 11(1), 33-49.
34. Hawkins M.R. (2004). Introduction. In M.R. Hawkins (Ed.), *Language learning and teacher education: A socio-cultural approach* (pp. 1-9). Frankfurt Lodge: Cromwell.
35. Hussein, J.W. (2006). Locating the value conflict between the rhetoric and practices of the public and teacher education in Ethiopia within the hegemony of the global neo-liberalism and seeking the alternative in critical pedagogy. *Journal for Critical Education Policy Studies*, 4(2), 1-16.
36. Imig, D.G., & Imig, S. R. (2006). What do beginning teachers need to know? An essay. *Journal of Teacher Education*, 57(3), 286-291.
37. Jewett, P., & MacPhee, D. (2012). Adding collaborative peer coaching to our teaching identities. *The Reading Teacher*, 66(2), 105-110.
38. Johnson, K.E. (1996). The vision versus the reality: The tensions of the TESOL practicum. In D. Freeman and J.C. Richards (Eds.), *Teacher learning in language teaching* (pp. 30-49). Cambridge: Cambridge University Press.
39. Korthagen, F.A.J. (2001). (Ed). *Linking practice and theory: The pedagogy of realistic teacher education*. London: Lawrence Erlbaum.
40. Korthagen, F.A.J. (2004). In search of the essence of a good teacher: towards a more holistic approach in teacher education. *Teaching and Teacher Education*, 20, 77-97.
41. LaBoskey, V.K. (1993). A conceptual framework for reflection in pre-service teacher education. In J. Calderhead & P. Gates (Eds.) *Conceptualizing reflection in teacher development* (pp. 23-38). London: The Falmer Press.
42. Lewis, D., & Allan, B. (2005). *Virtual Learning Communities: A Guide to Practitioners*. Berkshire, Open University: McGraw Hill.
43. Locke, J. (2006). A new image: Online communities to facilitate teacher professional development. *Journal of Technology and Teacher Education*, 14(4), 663-678.
44. Liston, D., Witcomb, J., & Borko, H. (2006). Too little or too much: Teacher preparation and the first years of teaching. *Journal of Teacher Education*, 57(4), 35-358.
45. McAdams, D.P. (2004). The redemptive self: Narrative identity in America today. In D.R. Beike, J.M. Lampien, & D.A. Behrend (Eds.). *The self and memory* (pp. 95-115). New York: Psychology Press.
46. Melville, W., Bowen, G.M., Passmore, G. (2011). Pre-service teacher reflections, video-conference and WebCT: An exploratory case study. *Electronic Journal of Research in Educational Psychology*, 9(2), 799-822.
47. Moon, J. (1999). *Reflection in learning and professional development*. London: Kogan Page.
48. Murillo, E. (2002). *Using social network analysis to detect cohesive subgroups in Usenet news groups: an initial approximation to the study of virtual communities of practice*. Unpublished Master of Research Methods dissertation, University of Bradford, Bradford, U.K.
49. Newhouse, P., Lane, J., & Brown, C. (2007). Reflecting on teaching practices using digital video representation in teacher education. *Australian Journal of Teacher Education*, 32(3), Article 5.
50. Ng, C. (2012). Redesigning academic essays to promote teacher reflection on selected issues of learning and teaching related to the current educational reform in Hong Kong. *Teaching Education*, 23(4), 387-410.
51. Nunan, D. (2004). *Task-based language teaching*. Cambridge: Cambridge University Press.
52. Nunan, D. (2005). *Research methods in language learning*. Cambridge: Cambridge University Press.
53. Otero, V.K. (2006). Moving beyond the "get it or don't" conception of formative assessment. *Journal of Teacher Education*, 57(3),

247-255.

54. Ostorga, A.N. (2006). Developing teachers who are reflective practitioners: A complicated process. *Issues in Teacher Education*, 15(2), 5-20.
55. Pollard, A. (2008) *Reflective teaching: Evidence-informed professional practice*. (3rd ed.). London: Continuum.
56. Richards, J.C. (1998). *Beyond training*. Cambridge: Cambridge University Press.
57. Richards, J.C., & Crookes, G. (1988). The Practicum in TESOL. *TESOL Quarterly*, 22(1), 9-27.
58. Salazar, D., Aguirre-muñoz, Z., Fox, K., & Nuñez-Lucas, L. (2010). On-line professional learning communities: Increasing teacher learning and productivity in isolated rural communities. *Journal of Systemics, Cybernetics and Informatics*, 8(4), 1-7.
59. Salmon, G. (2002). *E-tivities: The key to active online learning*. London: Kogan Page.
60. Salmon, G. (2004). *E-moderating: The key to teaching and learning online*. (2nd ed.). London: Kogan Page.
61. Schön, D. (1982). *The Reflective practitioner: How professionals think in action*. London: Temple Smith.
62. Simonsen, L., Luebeck, J., & Bice, L. (2009). The effectiveness of online paired mentoring for beginning science and mathematics teachers. *The Journal of Distance Education*, 23(2), 51-68.
63. Smyth, J. (1989). Developing and sustaining critical reflection in Teacher Education. *Journal of Teacher Education*, 40(2), 2-9.
64. Sparks-Langer, G. M., Simmons, J., Pasch, M., Colton, A., & Starko, A. (1990). Reflective pedagogical thinking: How can we promote it and measure it? *Journal of Teacher Education*, 41, 23-32.
65. Uline, C., Wilson, J.D., and Cordry, S. (2004). Reflective journals: A valuable tool for teacher preparation. *Education*, 124(3), 456-461.
66. Valli, L.R. (1993). Reflective teacher education programs: An analysis of case studies. In J. Calderhead, & P. Gates. (Eds). *Conceptualizing reflection in teacher development* (pp. 11-22). London: The Falmer Press.
67. Van Manen, M. (1977). Linking ways of knowing with ways of being practical. *Curriculum Inquiry*, 6(3), 205-228.
68. Vygotsky, L.S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
69. Walker, S.A., & Pilkington, R.M. (2003). Facilitating debate in networked learning: reflecting on online synchronous discussion in higher education. *Instructional Science*, 31(1-2), 41-63.
70. Weiner, L. (2001). Two views on Manhattan's District 2. Standardization's stifling impact. *Education Week*, Feb, 29- 33.
71. Wenger, E. (1998). *Communities of practice*. Cambridge: Cambridge University Press.
72. Yang, S.H. (2009). Using blogs to enhance critical reflection and community of practice. *Educational Technology and Society*, 12(2), 11-21.

About the author:



Mark Brooke is Lecturer at the Centre for English Language Communication at the National University of Singapore. He has published in areas such as teacher training, corpora design and concordancing, discourse analysis, qualitative research methodology, educational policy-making and learner-centered pedagogy.