

Teacher training in a synchronous cyber face-to-face classroom: characterizing and supporting the online teachers' learning process

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This article discusses the learning process undertaken by language teachers in a cyber face-to-face teacher training program. Eight tertiary Chinese language teachers attended a 12-week training program conducted in an online synchronous learning environment characterized by multimedia-based, oral and visual interaction. The term “cyber face-to-face” is used here to describe this environment as it both resembles and differs from the physical face-to-face environment. This article discusses a two-phased program with a four-week online platform training (Phase 1) followed by an eight-week online teaching practice and observation (Phase 2), conducted from November 2006 to February 2007. Data collected throughout the program indicate a learning curve that could best be characterized by four stages – the “wow” stage, the “oh-oh” stage, the anxious stage, and the internalizing stage. This article focuses on how the trainees progressed through these four stages, and describes how their learning was supported in each stage through a cyclic approach of action, reflection, and improvement. The characterization of the four stages not only helps us to capture how trainee teachers learn about teaching online, and respond to the challenges and potentials this new form of teaching presents, but also helps the trainer to determine what knowledge and skills should be taught and what kinds of support should be provided at what points in the process.

Keywords: online teacher training; online synchronous learning; language teacher education; cyber face-to-face learning; computer-assisted language learning

Introduction

In computer assisted language learning (CALL) literature, the subject of teacher education, although growing, only occupies a small proportion (see Hubbard, 2008 and Hubbard & Levy, 2006 for a detailed discussion). As far as the quality of teacher training is concerned:

training continues to predominantly be acquired in an informal or *ad hoc* manner through conference workshops, in-services, personal reading and other forms of self-education. (Kessler, 2006, p. 23)

In terms of content, most of the training relates to learning to use a specific technology (e.g. Hampel, 2003; Hampel & Baber, 2003; Hampel & Hauck, 2004;

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Hampel & Stickler, 2005; Hauck & Stickler, 2006; Rosell-Aguilar, 2006; Stickler & Hampel, 2007; see also Levy & Stockwell, 2006 for a discussion). Some studies explore how technology, specifically computer-mediated communication, is employed as a regular component in their language teacher education program (e.g. Slaouti & Motteram, 2006; Tochon & Black, 2007; also see Lord & Lomicka, 2007, for a discussion).

However, an issue that is often easily overlooked in teacher education in CALL is the need to document and support the attitude, motivation, and identity change when teachers are learning new pedagogies. Affective factors, such as attitudes, motivation, and anxiety are much researched for their contributions to L2 acquisition in general. Mitchell and Myles (2004, p. 26) point out that:

social psychologists have long been interested in the idea that the attitudes of the learner towards the target language, its speakers and the learning context, may all play some part in explaining success or lack of it.

Consider Freeman (1989, p. 32):

Attitude is interplay of externally oriented behaviour, actions, and perceptions, on the one hand, and internal intrapersonal dynamics, feelings, and reactions on the other. It becomes a sort of bridge that influences the effective functioning of the individual teacher in particular circumstances. As such it begins to account for the differential successes, strengths, and weaknesses of individual teachers.

Attitudes, motivation, anxiety, and confidence alongside other variables have become a collected indicator of learners' readiness to enter into a certain learning discourse (see Dörnyei & Skehan, 2002; MacIntyre, Clément, Dörnyei, & Noels, 1998). However, these factors have not received enough attention in teacher education, as Loughran (2007) points out:

In fact, it could be well argued that in much of what we do in teacher education, attention to the cognitive domain too often dominates. Such domination can be to the detriment of the importance of recognizing and responding to one's emotions, feelings and reactions, all of which are so enmeshed in the experiences of learning and teaching about teaching. (p. 3)

Loughran refers to campus-based face-to-face teacher education in general. In comparison, the novelty, complexity, and synchronicity of a cyber face-to-face environment makes it even more important for us to recognize and respond to the trainee teacher's "emotions, feelings, and reactions". Typically, a cyber face-to-face environment is supported by a synchronous learning management system (SLMS) which integrates a variety of technologies (e.g. text chat, videoconferencing, and other data conferencing tools such as joint web browsing and desktop sharing) into one single platform.¹ Unlike teachers in campus-based teaching, who can refer to the ways they have been taught in schools, teachers new to online teaching and learning tend to feel more anxious and uncertain as the online environment differs, sometimes in unexpected ways, from the campus-based one in which they have been taught or in which they now teach. While new technological challenges may be expected, the subtle ways in which classroom management, feedback, interaction, etc. may differ are not so straightforward, and the similarities and differences between online and face-to-face teaching take time and practice to understand and

assimilate. The importance of nurturing the trainees' intrapersonal change also lies in the fact that a cyber face-to-face learning environment presents different sets of challenges from that supported by standalone technologies. Managing a live online classroom can be technically, pedagogically and psychologically demanding as text-based, oral and oral-visual interactions all happen at the same time. It was in such a multimodal environment that our teacher training program was conducted. This article aims to examine the changes in attitude, motivation, and confidence as the trainee teachers moved through the training program. Importantly, the trainees' perspective is the one that is taken here, with a view to capturing important facets of the individuals' learning experience as they progress. This aim is achieved by identifying and exploring the different stages of the changes undergone by eight language teachers in their journey to become confident and competent online teachers. Equally important, this article will discuss how the richness of their experiences was captured and how their learning process was supported through a carefully articulated and executed cyclic approach of action, reflection, and improvement.

Theoretical approach

The training program designed for this study consists of two phases. Phase 1 focused on online platform training (four weeks) and Phase 2 on online teaching practice and observation (eight weeks). Encouraging and enabling reflection at significant points in the program is a key strategy, not only for the purpose of data collection but also as a means of fostering trainees' personal and professional development. More importantly, such reflection was approached cyclically by providing each trainee teacher with three opportunities to reflect on their learning in Phase 1, and four rounds of online teaching and observation, and immediate reflection upon their own teaching and on the teachings by others in each round in Phase 2.

Our adoption of reflection as a means of training in Phase 1 was particularly influenced by Loughran and Northfield (1998, p. 15). They believe that "reflection is a personal process of thinking, refining, reframing and developing actions". We also used monitoring and self-reflection reports as a means of reflection in Phase 2, as reflection enables teachers to "systematically collect evidence from their practice, allowing them to rethink and potentially open themselves to new interpretations and to create different strategies for educating students" (Hamilton & Pinnegar, 1998, p. 1). When deciding on how the reflection should be done, we found Wallace's (1991, p. 56) "reflective cycle" inspiring. According to him:

The "reflective cycle" is a shorthand way of referring to the continuing process of reflection on "received knowledge" and "experiential knowledge" in the context of professional action (practice).

Another key component that was built into our training program was observation of teaching by peers and the use of monitoring reports to provide reflection immediately after class. The value of observation is neatly explained by Maingay (1988, p. 121), who points out that when observing teaching, the observer will be able to pick up new ideas and reflect on their own teaching through watching someone else. Lewis (2006, p. 593) also confirms that the observation of his teaching

by a “critical friend” was “[b]y far the most productive of the strategies” used for his professional development.

Methodology

Overview of the training program

As mentioned before, the 12-week training program was conducted in two phases – online platform training in Phase 1 and online teaching practice and observation in Phase 2. The training formally started with Module 1 in physical face-to-face mode on 15 November 2006, followed by Modules 2 and 3 conducted completely online with trainee teachers attending the training either from home or their offices. The fourth week in Phase 1 was designated for practice, reflection, and preparation for Phase 2. Phase 2 was divided into two parts: online individual teaching practice in the first four weeks and online team teaching practice for another four weeks. In the first four weeks, each teacher was required to teach 15 minutes per week for two weeks. In the last four weeks, we paired the teachers to conduct 30 minutes of team teaching per team per week for two weeks. Team teaching was conducted in two major formats – sharing the teaching equally and a co-teacher acting as a teaching assistant. In the former scenario, the two team members took turns to teach the class, while in the latter, one trainee teacher would engage the class with learning activities through the whiteboard, audio, video, and other tools, and the other would help on the side, e.g. to answer questions through the text chat, or upload resources to the whiteboard. During the online sessions, one teacher or a team would perform language learning activities with the class (e.g. a role play and a bingo game) in accordance with the students’ progress in their curriculum each week, much as we do in traditional classroom teaching, and the rest of the trainee teachers would observe the teaching.

Participants

Chinese language teachers

Eight teachers from three universities in Queensland, Australia participated in the training voluntarily. Among them, seven were Chinese native speakers and one a native English speaker. Data from the pre-training survey indicate that two of them had either briefly taught or attended online classes before but the rest did not have any online teaching and learning experience. None of them had used a desktop videoconferencing tool before. Four self-rated their computer competence to be 3 out of 5, with 5 being high, three chose 4, and only one chose 2. Their rating of their computer confidence corresponded to the level of competence they indicated. Pseudonyms were used for all participants in this study to protect privacy.

Distance Chinese language students

We invited all students who were studying intermediate Chinese through the Open Learning Program at Griffith University, Australia, to attend our online practice sessions in Phase 2. Only five students volunteered due to the small enrolment in the program and the non-compulsory nature of the participation. They attended the online classes from various parts of Australia, with one from China.

The synchronous learning management system (SLMS) – 3C

The training program was conducted on an advanced SLMS called Collaborative Cyber Community (hereafter 3C).² 3C has two modes: the asynchronous and synchronous modes. In the asynchronous mode, audio, video, and text-based learning resources (e.g. discussion forums, lecture notes, web-based course materials, assignments, and video recordings of cyber face-to-face classes) can be accessed. Our training program aims to help trainee teachers to develop pedagogies in managing the synchronous mode for teaching second language online. The synchronous mode consists of a main cyber classroom and group cyber classrooms. The group cyber classrooms are duplicates of the main classroom. As shown in Figure 1, these classrooms feature five major windows: the main audio and video, the control panel, the text chat box, the whiteboard, and the sub-video windows. Up to 18 sub-video windows can be displayed at the same time. The cyber classrooms are also supported by versatile synchronous data sharing tools, such as desktop sharing, window capture, joint web browsing, the Poll, remote control, and collaborative annotation tools (e.g. pens and pen colors).

Data collection

A combination of data collection methods was employed, not only for documenting the trainees' learning experience but also as a way of fostering the trainees' personal and professional development. Table 1 summarizes the data collection methods and data to be discussed in this study.

As shown in Table 1, data collection in Phase 1 was mainly by survey, and posting in the Discussion Forum in 3C. At the end of each training module, trainees

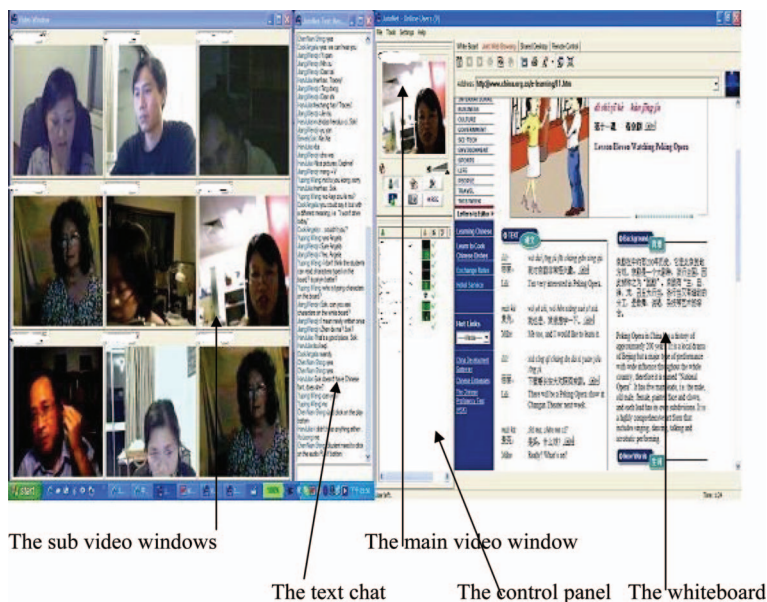


Figure 1. An example of the cyber face-to-face classroom in 3C. Reproduced with kind permission from Collaborative Cyber Community.

Table 1. Data collection methods and data presented in this study.

| Data collection methods | Data collected |
|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Phase 1: online platform training | |
| 1. Pre-training survey (background information about the participants) | 8 |
| 2. Reflection journals on the platform training part of the project (Modules 1, 2 and 3) | 21 (one survey for each of the three modules and 7 participants completed the surveys) ³ |
| Phase 2: online teaching practice and observation | |
| 3. Self-reflection reports: Each tutor who conducted an online class completed a self-reflection report | 26 reports |
| 4. Monitoring reports: Each tutor and the trainer completed a monitoring report for the tutor(s) who conducted the class each week | 210 reports |
| Throughout the training program | |
| 5. Discussion forum | 108 postings |
| 6. Final survey | 8 |
| 7. Video recording of all online training and practice sessions | 11 sessions (3 two-hour and 8 one-hour sessions) |

were asked to reflect on their experience through completing a reflection survey. The questions invited general responses and specific feedback according to the goals of the module with the aim of assisting trainees' reflection. The trainer also invited and encouraged postings from the trainees in the Discussion Forum, which served as a venue for social reflection. Among the 108 postings, 61 (57%) were generated in Phase 1 by both the trainers and all the trainees, concentrating on reflections on general issues such as how they felt about online teaching and their reactions to the occurrence of technical problems. The trainer also utilized the Discussion Forum to guide the trainees' personal and professional development and to provide explanations of and/or solutions to technical problems.

In Phase 2, all trainees were engaged in online teaching practice with distance language students, observation, and reflection. The self-reflection and monitoring reports (3 and 4 in Table 1) formed the core of this phase; they go hand-in-hand, and were aimed at facilitating reflection on the part of each trainee in relation to their individual teaching experiences and to the teaching of their peers. These reports provided each trainee with a cyclic, structured approach to the reflection process as they moved through their four rounds of online teaching. This process allowed not only for multiple self-reflections but also for multiple reflections upon and learning from the work of others (for more detailed discussion of the cyclic approach and these reports, see Levy, Wang, & Chen, 2009).

In addition, postings by both the trainer and the trainees in the Discussion Forum in 3C continued in Phase 2, although only occupying 47 (43%) of the total postings. They focused more on sharing online teaching experiences and pedagogies than on discussing technical problems. Specific topics for discussion were put forward by the trainer in the Forum, encouraging the trainees to explore general online pedagogies in more depth as they went on with their practice teaching. As the use of the Discussion Forum was not compulsory in our training, we did not see a balanced contribution from all trainees, with some posting a few and others more

than 10. A final survey completed the project and was used to record trainees' experiences, suggestions, and concluding remarks. All online sessions were video recorded through the recording function in 3C. As the project focused on the trainee teachers' experience, we did not collect data from the participating distance students.

Data analysis

In examining the data outlined in Table 1, it became evident that generally our trainees' learning process progressed through a sequence that could best be characterized by four stages – the “wow”, “oh-oh”, anxious, and internalizing stages. Chou (2001, p. 181) also identifies four stages for her students' adaptation to technology, which were the “wow”, fun, “oh-oh”, and back-to-normal stages. Similar to the “wow” stage in Chou's study, this stage was also experienced by our trainee teachers when they were first introduced to 3C in the physical face-to-face workshop. Murray and Barnes (1998, p. 250) define the “wow” factor as “both extremely positive and extremely negative initial reactions in the user”. However, in our research, the “wow” stage was all positive as the trainees were fascinated with the potential of online learning and excited at the prospect of learning to use high-tech for teaching. Different from Chou's finding, the fun stage was not obvious in our training program. Instead, the “wow” stage was closely followed by the “oh-oh” stage when online training started and some technical problems emerged. This was a period when the trainees began to realize the differences between cyber face-to-face and physical face-to-face teaching. The *anxious* stage witnessed the period of online teaching preparation and the first two weeks of the teaching practice with real distance students. Although excitement and anticipation were also evident, apprehension and anxiety seemed to be the dominant traits in this stage. During the *internalizing* stage the trainees were becoming more used to online teaching and the occurrence of technical problems. They began to evaluate their learning experience in more depth and breadth as the practice teaching went on. The back-to-normal stage in Chou's study was not observed in our training, probably because online synchronous teaching never ceased challenging the trainees in the 12 weeks of training.

Although the stages may overlap at certain points and there were differences from one individual to the next, especially in terms of the onset and closure of the middle stages, the trainees still tended to move through all four stages. To effectively capture these movements, data analysis will follow the sequence of these four stages to examine qualitatively the kinds of intrapersonal changes the trainees underwent and the kinds of support they received at significant points in the process. Data from the reflection journals, self-reflection and monitoring reports, and postings in the Discussion Forum in 3C, were interrogated for themes that will be used to support the discussion of the four stages. Excerpts from these data sources will also be presented in their original forms in order to accurately capture the prevailing characteristics of each stage.

Results and discussion

The “wow” stage

This stage happened in Phase 1 of the training program when the training program started with Module 1. The two-hour face-to-face training was conducted in a

language laboratory at Griffith University, with the aims of: (1) demonstrating the installation of the equipment needed, including webcams and headphones, (2) introducing 3C generally, and (3) building a rapport among the trainees.

The trainees' reflection journals about this module indicate that they enjoyed the training and found it easy to install the necessary components. In addition to the high frequency words such as "easy", "exciting", and "well conducted" in their reflection journals, they also posted the follow messages in the Discussion Forum in 3C after Module 1:

I am very happy that I have joined in this training program. It is exciting to be able to use hi-tech for teaching. (Winnie, 15 November 2006)

It's great to be able to participate in this training program. It's exciting to realize that my role as a teacher can be extended from traditional classrooms to a more accessible media, especially when thinking that I will be able to communicate with students while sitting in a comfortable chair at my own home with some good drink at hand. (Jill, 15 November 2006)

It's a very exciting system! I enjoyed the training very much this afternoon. It opened up a new world of communication to me

For me, the beautiful things of this system are that 1) it is easy to learn . . . 2) it allows teacher to implement varied "in-class" activities. Moreover, it encourages interaction between the teacher and students as well as between the students themselves; and 3) it creates a nearly real atmosphere of a classroom". (Cristina, 16 November 2006)

The trainees' enthusiasm was also exemplified by the fact that two of them changed their dial-up connections to broadband and one bought a laptop to replace her old computer, especially for this project and all at their own cost.

In response to the trainees' positive feedback, the trainer only expressed how impressed she was by the trainees' enthusiasm and refrained from commenting on the advantages of online learning and the merits of 3C, for fear of influencing the trainees' perceptions and making them overly optimistic. For example, to Cristina's posting on 16 November 2006, questioning about the differences between online and traditional classroom teaching, instead of answering these questions, the trainer merely replied that:

You've asked some very interesting and thought provoking questions! I don't have a ready answer to them but we can all find them out together in the training.

In summary, the "wow" stage witnessed an overall enthusiasm about online teaching. This positive attitude toward online teaching forms a distinct contrast to what Van Olphen (2007, p. 95) finds in her study. According to her, at the beginning, most students experienced: "(a) rejection of anything that could increase the course workload, (b) fear of unknown, or (c) aversion to what may be beyond their control". In our program, "the fear of unknown" and "aversion to what may be beyond their control" only became evident in the anxious stage just before and in the beginning of the practice teaching.

The "oh-oh" stage

Following Module 1, Modules 2 and 3 were conducted completely online with the trainee teachers attending the training from their homes or offices, and the trainer

from her home. The aims of these two modules were to further introduce the various functions of 3C, with a particular emphasis on how the features (e.g. uploading files to the whiteboard, using the pointer, online Poll, discussion group, window capture and joint web browsing) should be used in an online language learning classroom.

However, some technical problems were experienced the first time the participants logged into the cyber face-to-face classroom. The classroom went blank on the trainer's computer screen, and the trainer had to log out of 3C. Although the classroom was re-initiated successfully, teaching was further delayed by the standby technician attempting to fix the echoes from Jade's microphone. As a result, the trainer had to race through what she had prepared for this module, leaving insufficient time for practice. The following postings were received in the Discussion Forum in 3C immediately after this module:

Reflecting on the last night's training, I realised that online teaching was not always as exciting :p The technical issues could be very time consuming and could have a great deal of impact on the efficiency of teaching.

It seems to me that a high level of online classroom management skills are required to enhance the effectiveness of teaching and to keep students interested and engaged. All in all, online teaching is a very challenging task. (Cristina, 23 November 2006)

In her reflection journal on Module 2, Annie concluded that:

I suspect it will take (me) a while to become *au fait* with all the different functions and to get to the stage where I feel as though I can run a tight class.

Module 3 went without technical problems and successfully concluded the platform training part of Phase 1. In the Discussion Forum, Pat posted the following message upon the conclusion of Module 3:

I got the feeling of understanding the concept and method, but a few days later, this understanding seems to be faded away, and I need to come back to the computer and start all over again. (5 December 2006)

Interestingly, technical problems did not seem to deter the trainees. Instead they recognized the differences between online and traditional classroom teaching and encouraged each other to be persistent. Lonny posted the following message in the Discussion Forum after Module 2:

According to my experience and observation, the initial sessions of distance learning are usually mixed with excitement, confusion and winding down. We may have a more objective feeling after 4–5 sessions. Let's wait and see. (26 November 2006)

Other trainees responded to this comment positively. For instance, Jill replied to Lonny:

I totally agree! Even with traditional classroom teaching, the first one or two weeks can be tricky. But we just feel more confident of handling the problems occurred in traditional classroom environment. It seems more under control. (29 November 2006)

This kind of mutual support among the trainees at various levels such as emotional, pedagogical, and technical was evident throughout the training process.

The trainer also pitched her support in a tone of encouragement by saying in the Discussion Forum that the trainees were the pioneers in online synchronous language teaching and pioneers often had to suffer first in order to see what others do not get to see. This is also a stage when the trainer felt the necessity of directing the trainees to an important issue in online teaching – the attitude toward technical problems. She posted the following passage in the Discussion Forum:

We have to admit that technical problems do occur when using technologies. This is especially true with a multimodal environment, such as synchronous learning, because there are so many factors at play. As an online teacher, we should be psychologically (if not technologically) prepared for the occurrence of technical problems. My experience indicates that getting used to the appearance of technical problems is also a learning process. (10 December 2006)

In this stage, we found that the Discussion Forum was more effective than the reflection journals in capturing trainees' feelings and attitudes to the occurrence of technical problems and the support, advice and encouragement from their peers and the trainer. The postings in the Discussion Forum direct us to a very important issue in online teacher training – the attitude toward technical problems. Future training programs should fully prepare the trainee for the occurrence of technical problems by stressing that technical problems are unavoidable when working with technologies. Common problems should be spelled out at the beginning of the training so that trainees can be better prepared. It is also crucial for the trainee to receive technical assistance in a timely manner and provide a mechanism such as a discussion forum for discussing solutions and for mutual support and encouragement among the trainee and from the trainer.

The anxious stage

This stage sees the one-week preparation for online teaching and the actual online teaching practice in the first two weeks (i.e. the first round) of individual teaching practice. Following Module 3, the trainees were given one week for reflection and online teaching preparation by themselves. Apart from providing a suggested syllabus, teaching materials, and advice in her online office hours, the instructor was not directly involved in individual trainees' preparation. Most trainees worked collaboratively online with their partners and some even met face-to-face to work on teaching plans. Some rehearsed their teaching with the trainer before online teaching started. The trainees requested that the cyber face-to-face classroom was set up one hour before the class so that they could take their time to upload their files to the whiteboard and practice what they had prepared.

The comments from the monitoring and self-reflection reports on the first round of individual teaching clearly indicate various kinds of apprehension and anxiety. They were unsure of what problems, either technical or pedagogical, would occur in their teaching, unsure of students' proficiency levels, unsure of how much content to cover, and unsure of their management of the synchronous learning environment. A recurring phenomenon in this period was that every trainee went over time because they had prepared too much for the 15-minute teaching.

Although the first round of individual teaching was successfully completed by all trainees, the evaluation of their performance contained in their self-reflection reports as well as in their responses to their peers' comments was generally very critical. This

forms a distinct contrast to the positive and encouraging feedback received in the monitoring reports from the observing trainees and the trainer. Take Annie as an example, she felt “inexperienced and incompetent” and frustrated “because it was so hard to elicit responses from the students and difficult to gauge their reactions and level of understanding”. She encouraged her fellow teachers to provide more negative comments on her teaching and suggestions for improvement. However, her online teaching was evaluated by her fellow trainees to be “very well organized”, and there were “excellent teacher–students dynamics”, “clear instructions in both Chinese and English”, “excellent oral practice with students by asking them about the family photo” that Annie placed on the whiteboard.

Similar self-criticism was also found in Cristina’s self-reflection, despite the fact that her teaching was highly commended by her peers. Cristina commented on her “inflexibility with using varied functions, lack of a sense of control and lack of competency of using the technology in teaching”. In her reflection posted in the Discussion Forum on 6 January 2007, Pat admitted that “[i]t is the unknown and inexperience that made me panic”.

In this stage, the trainer used monitoring reports to provide specific feedback on the elements of each lesson for each trainee and to help ease the trainee’s apprehension. A general message conveyed to the trainees in these monitoring reports is that they had done a great job and fluency with the system would come with practice. Suggestions on the use of specific tools were also made in the “Suggestions” column of the monitoring reports. For instance, when commenting on Diane’s confident and creative use of the online tools such as shared desktop and the Poll in Lesson 1, the trainer also suggested that:

you can see who votes what in the Poll by dragging the frame of the whiteboard towards the right. You could ask the students to summarize the Poll results in Chinese.

It was noted that the trainees’ apprehension and anxiety were soon out-grown through the process of reflection on their own teaching and encouragement from their peers and the trainer as the teaching practice went on. This is not to say that apprehension disappeared completely but it became less prominent as trainees’ confidence improved. Self-reflection and monitoring reports, supplemented by postings in the Discussion Forum played a crucial role in easing trainees’ anxiety and apprehension in this stage.

The internalizing stage

This is the longest period among the four stages, which roughly started with the second round of individual teaching in week 3 of Phase 2, and continued toward the end of the training program. Upon completing individual teaching, an ongoing workshop was conducted just before team teaching started in week 5 of Phase 2. During this two-hour workshop, trainees reflected upon and shared with each other their online teaching experience, and more online techniques and strategies, especially team teaching strategies were considered. The rationale of having a workshop in between the teaching practice was that the participants by then would have some experience with online teaching and would be able to relate more to these strategies and their online teaching experience. In the last four weeks, two rounds of team teaching were conducted with the trainees being paired with a different trainee

for each round. This cyclic approach provided the trainees with opportunities to examine their teaching in the first round and make improvements in the subsequent rounds. As a result, internalization surfaced as a distinct mark for this period, which happened at both the micro and macro levels.

At the micro level, internalization means improvements at various levels through the cyclic approach of action and reflection. These improvements include improved confidence level, the more fluent use of the tools, and consciously and subconsciously transferring their classroom-based pedagogy to their online teaching whenever possible. The trainees' self-reflection and monitoring reports in each round of teaching have successfully captured these improvements.

On the whole, the trainees appeared to be more relaxed and confident. This became increasingly evident in the ease with which they used the tools in class and the fact that they requested the main cyber classroom to be set up 30 minutes instead of one hour before the class, as at the beginning of the teaching practice. Most trainees arrived in the cyber classroom 10–15 minutes before the start of the class. Pat, one of the most nervous trainees said, "I enjoyed the interaction, it became personal", in response to Cristina's comments on her excellent interaction with the students in Lesson 3. In her monitoring report on Pat's teaching in Lesson 5, Annie observed that Pat showed good on-the-spot adjustment of the original lesson plan to fit in with time.

Jade's teaching in Lesson 7 best exemplifies the improvements and level of competency and confidence that the trainees reached in this stage. This was a team-teaching week but her co-teacher could not enter the classroom due to a problem with her Internet connection. Jade had to conduct the 30-minute teaching by herself. She and the students performed three games in this lesson: bingo, odd man out, and a matching game. Figure 2 is a screen capture of the matching game.

In her monitoring report on Jade's teaching, Annie congratulated Jade on her excellent use of the colors for the games, the ways of establishing rapport with the

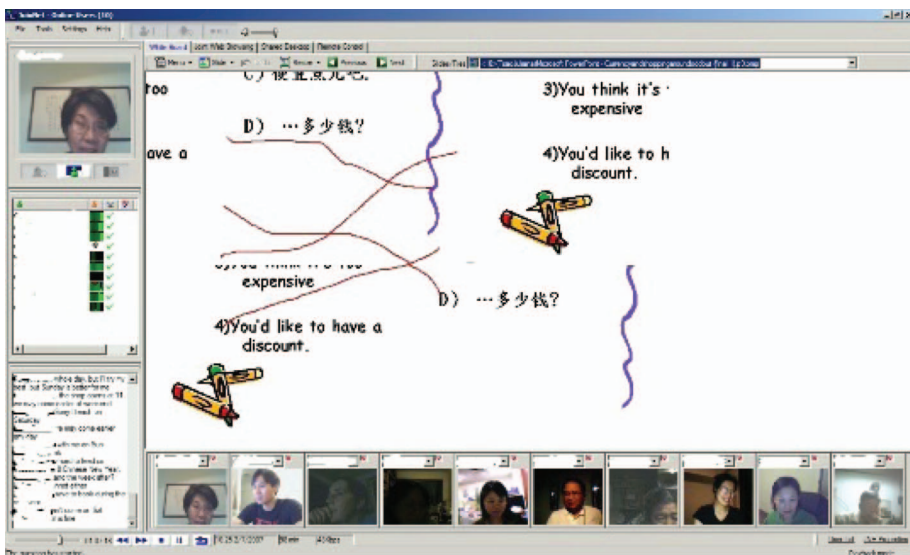


Figure 2. Jade's teaching in Lesson 7. Reproduced with kind permission from Collaborative Cyber Community.

students and the use of Chinese characters on the wall as a background in Jade's video. Jade's excellent classroom control was also observed by the trainer, who commented on how relaxed and in control Jade was, despite the absence of her co-teacher. The trainer also noted that, when realizing the activities were a little easy for a particular student, Jade adjusted the levels of difficulty on several occasions during this lesson to make the tasks more challenging for that student.

This stage not only saw the increased use of the online tools in the trainees' teaching but also witnessed a push from the trainees themselves to more creative use of the tools. Although the trainees' reflection on their own teaching continued to be critical, their self-analysis went beyond commenting on their inexperience and incompetent use of online tools. Instead, they focused on a deeper level of online pedagogy such as how certain tools could be used more effectively and creatively and how learners' understanding could be better checked and classroom interaction could be improved. This was especially true with the latter rounds of teaching. For example, in her reply to Pat's monitoring report on her teaching in Lesson 5, Cristina identifies the following specific areas for further improvement:

- I need not only to encourage the students to use chat box but also need to improve my own use of the text chat box.
- Wish I could use the pointer and lines more effectively.
- Still have trouble with developing student–student interaction.

At the macro level, one strategy that the trainees adopted was their conscious or subconscious comparison of their traditional classroom teaching with online teaching in their efforts to understand and develop an effective online pedagogy. This type of internalization was often shown in their postings in the Discussion Forum toward the end the training program and in their replies to the final survey conducted upon the completion of the training. Upon completing her last teaching session, Cristina posted an extended self-reflection in the Discussion Forum to summarize her learning process:

With regard to the technique, I found it was easy to learn the basics. However, it takes time to develop the competence of using the tools in a flexible, creative, and spontaneous way. I have strong belief in the great potential of this online teaching platform. However, it may take years to become a competent online teacher, in terms of using the tools. Moreover, the impact of the technical interruptions can never be neglected or underestimated. . . . This requires teachers to have well prepared backup strategies. . . . With regard to psychological issues, I found carrying out the tutorials at home is more relaxing than in traditional classrooms. When I was well prepared, I felt it was just like to have a chat online with friends, nice and easy. However, small issues can dramatically increase the level of anxiety. For example, I easily became very nervous when I did not log into the classroom well (say 10 mins) before the class started, or when I did not upload the lecture notes in advance or in the order I expected. (2 February 2007)

Similar appraisal of their training experiences is also found in the final survey. Every trainee confirmed that the training was an enjoyable and rewarding experience. More specifically:

- I enjoyed the whole thing. Learning to apply all the functions for teaching was fun although it was challenging at the beginning. . . . (Jill).

- A very rewarding experience. The skills learned from the training would enable me to extend my teaching beyond the traditional classrooms (Cristina).
- Yes. It was a great learning experience. The highlight was the learning of team teaching techniques (Cristina).

The trainer continued to provide specific feedback to individual trainees through the monitoring report, and encourage them to build on using the functions they had learned and experimenting with new functions. At the same time, the trainer also felt it was time to engage the trainees in a dialogue on online pedagogies at a meta level. Therefore, the following general topics were posted in the Discussion Forum by the trainer for the trainees to explore during their practice teaching in order to understand online teaching better:

- Is the text chat necessary for online language teaching and learning?
- What are the classroom protocols that we should establish in order to maintain an effective online learning environment?
- What are the challenges of online language teaching?

Due to space limitations and the focus of this article, the trainees' responses to these questions will not be discussed here in detail. Briefly, in answering these questions, the trainees not only reflected on the challenges they have encountered but also suggested ways to meet the challenges of online language teaching, for example, how to manage the text chat and the online class effectively. More importantly, these questions directed their attention away from specific strategies used in the online classroom to more general online teaching issues that have implications on a broader spectrum.

To summarize, although internalization happened in every one of the four stages, it was in this stage that the internalization process began to gain momentum and depth. This process is not only about trainees' knowledge and skill development but also about their attitude and identity change, a psychological change that has been neglected by many other studies. More importantly, our cyclic approach to the use of four rounds of self-reflection and monitoring reports, and postings in the Discussion Forum formed the backbone support mechanism in this stage to effectively facilitate this process. These strategies also enabled the trainer to closely monitor each trainee's progress and respond to their needs in a timely fashion.

Conclusion

We have argued that teacher education in CALL should not only be about learning about teaching or even teaching about teaching but should also be about fostering the trainee's personal development to become a confident and competent online teacher by paying careful attention to their emotions, feelings, and reactions. How to respond to the needs of the trainee teachers, and how to guide their learning process appropriately is an ongoing challenge to teacher educators. This is because in CALL, teaching is no longer just about the relationship between the teacher and the student. There is a new dimension as far as the teacher is concerned: the relationship between the teacher and the technology-mediated environment. This new dimension not only requires online teachers to develop new pedagogies but also influences their personal growth in many important ways. It is therefore crucial for an effective online teacher training program to have strong mechanisms built into it. To this end, our research

has adopted a cyclic approach of action, reflection, and improvement, which was demonstrated to be able to bring home the trainees' feelings and reactions as well as progress as they moved through the different phases of the training.

This approach has also yielded a wealth of data, from which we were able to characterize the trainees' learning curve into four stages, namely, the *wow*, *oh-oh*, anxious, and internalizing stages. We recognize that these stages intertwine and overlap with one another throughout but still, at certain times, a collective response among the trainees became distinctly evident in our data. It was at these points that we tried to capture the prevailing characteristics and the four stages are presented as a way to describe the result. In reality, this learning process was not linear but at times involves cyclic movement between these stages. For example, in the internalizing stage, trainees could still feel excited when they used a tool in their teaching creatively; they could still feel frustrated and panicky if an unexpected technical problem appeared. We also recognize the differences between individual trainees. For example, the more computer-literate teachers might enter the internalizing stage earlier than those who were not so fluent with computers; a more confident trainee might not be as panicky as the less confident ones in the anxious stage. Furthermore, different groups of trainees may progress through different stages, not necessarily following the sequence of the stages that our trainees had gone through. For example, in our study, the trainee teachers clearly enjoyed the whole learning process but online synchronous teaching never failed to challenge them. As a result, the "back-to-normal stage" evident in Chou (2001) was not experienced by the trainees in this study. It may take a longer period of time than the 12 weeks of training for them to arrive at that stage.

Nevertheless, characterizing the trainees' learning into stages has helped us to simplify the analysis of a complex process, and to effectively capture a sense of how the group was progressing at certain points in their learning process. More importantly, these four stages have directed our attention to the importance of knowing or anticipating the trainees' learning curves so that the trainer is able to determine what strategies and support should be provided at what points in the process. In this study, different strategies for guiding the trainees' progress were employed as they moved from one stage to the next. For example, the first two stages are really about discreetly neutralizing the trainees' over reacting, and in the last two stages, the trainees' enthusiasm was deliberately brought up through explicit encouragement from the trainer and their attention was drawn to online pedagogies at both micro and macro levels.

Teacher training in a synchronous cyber face-to-face environment is still new to language professionals, and presents different kinds of challenges in comparison to campus-based teacher education. We believe that the greatest challenge for all those concerned with teacher education in CALL is to ensure that trainee teachers are given the kind of support they need, when they need it, be it pedagogical, technological, or psychological.

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Notes

1. For more discussions on SLMSs, see Wang and Chen (2007, 2009) and Chen and Wang (2008).
2. 3C was funded by the Taiwan National Science Council and has been constantly upgraded by the National Sun Yat-sen University in Taiwan. In terms of scalability, the server running 3C has a capacity to support up to 500 online asynchronous users and 200 online synchronous users.
3. One teacher was not available for Modules 2 and 3 but returned for the rest of the training program.

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