

行政院國家科學委員會專題研究計畫 成果報告

透過網路討論「教學實況錄影案例」對提昇英語職前教師 專業成長之研究 研究成果報告(精簡版)

計畫類別：個別型
計畫編號：NSC 99-2410-H-029-030-
執行期間：99年08月01日至100年07月31日
執行單位：東海大學外國語文學系

計畫主持人：劉美惠

計畫參與人員：大專生-兼任助理人員：崔凱翔
大專生-兼任助理人員：黃鈺婷

報告附件：出席國際會議研究心得報告及發表論文

公開資訊：本計畫涉及專利或其他智慧財產權，1年後可公開查詢

中華民國 100 年 10 月 31 日

中文摘要： 本計劃案探究運用網路學習社群討論「教學實況錄影案例」對職前英語教師專業成長之影響。於師資培育之創新理念下，學者們倡導職前教師於網路社群參與討論「教學實況錄影案例」將有助於其深入地探究課室教學中之複雜性以及學習如何將教學理論運用於實際課室教學。根據 Lave & Wenger (1991) 之 *situative perspective of teacher learning* 理論基礎，本研究為彌補先前文獻之不足而邀請不同學校層級之 EFL 在職老師於網路「教學實況錄影案例」討論社群中協助 EFL 職前教師之教學成長。參加本研究之網路成員包括 21 位職前英語教師、7 位國中或高中在職英語教師、與 4 位大學英語教師；多重資料蒐集方法包括教學實況錄影與相關教學資料、網路線上討論訊息、訪談、以及職前教師所記載填寫之反思日誌與開放式問卷。根據資料分析顯示，此一網路社群營造出互助與分享之學習文化，其不僅有助於職前英語教師之學習與成長，並且也使得在職中學英語教師與大學英語教師有專業成長之機會。本研究結果印證 Lave & Wenger (1991) 之 *situative perspective of teacher learning* 理論基礎之三項重要教師專業成長概念: 1) *cognition as situated*、2) *cognition as social* 以及 3) *cognition as distributed*。然而，本研究發現某些社群成員因為幾項考量或困境而無法經常參與此網路「教學實況錄影案例」討論活動，例如: 於網路上呈現自我教學實況之壓力、社群成員角色認同議題、與繁重工作壓力等。本研究結果提供師資培育者有關於建立網路「教學實況錄影案例」討論社群之成功經驗與應注意之考量事項，以裨益臺灣本土或其他國家之職前師資培育。

英文摘要： This project investigated the application of an online videocase discussion community into fostering preservice EFL teachers' professional development. As an innovative perspective of teacher preparation, online videocase discussion has been promoted to cultivate teacher candidates to deeply investigate the complexity of classroom instruction and further connect theory with practice. Relying on the theoretical framework of situative perspective of teacher learning (Lave & Wenger, 1991), this study filled in the gaps existing in previous literature by involving inservice EFL teachers at various school levels to nurture preservice EFL teachers' learning to teach on an online videocase discussion forum. Multiple data sources from various stakeholders involved 21 preservice teachers, 7 inservice teachers, and 4 university TESOL teachers. Multiple data collection methods included video-taped instructions with related artifacts, online discussion messages, and interviews as well as open-ended questionnaires and reflection journals conducted with preservice teachers. Data analysis reveals that this online collective learning community not only scaffolded preservice teachers' reflection on their instructional beliefs and practices but

also reciprocally fostered inservice teachers' and university faculty's professional development. Three dimensions of situative perspective of teaching learning were revealed in this online learning environment, including cognition as situated, cognition as social, and cognition as distributed (Putnam & Borko, 2000). Yet, this study uncovered several concerns or difficulties perceived by the participants when involved in online videocase discussions, such as online stage fright, self-identity as online learners, and heavy workload. The findings of this study rendered meaning and lessons for teacher educators intending to incorporate online videocase discussion community into preservice teacher training in Taiwan or other country contexts.

行政院國家科學委員會補助專題研究計畫

成果報告
 期中進度報告

計畫名稱：透過網路討論「教學實況錄影案例」對提升英語職前教師專業成長之研究

計畫類別： 個別型計畫 整合型計畫

計畫編號：NSC 99 - 2410 -H - 029 - 030 -

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執行機構及系所：東海大學外國語文學系

計畫主持人：劉美惠

計畫參與人員：學士級兼任研究助理— 黃鈺婷、崔凱翔

成果報告類型(依經費核定清單規定繳交)： 精簡報告 完整報告

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涉及專利或其他智慧財產權， 一年 二年後可公開查詢

中 華 民 國 100 年 10 月 31 日

透過網路討論「教學實況錄影案例」對提升英語職前教師專業成長之研究

關鍵字：教師專業成長，職前教師師資培育，教學實況錄影案例，網路學習社群，英語教育

本計劃案探究運用網路學習社群討論「教學實況錄影案例」對職前英語教師專業成長之影響。於師資培育之創新理念下，學者們倡導職前教師於網路社群參與討論「教學實況錄影案例」將有助於其深入地探究課室教學中之複雜性以及學習如何將教學理論運用於實際課室教學。根據 Lave & Wenger (1991) 之 *situative perspective of teacher learning* 理論基礎，本研究為彌補先前文獻之不足而邀請不同學校層級之 EFL 在職老師於網路「教學實況錄影案例」討論社群中協助 EFL 職前教師之教學成長。參加本研究之網路成員包括 21 位職前英語教師、7 位國中或高中在職英語教師、與 4 位大學英語教師；多重資料蒐集方法包括教學實況錄影與相關教學資料、網路線上討論訊息、訪談、以及職前教師所記載填寫之反思日誌與開放式問卷。根據資料分析顯示，此一網路社群營造出互助與分享之學習文化，其不僅有助於職前英語教師之學習與成長，並且也使得在職中學英語教師與大學英語教師有專業成長之機會。本研究結果印證 Lave & Wenger (1991) 之 *situative perspective of teacher learning* 理論基礎之三項重要教師專業成長概念：1) *cognition as situated*、2) *cognition as social* 以及 3) *cognition as distributed*。然而，本研究發現某些社群成員因為幾項考量或困境而無法經常參與此網路「教學實況錄影案例」討論活動，例如：於網路上呈現自我教學實況之壓力、社群成員角色認同議題、與繁重工作壓力等。本研究結果提供師資培育者有關於建立網路「教學實況錄影案例」討論社群之成功經驗與應注意之考量事項，以裨益臺灣本土或其他國家之職前師資培育。

Effects of Online Videocase Discussions on Preservice English Teachers' Professional Development

Keywords: Teacher professional development, Preservice teacher education, Videocases, Online learning community, English language education

This project investigated the application of an online videocase discussion community into fostering preservice EFL teachers' professional development. As an innovative perspective of teacher preparation, online videocase discussion has been promoted to cultivate teacher candidates to deeply investigate the complexity of classroom instruction and further connect theory with practice. Relying on the theoretical framework of *situative perspective of teacher learning* (Lave & Wenger, 1991), this study filled in the gaps existing in previous literature by involving inservice EFL teachers at various school levels to nurture preservice EFL teachers' learning to teach on an online videocase discussion forum. Multiple data sources from various stakeholders involved 21 preservice teachers, 7 inservice teachers, and 4 university TESOL teachers. Multiple data collection methods included video-taped instructions with related artifacts, online discussion messages, and interviews as well as open-ended questionnaires and reflection journals conducted with preservice teachers. Data analysis reveals that this online collective learning community not only scaffolded preservice teachers' reflection on their instructional beliefs and practices but also reciprocally fostered inservice teachers' and university faculty's professional development. Three dimensions of *situative perspective of teaching learning* were revealed in this online learning environment, including cognition as situated, cognition as social, and cognition as distributed (Putnam & Borko, 2000). Yet, this study uncovered several concerns or difficulties perceived by the participants when involved in online videocase discussions, such as online stage fright, self-identity as online learners, and heavy workload. The findings of this study rendered meaning and lessons for teacher educators intending to incorporate online videocase discussion community into preservice teacher training in Taiwan or other country contexts.

Effects of Online Videocase Discussions on Preservice English Teachers' Professional Development

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Research Report

October 30, 2011

Introduction

The rich potential of videocases has been employed as a powerful tool for connecting theory with practice in teacher education (e.g., Borko, Jacobs, Eiteljorg, & Pittman, 2008; Kurz, Llana, & Sabenye, 2004; Sherin, 2004). Based on the case methodology, videocases can capture the richness and complexity of the classroom context and provide a very efficient way to expose the viewer to the authenticity of the classroom (Brophy, 2004). Specifically, videocases provide a common experience through which individuals or groups of teachers can analyze the issues, dilemmas, and opportunities of teaching (Kurz et al., 2004). As Borko et al. (2008) argued, applying videocases to teacher professional development “helps teachers to systematically investigate critical elements of the professional development experience, and to probe into the nature and evolution of teaching and learning” (p. 418). Moreover, videos present multiple layers of perspectives in the classroom environment and demonstrate how a variety of simultaneous events may impact, if not affect, teachers' instructional decisions in classrooms (Monroe-Baillargeon, 2002). When involved in watching, discussing, and reflecting on videocases, teachers are offered opportunities to “develop a different kind of knowledge for teaching—knowledge not of ‘what to do next,’ but rather, knowledge of how to interpret and reflect on classroom practices” (Sherin, 2004, p. 14).

With the advent of digital technology researchers recently have started to store teaching videos on the computer and to share videos across the Internet, i.e., to apply online videocases to teacher preparation (e.g., Fishman, 2004; Koc, Peker, & Osmanoglu, 2009; Nemirovsky & Galvis, 2004). It is then coupled with establishing a virtual learning community of novice and/or veteran teachers, providing teachers an online professional development forum (e.g., Boling, 2007; Fishman, 2004; Koc et al., 2009). Fishman (2004) raised two major reasons why researchers applied online videocase discussions to fostering teacher preparation. First, online videocases are available to more teachers, compared to face-to-face video clubs which are effective small-scale venues for teacher learning. Second, less moderators and facilitators are needed to help teachers with their professional development. By involving themselves in such “video networks” (Sherin, 2004), teachers' videos from their own classroom can be uploaded to the Internet, along with lesson plans or other background materials. All online community members can “visit” one another's classrooms and access related lesson materials, facilitate the sharing of teaching practice, and engage in professional dialogues or discussions without time or geographical barriers (Perry & Talley, 2001).

The focus on videocases as a tool for teacher professional development has prompted a number of studies to investigate the video learning experience by preservice teachers (e.g., Beck,

King, & Marshall, 2002; Masingila & Doerr, 2002; Stephens, 2004) or inservice teachers (e.g., Fishman, 2004; Santagata, 2009; Sherin & van Es, 2009). Yet, a paucity of researchers sought to involve both preservice and inservice teachers in the same learning community, except for few extant studies (e.g., Maclean & White, 2007; Koc et al., 2009; Nemirovsky & Galvis, 2004). As advocated by Koc et al. (2009), the number of the studies of this type is limited and further research is needed in this area. Moreover, given the extensive use of videocases in teacher education and professional development, far too little is known about how video supports teacher learning or influence teachers' own practice (Borko et al., 2008; Sherin & van Es, 2009). Additionally, there is a burgeoning interest in applying online videocases to professional development projects, yet research on the effectiveness of such a media on teachers' practices is still in its infancy (Boling, 2007; Koc et al., 2009; McGraw, Lynch-Davis, Koc, Budak, & Brown, 2007). Furthermore, despite the prevalence of employing videocases in the general teacher education field, there remains a dearth of related studies in the EFL (English as a foreign language) teacher preparation.

The Current Study

Mindful of the above reasons, this study which was aligned with recent research trend in applying digital technology to teacher education investigated the effectiveness of videocase discussions on fostering EFL preservice teachers' professional development by involving inservice teachers and university faculty in an online forum. Maclean & White (2007) maintained that the integration of pre- and in-service teachers' video sharing and discussions makes both groups of teachers "synergistically benefit from joint access to professional development activities" (p. 48). Relying on the theoretical framework of *situative perspective of teacher learning* (Lave & Wenger, 1991; Putnam & Borko, 2000), this investigation further revealed the nature and development of teacher reflection and discourse around videos evolving in a virtual learning community. Also included were the concerns or difficulties perceived by various members when participating in this online video discussion forum. Borko et al. (2008) stressed that while involving teachers in videocase learning, "situative theorists draw our attention to the social nature of learning and the central role that communities of practices play in determining what and how people learn" (p. 418). As further argued by Sherin, Linsenmeier, & van Es (2009), the situative perspective of learning offers important implication for the use of teachers' videos because this framework highlights the need to ground teacher learning in the practices of teaching, i.e., to situate professional development in the context of teachers' work. The research questions discussed in this study were as follows.

1. What is the nature and development of discussions in an online videocase learning community?
2. How does this online learning forum scaffold EFL preservice teachers' learning to teach and reciprocally foster EFL inservice teachers' and university faculty's professional development?
3. How do online videocase discussions help EFL preservice teachers develop their beliefs and practices?
4. What are the concerns or difficulties these community members encounter, if any, during their involvement in this online videocase professional development context?
5. What are the implications of this online video pedagogy for EFL teacher preparation?

Methodology

Setting and Participants

A web-based asynchronous videocase discussion board was implemented on a user-friendly *Moodle* platform. It was a closed online community which requested any member to log into the system by the username and password assigned by the researcher. Different links were set up for the community members to conveniently access individual preservice or inservice teachers' videotaped practices (see Figure 1 in Appendix A). When viewing a videocase online, the teachers could move the forward or backward button to repeat observing specific sections of the classroom events. At the same time, they were able to open the window of discussion forum to review posted message and join the discussion on the selected videocase (see Figure 2 in Appendix A).

In total, 21 preservice and 11 inservice EFL teachers were involved in this study. Enrolled in a 3-year teacher training program at a university located in central Taiwan, these preservice teachers (3 males and 18 females) were taking teaching methodology courses, joining a service learning course to teach English at a nearby junior high school, or experiencing a semester-long practicum at different secondary schools. The average age of these participants was 24. Additionally, the recruited inservice teachers were 7 English teachers (2 males and 5 females) who have taught English for 2 to 12 years at junior or senior high schools scattered on the western coast of Taiwan. Also included were 4 university TESOL teachers (2 males and 2 females) with 5 to 25 years of teaching experience at the English Language Center affiliated to the preservice teachers' university. The ages of these inservice teachers ranged from 34 to 56. Most of these participants had been involved in the researcher's 98 NSC project and they continued to take part in this study according to their availability and willingness.

Roles of the Present Researcher

The present researcher played various roles when interacting with the participants in this study. As an insider-researcher at her working environment, she did not impose any institutional power to recruit potential preservice teachers and university TESOL faculty. Instead, she received strong rapport from them based on personal collegial relationship. Following Mercer's (2007) suggestions to insider-researchers, to avoid contaminating the study she did not inform these participants too specifically about the research questions to be examined. Nor did she publicize her own opinions about the research topic or contribute any opinions during the data collection procedures. On the other hand, she achieved an object account of human interaction when involving the secondary inservice teachers in this study.

Lock (2006) maintained that to facilitate teacher professional development designers of online communities '*have a role in being agents in purposefully fostering the growth of community*' (p. 673). Accordingly, several measures were taken in this study when all the participating teachers were novice to joining online videocase discussion. To begin with, the present researcher followed Fry and Bryant (2006-2007) to serve as a '*participant observer*' who regularly reminded the cohort members to participate in the online activities by emails as well as promoted reflectivity among the cohort by providing open-ended guiding questions for videocase discussion. She further posted

encouraging messages (e.g., “You did a great job!”) in response to the participants’ involvement, if needed. In order not to distort or negate the discussion discourse, she did not make any suggestions or comments on the exchanged messages. Furthermore, with the assistance of a research assistant majoring in the Information Engineering, she provided the participants with instant technical support throughout the study. Palloff and Pratt (2005) reminded that available technological assistance or support provided to participants is conducive to their positive attitudes and willingness to utilize new technological tools in their learning (see also Preece, 2000).

Data Collection and Analysis

Multiple data resources included in this study were 1) video-taped instructions with related artifacts, 2) online discussion messages, 3) semi-structured interviews, 4) open-ended questionnaires, and 5) reflection journals. Different classes taught by the participating teachers were videotaped so as to reveal the varieties of teaching practices in different classroom contexts (Santagata, Zannoni, & Stigler, 2007). In addition to the video footages, available artifacts (e.g., lesson plans, curricular materials, or students’ work) were collected to be uploaded online together with the videocases to situate teacher professional development firmly within the participants’ practice (Abell & Cennamo, 2004; Borko et al., 2008). The online discussion messages were recorded by the *Moodle* system, containing free exchanges among the participants about the videocases and any posted messages anchored on open-ended guiding questions.

Overall, the data collection procedure lasted from late September 2010 to mid August 2011¹ (see Table 1 in Appendix B). Throughout the study, all the preservice teachers participated in the video-taped teaching sessions, online discussion forums, 3 interviews, monthly journals, and 2 open-ended questionnaires. The inservice teachers cooperated with 3 interviews in addition to allowing teaching sessions to be video-taped and joining online discussions.² To build up social relationship and mutual trust among online community members, in the early phase of this project a half-day orientation session was organized to provide an overview of the goals and objectives of this virtual support cohort. In general, the preservice teachers’ instructional practices were videotaped 3 to 4 times individually, and inservice teachers and university faculty 1 to 2 times. The recording sessions were scheduled based on the participants’ available time slots. A team of research assistants took turns to videotape these classroom practices. Afterwards, an unedited video of each class session was reviewed and edited into a 15- to 20-minute video clip by the researcher (or two well-trained assistants) and the case teacher. This initial viewing and editing gave teachers agency in controlling the aspects of their teaching to be discussed and created “multiple layers of reflection” (Maclean & White, 2007, p. 49). The edited video clips with related artifacts were then uploaded to the *Moodle* platform on which specific links were set up for accessing individual participating teachers’ videocases. With free access to computers, the Internet, and technical support, all the participants joined the online discussion forum throughout the data collection process. Other

¹ The data collection was extended to August 2011 because several senior preservice teachers suggested that their third interviews be delayed after they finished taking teacher recruitment exams in July and early August.

² As designed in the 99 NSC proposal, the inservice teachers with heavy teaching workload were not requested to cooperate with the open-ended surveys and keep monthly journals.

than online discussion messages collected, all the participants were interviewed at the beginning, the middle, and the end of this study. For the sake of practical and time conflict issues, face-to-face interviews with the preservice teachers and university faculty were conducted by an experienced research assistant. The present researcher was responsible for visiting and interviewing the secondary inservice teachers. The participants were informed that all the interviews would be recorded and transcribed verbatim for research purpose. Furthermore, the preservice teachers cooperated with keeping monthly reflection journals and filled in open-ended questionnaires near the end of each semester. Both data sources were collected by private emails.

Data collected from various participants were analyzed and compared continuously until theories or patterns emerged (Glaser & Strauss, 1967; Silverman, 2006). The discourse analytic approach was employed to code the online posting messages (Koc et al., 2009; Maclean & White, 2007). To develop meaningful and valid coding categories, an “iterative process” was adopted from the relevant literature (Borko et al., 2008; Koc et al., 2009; Sherin & van Es, 2009), including three major categories with several subcategories (see Table 2 in Appendix B). The messages were coded by the researcher and an experienced assistant based on the themes (i.e., units of meaning) emerging from each posting (see Henri, 1992; Wever, Schellens, Valcke, & Van Keer, 2006). During the data analysis process, the two coders discussed and reviewed any codes which were not agreed upon. Statistically, the inter-rater reliability between the coders was 82%, an acceptable percent agreement. The SPSS version 13.0 for Windows was used to analyze the homogeneity of proportions of posted messages between the preservice and inservice teachers. Additionally, qualitative data collected from the interviews, open-ended questionnaire, and reflection journals were analyzed by *Nvivo 8.0 for Windows* and open/axial coding techniques (Strauss & Corbin, 1998) to organize groups of data in particular themes or issues being investigated. These sets of data were compared and contrasted to depict the participating teachers’ learning to teach, possible changes of practices, and encountered concerns or difficulties in this online learning community.

Results and Discussion

Using the research questions as a guide, the relevant research findings will be revealed and discussed in the following sections.

1. What are the nature and development of discussions in an online videocase learning community?

The frequency of online viewing and posting depicted the development of online discussions in this virtual community. During this project, the 32 participants logged on to view the videocases and messages for 14,787 times and to post 696 complete messages from October 2010 to early August 2011 (see Figure 3 and 4 in Appendix A for monthly frequency recorded by the *Moodle* tracking system). In total, 21 preservice teachers viewed the videocases and messages for 8,384 times (57%) and 11 inservice teachers 6,403 times (43%). Of the posted messages, 571 were from the preservice teacher (average= 27.2 per person) and 125 from the inservice teachers (average =11.4 per person). Compared to the preservice teachers, the inservice teachers appeared to post longer messages with various themes in each posting. Since most posted messages comprise more

than one discussion thread, the total count of discussion threads (1,731) is more than the actual 696 messages. Figure 3 and 4 show a similar fluctuation in the number of people viewing and posting in this online community. With a previous experience of participating in an online professional development community (i.e., the 98 NSC project), most participants started to engage in online discussions after viewing the first sets of videocases in October 2010. Along with more videocases uploaded to the Moodle platform, there was a sharp or modest increase in both numbers of viewing and posting in January, March, and June 2011. Yet, numbers fell dramatically in November, 2010 as well as in late January, mid April, late June, 2011 when most participating teachers devoted themselves to midterm/final examinations in each semester or taking teacher recruitment exams. In a similar vein, online videocase discussions were limited between early February and early March 2011 because a majority of participants were occupied by family reunions during the Chinese New Year holidays and school workload at the commencement of spring semester. The above findings suggested that the majority of participants usually joined the online discussions during their free time in the first and second semesters. The heavy teaching or learning workload appeared to hinder the participants from engaging in the online videocase discussion.

The frequency of discussion types indicates how the participants discussed what they observed in the videocases (see Table 3). Data analysis shows that “evaluating events” is the discussion behavior the whole community members mostly had (24% of the total message threads), followed by “describing events” (23%), “giving suggestions for improving events” (18%), and “interpreting events” (11%). The frequency pattern further shows that the 21 preservice teachers outperformed the 11 inservice teachers in most categories. Yet, noticeably, compared to the preservice teachers, the inservice teachers engaged much more frequently in “setting up the discussion” (80%) and “critiquing event” (66%). Furthermore, the frequency of discussion content revealed what the participating teachers noticed in the videocases. As shown in Table 4, both the preservice and inservice teachers discussed five major categories of content as their priority, including “teaching flow” (18%), “teacher’s pedagogy” (17%), “teacher and student interaction” (16%), “stage manner” (12%), and “classroom management” (11%). Seemingly, despite its smaller number of members, the 11 inservice teachers appeared more attention to “teacher’s roles” (54%) and “students and students interaction” (54%) in the videocases. Specifically, both preservice and inservice teachers tended to gradually enculture themselves into this professional development community and showed their similar interest in discussion content. According to the analysis of other qualitative data sources, more than half of the participants reported that they had been influenced by the other community members in discussing the videocases. For example, an inservice teacher described, “I usually checked what kinds of discussion contents are more interesting to the other community members. Then, I joined them for a thorough discussion” (2nd interview).

2. How does this online learning forum scaffold EFL preservice teachers’ learning to teach and reciprocally foster EFL inservice teachers’ and university faculty’s professional development?

Three conceptual themes central to the *situative perspective of teacher learning* (Lave & Wenger, 1991; Putnam & Borko, 2000) provided a theoretical framework to explore the

professional learning growth of both EFL preservice and inservice EFL teachers in this online videocase discussion community. They include 1) cognition as situated, 2) cognition as social, and 3) cognition as distributed.

Cognition as situated. The teaching videocase discussion module in this project exposed participants to a variety of authentic instructional activities employed at different classroom contexts. All but one university teacher of the participating teachers appreciated such an experience to watch and discuss videocases to capture the authenticity, richness, and complexity of classroom practices. For example, a senior preservice teacher contended, “I am grateful for having this learning experience to observe multiple and diversified teaching instruction online. It’s because we involve peers, inservice teachers and university professors in this community” (3rd interview). In a similar vein, an experienced secondary school teacher commented, “In this online community, it’s really easy and convenient for us to observe what is happening to the other English teachers’ classroom practices at different schools” (2nd interview).

In particular, the participating teachers reported the significance of accessing available artifacts related to the videocases on this online learning forum, such as curriculum materials, handouts, or student worksheets. Referring to these artifacts, they could have a much clearer picture about each community member’s practice situated in a specific context. A preservice teacher recounted, “It’s much better for me to watch each video along with the teacher’s instructional materials. This did help me follow the teaching procedures step by step in that classroom context” (3rd journal). One university teacher echoed such a statement, highlighting that “It’s a brilliant idea to ask the case teachers to upload the artifacts related to their teaching practices. That will help everybody, especially preservice teachers, grasp the essence of individual teaching videocases” (2nd interview).

Cognition as social. As revealed in the interviews or reflection journals, most participants valued their social learning experience in this online professional development community during the process of getting involved in videocase discussions. A junior preservice teacher reflected that “I really appreciate community members’ willingness to post precious comments on how to improve my teaching practices. I am a shy person with little confidence to consult people face to face, so this online learning experience does help me a lot!” (4th Journal). A senior high school teacher further confessed, “Without joining this online community, I seldom have the chance to discuss with, not to mention to learn from, other teachers concerning how to teach English. So, I do cherish this web-based social interaction opportunity” (2nd interview).

A majority of participating teachers, especially preservice teachers, perceived their engagement in a professional online learning community where various teachers shared and discussed with an aim to develop knowledge of how to interpret and reflect on teaching practices. In the second open-ended survey, a preservice teacher stressed “by watching current teacher’s videos, I got inspired to use more materials from the Internet and multimedia to make lessons more interesting.” Similarly, the other wrote “Through online discussion, I am glad to see that other members discovered something I did not notice in the teaching videos...that means they pointed out something I neglected in my or others’ teaching procedures.”

Near the end of this study, it is obvious that more than half of the participants appeared to

enculture themselves into the community's disposition of making efforts to create an English-speaking learning environment for students. "Although we have the pressure of keeping pace of curriculum schedules and preparing students for entrance exams, we should learn from Teacher Jason [pseudonym of an inservice teacher] who has successful experience in teaching all course content in English" (preservice teacher, 3rd interview). "After watching and discussing Teacher Jason's videocases, I guess I will give it a try to teach students in English instead of mostly reading out the Chinese translation to them" (inservice teacher, 3rd interview).

Cognition as distributed. This online discussion community brought together collective resources for those participants who used to work alone in designing teaching activities or lesson plans. A preservice teacher taking service learning course reported that "After taking part in this community, I was made to work together with others to design and discuss lesson plans online for our teaching at Li-An Junior High School. Otherwise, I tended to prepare teaching by myself before" (3rd interview). A university teacher expressed that "It's great to see the young generation is learning how to share everybody's work pieces rather than hide something for themselves in a selfish way" (2nd interview).

With a voice, more than two-thirds of the participating teachers appreciated such an opportunity in benefiting from the distribution of curriculum materials, teaching ideas/activities, and lesson plans to situate professional development in the contexts of reviewing and commenting on teaching videocases. As one junior preservice teacher said, "I usually refer to the other team's lesson plans before drafting mine. It saved me a lot of time to figure out what teaching activities I may use in the class" (5th journal). By the same token, an experienced high school teacher paid high tribute to this online learning community where "the collection of various teaching sources contributes to teacher professional development a lot" (3rd interview).

3. How do online videocase discussions help EFL preservice teachers develop their beliefs and practices?

The experience of discussing online videocases contributed to how participating teachers adjust, if not change, their instructional beliefs and practices. As revealed in various data sources, more than 70% of the participating teachers had revisited their teaching beliefs and tried to apply what they learned from the online videocases to their classroom practices. For instance, one preservice teacher's use of harmonic tone to teach 12 months evoked the others to apply this interesting technique to teaching vocabulary. "I learn from Jean [Pseudonym] by using interesting tones to teach Sunday, Monday, and the other words of a week to my junior high students. My students were laughing and very happy about this learning experience" (preservice teacher, 7th journal). Moreover, inservice teachers also benefited from this online video discussion. For example, one junior high school teacher said "I learned from Teacher Jason how to apply the approach of Cooperative Language Learning to my classes last month. There are some great techniques I have never used before" (3rd interview).

On the other hand, several teaching videocases illustrating ineffective, if not unsuccessful, teaching behaviors and/or practices appeared to remind most participating teachers of not making

the same mistake again. As a preservice teacher described, “I saw how awful and boring it was for students to learn English when a video-taped teacher was translating the long reading passages about traveling word by word. So, when teaching the same lesson unit in my class, I used a map to describe what happened to the traveler in his journey” (2nd open-ended survey). An inservice teacher appeared to reflect on her practice after reviewing other community members’ comments on her classroom instruction. “According to the suggestions and comments I received, I realize that I should give students more opportunities to practice their oral in addition to making them do a lot of written work” (3rd interview).

4. What are the concerns or difficulties these community members encounter, if any, during their involvement in this online videocase professional development context?

The analysis of interview data depicted three major concerns or difficulties which appeared to hurdle some participants from frequently getting engaged in online videocase discussion. First, throughout this year around 47% of the participants reported their difficulties in posting discussion messages related to each videocases owing to heavy workload as teachers or interns. For instance, a senior high teacher maintained “I do enjoy watching the videos and join the online discussion. Yet, it seems impossible for me to finish all the videocase discussions as a busy school teacher. To be honest, sometimes it’s another pressure added to my workload” (2nd interview). Second, except for university teachers, half of the preservice and secondary school teachers revealed nervous or unsteady feelings to view their own videotaped practices due to lack of confidence to show the “best practice” to other community members. That is, they had online stage fright when watching their own videos online. Typically, a preservice teacher reflected that “Sometimes, I did worry about whether my teaching practice was too poor to be viewed on the platform” (4th journal). A junior high teacher echoed, “I need great courage to see my own mistakes shown in the video, despite that I know nobody would laugh at me” (3rd interview). Third, both secondary school and university teachers had concerns about identifying themselves as online learners because most of the time preservice teachers regarded them as “model teachers or authorities.” As one senior high teacher explained, “Most of the preservice teachers tended to make polite and complimentary comments on my or other inservice teachers’ teaching videos. They appeared to respect us as model teachers or authorities superior to them. So, from time to time it’s difficult for me to identify myself as a learner in this community” (2nd interview).

5. What are the implications of this online video pedagogy for EFL teacher preparation?

Applying online videocase discussion to fostering teacher professional development is a new trend and development in the teacher education field (Santagata, 2009; So, Pow, & Hung, 2009). Such a trend echoes the argument of scholars and researchers to reform teacher education from the traditional transmission model to a community model of professional development in the future (e.g., Cochran-Smith & Lytle, 2001; Grossman, Winebur, & Woolworth, 2001). Referring to the design of an interactive online video database for preservice ESL teacher training (So et al., 2009), this project suggested extending such a collective learning community by further involving

inservice secondary school teachers, university faculty, and teacher educators (see Figure 5). Through self-reflection and social interaction, various teachers engaged in the same community will learn how to enhance their teaching by making sense of the sharing experience and adjust their teaching practices to meet the perceived demands and educational goals of various school contexts (So et al., 2009, p. 775).

To promote and strengthen situative perspective of EFL teacher preparation, several measures should be taken to implement online videocase discussions and help participating teachers with their concerns or difficulties. First of all, the participating teachers should be convinced that more flexible time is available for them to finish reviewing certain videocases or there is no prerequisite for them to make suggestions on all videocases. In so doing, those teachers with heavy workload will relieve their concerns of lags between watching videos and giving comments. Second, to deal with online stage fright issue, on the one hand teacher educators are supposed to keep reminding the community cohort that videocases do not necessarily present the “best practice” but a milieu for teachers to analyze, discuss, and reflect on instructional practices (Brophy, 2004). On the other hand, more encouragement should be promoted among the cohort members to review individual teaching videos and engage in online discussions. Finally, it is paramount to define the role(s) of inservice teachers in virtual communities (Hough, Smithey, & Evertson, 2004) with an aim to enhance the efficacy of their involvement in such a cohort where they not only contribute to but also benefit from preservice teachers’ learning to teach.

Conclusion

In view of the significance of integrating preservice and inservice teacher education (Fullan, 1995), the online collaborative learning community reported in this study has the potential to create a knowledge base for teacher professional development (see Figure 5). Through online videocase discussions situated in authentic classroom contexts, various school levels of teachers in this study worked collectively and probed into the nature and evolution of learning to teach (e.g., Boling, 2007; Fishman, 2004; Santagata, 2009). When playing different roles in discussing teaching practices, the preservice and inservice teachers did not learn individually. Instead, the social interaction among each other fostered both groups of the teachers to self-reflect and construct knowledge of teaching together. After gradually enculturating themselves into the values and norms of the community as a whole (Lave & Wenger, 1991; Putnam & Borko, 2000), these teachers had similar perspective of what to notice and discuss in teaching videocases. This in turn had an impact, if not influence, on their instructional beliefs and practices. To recapitulate, the current study revealed that the videocase professional development project not only nourished preservice EFL teachers’ learning to teach but also benefited inservice EFL teachers’ continual professional development. Moreover, this study documented several concerns and difficulties emerging from joining online videocase discussion between preservice and inservice teachers, which have not been thoroughly examined in the extant literature. As the global researchers have endeavored to promote online videocase discussion communities for teacher professional development, the study herein described adds to such a research collection by providing more evidence in an EFL context.

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Appendix A



Figure 1. Interface of the videocase links

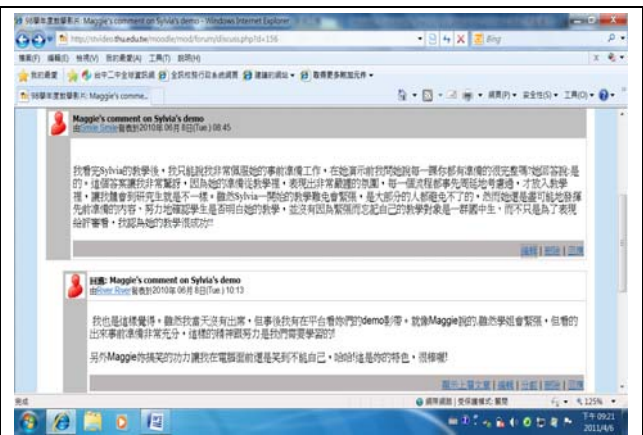


Figure 2. A sample of discussion forum

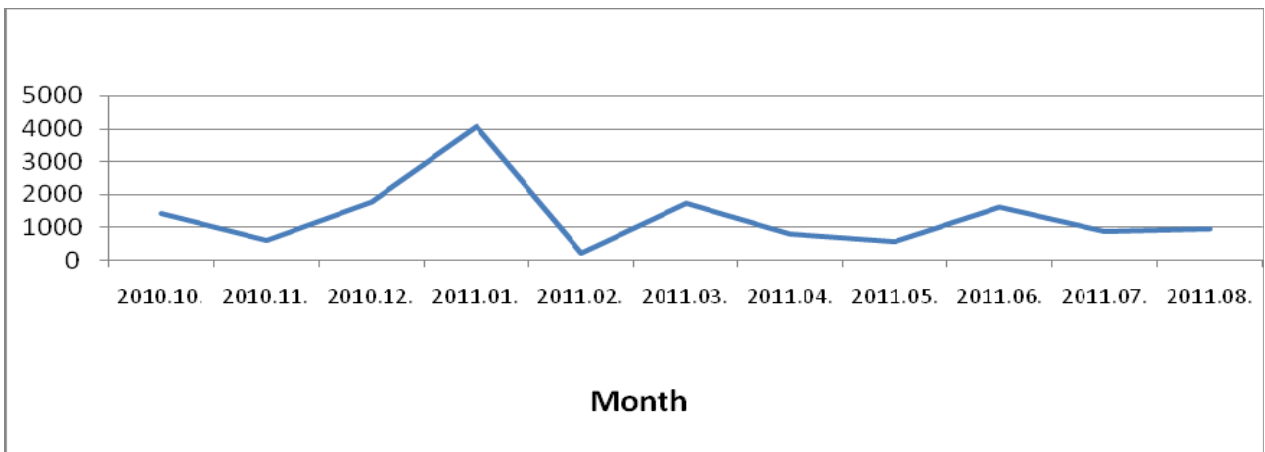


Figure 3. The Frequency of Viewing

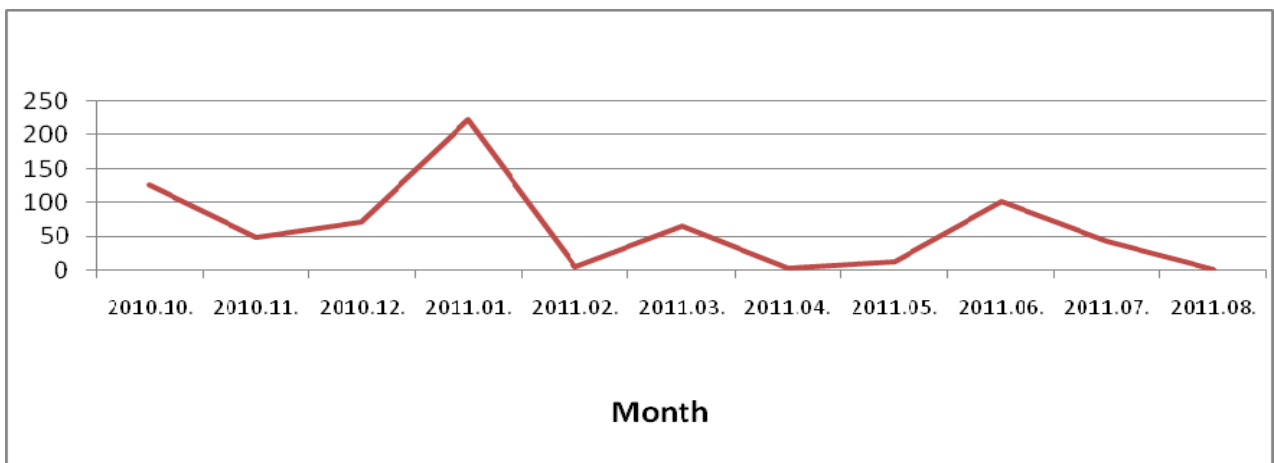


Figure 4. The Frequency of Posting

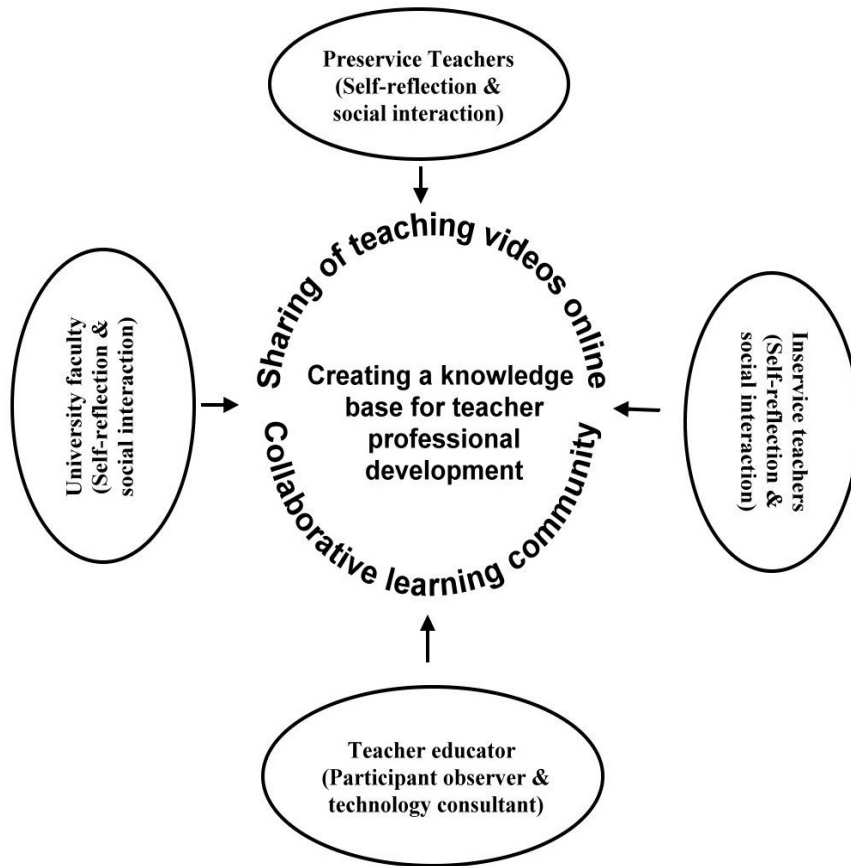


Figure 5. Creating a knowledge base for teacher professional development

Appendix B

Table 1. Data collection procedures

Time	Year 3 Preservice Teachers	Year 2 Preservice Teachers	Inservice Teachers	University English Teachers
Late September 2010	■ Interview (1)	■ Interview (1)	■ Interview (1)	■ Interview (1)
October 2010	■ Observation (1)	■ Observation (1)		
November 2010	■ Observation (2)		■ Observation (1)	■ Observation (1)
December 2010	■ Observation (3)	■ Observation (2)		
Mid January ~ Early February 2011	■ Interview (2) ■ Open-ended questionnaire (1)	■ Interview (2) ■ Open-ended questionnaire (1)	■ Interview (2)	■ Interview (2)
(Winter Vacation)				
Late February 2011		■ Observation (3)		
March 2011			■ Observation (2)	■ Observation (2)
April 2011		■ Observation (4)		
Early June 2011	■ Open-ended questionnaire (2)	■ Open-ended questionnaire (2)		
July ~ Mid August 2011	■ Interview (3)	■ Interview (3)	■ Interview (3)	■ Interview (3)
<p><i>Note:</i> ■ Messages derived from online video discussion forum among various participants were collected from October 2010 to Mid August 2011.</p> <ul style="list-style-type: none"> ■ The preservice teachers kept monthly journals throughout this project. ■ Year 3 preservice teacher were not conducted with video-taped observations in the second semester because they finished teaching practicum in the first semester. 				

Table 2. Coding categories of online messages on videocases

Categories	Subcategories
1. Participant in the discussion	(1a) year 2 preservice teacher (1b) year 3 preservice teacher (1c) inservice teacher (1d) university teacher
2. Type of discussion	(2a) setting up the discussion (2b) describing events (2c) evaluating events (2d) critiquing events (2e) asking questions on events (2f) interpreting events (2g) giving suggestions for improving events
3. Content of the discussion	(3a) video-taped teacher's role (3b) video-taped teacher's pedagogy (3c) video-taped students' learning behavior (3d) teacher and students interaction (3e) students and students interaction (3f) instructional tools or aids (3g) classroom management (3h) others

Table 3

The frequency of types of online discussion messages

Types of Discussion	21 Preservice Teachers	11 Inservice Teachers	Total	%
Evaluating events	305 (72%)	118 (28%)	423	24%
Describing events	364 (91%)	34 (9%)	398	23%
Giving suggestions for improving events	217 (70%)	94 (30%)	311	18%
Interpreting events	100 (54%)	84 (46%)	184	11%
Asking questions on events	118 (71%)	49 (29%)	167	10%
Setting up the discussion	33 (20%)	130 (80%)	163	9%
Critiquing events	29 (34%)	56 (66%)	85	5%
Total	1166 (67%)	565 (33%)	1731	100%

Table 4

The frequency of discussion content of online discussion messages

Discussion Content	21 Preservice Teachers	11 Inservice Teachers	Total	%
Teaching flow	206 (67%)	102 (33%)	308	18%
Teacher's pedagogy	182 (62%)	112 (38%)	294	17%
Teacher and student interaction	167 (58%)	119 (42%)	286	16%
Stage manner	154 (74%)	53 (26%)	207	12%
Classroom management	111 (59%)	78 (41%)	189	11%
Students' learning behavior	103 (57%)	79 (43%)	182	10%
Instructional tools or aids	67 (59%)	47 (41%)	114	7%
Teachers' roles	39 (46%)	45 (54%)	84	5%
Students and students interaction	31 (46%)	36 (54%)	67	4%
Total	1060 (61%)	671 (39%)	1731	100%

Effects of Online Videocase Discussions on Preservice English Teachers' Professional Development

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Self-Evaluation of the Research Results

1. An evaluation of whether or not the expected results match the original plan

Overall, the implemented research project has a match to the original proposal in terms of the research context, participants, data collection methods, data collection procedures, and data analysis. I successfully accessed the potential EFL preservice teachers and TESOL faculty at Tunghai university as well as EFL inservice teachers at various school contexts. Most participants were very cooperative with the multiple data collection methods employed in this project, except that several of them had concerns or difficulties frequently involving themselves in online discussions. Yet, as shown in the Moodle tracking system, these participants instead chose to view the online messages when they were available. In order to improve data collection methods, I adopted one research proposal reviewer's comment suggesting that the preservice teachers' paper-based reflection journals should be changed into electronic format and then collected online. This revised format improved the data collection to meet the essence of teacher professional development in an online learning community.

Since this research project was a qualitative-based investigation, there were no pre-supposed hypotheses to be tested. Yet, the research findings were analyzed to address the five research questions proposed in the original plan. Based on the rich data collected from various participants and multiple data collection methods, this study documented and portrayed the development and nature of discussions in this online videocase discussion community as well as a variety of teachers' professional development in this virtual context. Furthermore, this research project depicted some concerns or difficulties which hindered several participants from engaging themselves in the online videocase discussions. The lessons emerging from this study may provide pedagogical implications for future researchers in the teacher education field.

To recapitulate, the expected outcomes of this research project highly matches the original proposal. The example from an online videocase community in this project provides more evidence to teacher educators about involving multiple stakeholders in preservice teachers' online professional learning. Similar studies should be conducted in different contexts including other subject discipline areas in order to further provide evidence needed as to what would promote and foster online professional development among teachers at various school levels.

2. An evaluation of whether or not the final results are publishable

The results of this study reveal and uncover many issues embedded in an online videocase discussion community that have not been addressed in the English as a foreign language (EFL) teacher education field. More specifically, the current study involved various teachers to have online discussion on the videocases showing the participating teachers' classroom instruction. Such an investigation has been conspicuously absent in the literature review. Due to the above uniqueness, this research project is making a significant contribution to scaffold EFL preservice teachers' learning to teach and reciprocally foster EFL inservice teachers' and university faculty's professional development.

The research findings of this project are publishable due to its significance of filling in the literature and the related pedagogical implications for building online videocase discussion communities among teachers at various school levels. Integrating the major findings of this 99 NSC project and partial findings of the 98 NSC project, I presented a paper entitled "Discussing teaching videocases online: Perspectives of preservice and inservice EFL teachers" at the 2011 CAL Conference in Manchester Metropolitan University, England on April 14, 2011 (see the paper in the attachments to the section of 出席國際學術會議心得報告). After receiving the comments and feedbacks from the audience members, near the end of this April I revised the paper and submitted it to *Computers & Education: An International Journal* (SSCI journal). This manuscript was under further revision during this August and it was finally accepted in the early September (please refer to the attached notification email in the end of this report and the accepted manuscript at <http://dx.doi.org/10.1016/j.compedu.2011.09.004>) As informed by the Elsevier Ltd. Publisher, my article will be officially published in one of the issues in spring 2012. In addition to the above publication, I am currently drafting another manuscript regarding the affordance and concerns of building an online learning community between preservice and inservice EFL teachers. I aim to submit this manuscript to *English Teaching and Learning* (英語教學期刊) published by National Taiwan Normal University (TSSCI Core journal) before the end of January, 2012.

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國科會補助專題研究計畫項下出席國際學術會議心得報告

日期：100 年 5 月 30 日

計畫編號	NSC 99 - 2410 - H - 029 -030 -		
計畫名稱	應用網路支援學習社群探究英語職前教師之專業成長		
出國人員姓名	劉美惠	服務機構及職稱	東海大學外國語文學系 助理教授
會議時間	100 年 4 月 13 日至 100 年 4 月 15 日	會議地點	英國曼徹斯特
會議名稱	(中文) 2011 電腦輔助學習國際研討會 (英文) The CAL Conference 2011		
發表論文題目	(中文) 於線上討論教學實況錄影：探究職前英語教師與在職英語老師之觀點 (英文) Discussing teaching videocases online: Perspectives of preservice and inservice EFL teachers		

一、參加會議經過

由國際知名 Elsevier Ltd. 所主辦、英國曼徹斯特城市大學 (Manchester Metropolitan University) 承辦之 2011 電腦輔助學習國際研討會 (The CAL Conference 2011) 於曼徹斯特城市大學校區內隆重舉行。研討會之主題為: Learning Futures: Education, Technology & Sustainability; 多元化之研討會涵蓋四大議題: 1) Sustainability, globalisation and social justice, 2) The future of learning technologies, 3) Informal learning and digital cultures, and 4) Looking back to look forward。來自五大洲 32 個國家之 216 位專家學者共發表 132 篇論文, 與會人員根據其專長領域提出經驗分享、見解與論據、以及針對各項電腦輔助學習媒介或平台之改善與建議。臺灣代表方面共有 11 所公私立大專院校之 11 位教師發表 2 篇論文與 7 份 poster, 個人深感榮幸能代表臺灣參加此次由曼徹斯特城市大學所舉辦之兩年一度研討會中發表論文, 與來自世界各國之與會人員共同研討如何將電腦與網路科技納入教學之各項議題。

大會於研討會前一天晚上 19:00 ~ 20:00 pm 特別安排與 BBC 電台之 Prof. George Auckland 作特別面對面會談。Prof. Auckland 任職 *Head of Learning Innovation at the BBC* 超過 30 年之久，其為全世界提倡運用電腦科技與高科技媒體於學習之先驅者之一！經由參與此項面對面會談，與會者感受到這位前輩對於改革教育之前瞻性看法以及其所執行之實際性改革計畫案，著實令人感到敬佩不已！

研討會第一天早上 9:30 am 之開幕式由 CAL 2011 研討會主辦單位主席 Prof. Keri Facer 主持，隨即由英國 Nottingham University 之 Prof. Benford 進行一小時 Keynote Speech，其講題為 *Trajectories Through Learning Experiences*”，敘述與分析近十年以來電腦及網路科技與教學之關係，並呼籲當代教育學者應繼續引導教育邁向 E 世代紀元之重要性；身為新時代科技達人之 Prof. Benford 為英國 Mixed Reality Laboratory 之創辦人，其對運用電腦科技於教學與研究之「質與量」優異表現曾獲得多項獎項，令在場之各地專家學者一致推崇與景仰！其他幾場 Keynote Speech 中使我受益最多的是來自美國 University of California at Berkeley 之 Prof. Mahiri 所發表的講題 “On-line Youth Reshaping the Off-line Learning of Urban Public Schools”；Prof. Mahiri 在論文內容中分析都會區青少年之線上非正式之學習有助於提昇其學習學校課業之動機與效率，此研究發現引發我將來在台灣 EFL 情境中作類似研究之興趣與動機。

大會特別將議題相近之論文固定安排於同一區會議廳發表，以免與會人員四處奔波換場地；在超過 130 篇論文發表之場次中，同一時段約 15 場發表中我只能選擇要參加的單一場次，對於其他場次真是難以割捨。我聆聽了大部分與如何運用各種網路平台、3D 虛擬社群、或相關教學軟體於語言教學與師資培育之論文與 poster 發表，其次為探討運用電腦及網路科技於各學校層級教學時可能面臨之問題或挑戰等相關之議題。例如：在師資培育方面，我聆聽了兩篇最直接跟我的國科會研究案相關之研究論文，第一篇為英國 Steljes 大學之 Dr. Pearson 所發表之論文，Dr. Pearson 詳述以網路資訊系統提供教師們觀看教學影片之成效，著實呼應我的研究發現；另外，來自西班牙 Basque Country 大學之 Dr. Martinez-Arbelaiz, Dr. Correa-Gorospe, 與 Dr. Cuenca-Gutierrez 探討 online community of inquiry 對於職前教師專業成長之影響，與會人員提出許多疑問進行討論，我也適時將自己運用網路社群與線上教學錄影於台灣師資培育之經驗與大家分享。此外，針對電腦輔助學習方面而言，令人印象深刻的場次為來自美國 North Texas 大學之 Prof. Samruayruen 與其博士學生 Mr. Enriquez 發表之研究報告，該量化研究為歸納整理泰國大學生成為成功的網路學習者所應具備之五項要素。其他很多場次之論文內容探討各國運用 ICT 之課程規劃與改革；例如，英國 London 大學 Prof. Pachler, Prof. Cuthell, 與 Prof. Allen 共同發表之論文 “The ICT CPD landscape as discursive terrain” 引領所有與會人員深思 ICT 教學指標與學校教育政策應如何達到最佳之協調性與整合性。新加坡 Nanyang 大學之 Prof. So, Prof. Tay, 與 Prof. Tan 於其共同發表論文中特別強調：世界各國欲開創二十一世紀 learning futures of the future school 必須先強化教師與學生之各項科技運用概念和技巧，以因應 E 世紀之潮流與需求。

於語言教學方面，英國知名學者 Prof. Underwood 於其論文中倡導以 mobile personal language learning environment 促進 self-initiated foreign language inquiry learning，其所提出之理念與研究方法引發我日後可以做相關性研究之動機；而美國 Fielding 大學 Prof. Freeman 以 Sen's capabilities approach 分析美國高中學生藉由數位科技學習英語之成效；英國曼徹斯特城市大學 Prof. Robertson 於其 poster 中特別提出如何運用電腦科技於 TEFL (Teaching English as a Foreign Language) 教學情境。來自台灣高雄應用科技大學蔡教授與文藻大學的江教授以營造科技學習環境之需求，特別設計了 ESP (English as a Specific Purpose) 應用軟體供與會人員參考；交通大學葉教授、中華大學羅教授、以及中原大學李教授

共同發表之 Poster，以其所設計之 online annotation system 增進台灣學生學習英語單字之能力；海洋大學黃教授則在其 poster 中說明 EFL (English as a Foreign Language) 學習者對使用 e-book 閱讀成效之態度，並提供與會者相關研究資訊。

我個人論文發表的場次排定於會議第二天下午兩點十分至兩點三十分之 Session 13.1，大會嚴格規定每場次論文發表者在二十分鐘之內完成其研究報告，在場主持之主席英國籍 Prof. Hennesy 也再三叮嚀我們遵照大會之 schedule，以便於在所有論文發表之後，其他與會人員才有時間提問。我根據之前參加各項國內外論文發表時間掌控的經驗，適度地調整自己發表論文的速度並於規定時間內完成報告。於 Q & A 時段，在場與會人員主要提問三大議題：1) 台灣師培單位是否普遍地運用 online video discussion 以增進教師專業成長，2) 如何提昇 online video discussion 之效益，以及 3) 如何處理在職教師與職前教師於參加 online video discussion 所遇到之困境。在結束參與 Session 13 共三篇論文發表之後，我隨即將在場專家學者之意見作總整理，以便研討會後修改我的論文。

除了參加論文發表場次外，推廣國民外交是我每次參加國際會議之重大任務之一；於大會所安排的 tea break 與午餐時間，我與來自各國不同學校之論文發表者分享經驗；其中，加拿大 McGill 大學的 Dr. Tung、澳洲 Wollongong 大學的 Prof. Wills、與來自香港 Polytechnic 大學的 Prof. Chow 皆曾經參訪過台灣寶島；而來自澳洲 Queensland 大學的 Prof. Lawrie 因為我是該校畢業校友所以跟我特別親近，當他表示有高度興趣至台灣觀光與造訪姊妹校時，我便積極盡力地介紹相關旅遊訊息給 Prof. Dawley 與一起聊天的其他與會人員。因為主辦單位並無安排任何市區導覽行程，所以我便與幾位國際友人以及台南大學張教授相約於第二天研討會會後參觀曼徹斯特市區與著名觀光景點。於最後一天閉幕式會後，我和與會友人交換名片與話別，並相約如果有緣的話會在世界其他各地的研討會見面。最重要地是，我積極地邀請國際友人不久的將來能到臺灣參加研討會，隨後便與友人互道珍重再見！

二、與會心得

此次遠赴英國參加由國際知名 Elsevier Ltd. 所主辦、英國曼徹斯特都會大學所承辦之 2011 電腦輔助學習國際研討會著實收穫良多！經由聆聽專家大師之演講與參與八方雲集之學者們發表的論文中，深深體會世界各地教育學者專家積極投入將電腦與網路科技融入教育百年大業之付出與奉獻。會中學者們盡其心力長期研究各項網路平台之開發與運用，例如：teacher professional development platform、3D virtual classroom、e-book、mobile learning environment、與 online cognitive style assessment 等等。此外，多位質性研究者甚至投入數年之時間長期追蹤分析電腦與網路科技對學習之優缺點，其研究精神著實令我佩服。近年來國科會因應研究趨勢鼓勵國內研究人員申請多年期研究計劃案，期許身為新進研究人員的自己能夠加強自我專業能力以跟進世界性之研究方向。

在聆聽論文發表與參與會後討論之中，我吸取許多寶貴經驗得以應用於日後擔任英語教學與師資培育工作等相關領域之研究。其中，與我的國科會計畫案最直接相關者為將教育科技運用於師資培育之論文，與會人員分享與討論其如何於網路上營造 teacher professional development culture 之方法與心得，可以作為我日後在運用網路平台訓練職前英語教師或推動在職英語教師專業成長時之重要參考文獻。尤其，在科技日新月異帶動之下，運用網路於各項教學與學習儼然已經成為主流之一，我將積極在工作崗位上推動融合「網路平台虛擬情境」於英語教學與師資培育之構想，以裨益學生於各項科目之學習。

如同前幾次於香港、澳洲、西班牙以及希臘參加國際會議一般，此行除了充實個人自我學術領域知識之外，積極拓展國民外交以及讓更多國際學術界人士認識臺灣目前的學術與教育發展，是參加此次研討會最大的收穫。由於研討會主辦單位細心地規劃研討會會場空間與安排 conference dinner，增進了所有與會人員之互動與交流，所以幾位新認識的與會友人皆進一步地想從我身上得知臺灣寶島的發展狀況，尤其希望日後能有機會至臺灣參加國際研討會以及體驗臺灣特殊的風情文化。此時此刻，我個人便化身為外交小尖兵，注意自己在國際場合上的一舉一動與表現，以使國際友人對臺灣學術界留下之良好印象。我個人將繼續維繫與國際友人之關係，以利於台灣學術界與世界各國研究趨勢接軌。

最後，這次的行程讓我發覺自己對英國人嚴謹的辦事態度更加敬佩不已！之前於西班牙參加研討會時初次體驗英國人在同一發表場次中行俠仗義要求當場他國與會人員遵守研討會大會之規定；此次，在會場中發現工作人員恪守崗位並提供及時支援給與會人員；參加整個研討會之過程發現：儘管早上之演講或論文發表場次安排於 9:00 am，英國籍與會人員大約於 8:30 am 左右已經在會議場地打開筆電或 ipad 以就緒好準備迎接演講者或論文發表者之到來；三天會議中，午餐之後英國籍友人會帶頭提醒大家要早點進會場；因此即使我的場次緊接地安排於午餐飯後，沒有人遲到或早退，令人覺得很受尊重。不像之前參加幾次的國際研討會，午餐後之場次通常沒有多少人參加，不然則是姍姍來遲！除此以外，此次英國之行更加見識到當地人之生活步調與品質，從倫敦機場下榻於當地住宿處、搭火車至曼徹斯特、坐公車至會場參加研討會、以及研討會會後與友人參訪市區等等經驗，映入眼簾的皆是乾乾淨淨、有條不紊的環境。然而，在曼徹斯特街頭我瞥見當地人於日常生活中品嚐咖啡悠閒的一面，希望自己在繁重的工作壓力下，也能偶而學習一板一眼的英國人適時地調整生活的步調！

三、考察參觀活動(略)

四、建議

參加此次英國曼徹斯特 2011 電腦輔助學習國際研討會兩年一度之盛會後，有三項建議希望能裨益國內教育與學術之發展：

- (1) 鼓勵善用網路資源於教學與研究— 此次研討會中觀摩到各國學者與教育專家善於應用網路資源與營造網路平台或「網路 3D 虛擬學習情境」以輔助師資培育與提供各個層級學校教學之需求。雖然台灣多數大學教師近年來已經積極地使用 Moodle、Blackboard 或 Second Life 於教學上；但綜觀之下，大學層級以下之學校（例如：高中與國中）使用網路平台或「網路虛擬學習情境」輔助教學之現況仍是不普遍；此外，國內學者運用各種高科技網路平台之研究大多集中於大學教育之層級，較少研究探討運用網路科技於中小學教育之成效。希望在教育當局與國科會鼓勵之下，國內專家學者能更投入相關性研究與教學應用，以與世界性教育潮流並駕齊驅。
- (2) 推廣多年期結合質性與量化之研究— 國際學者經常致力於長期性之研究，並結合質性研究與量化研究之優點，以深入探討英語教學或教師專業成長之各項議題；期盼更多國內研究學者能執行多年期研究計劃案並採取多重資料蒐集方式，以彌補短期研究與單一資料蒐集方式之不足。
- (3) 致力於爭取承辦國際知名研討會— 於台灣境內所舉辦之國際性學術會議通常為學術單位個別主辦，較少承辦世界性之研討會；近日得知靜宜大學英語學系將於 2012 年 5 月份承辦第十五屆 International CALL Research Conference，其承辦此研討會之機緣在於系上老師參加第十四屆研討會

時主動爭取主辦單位之青睞。如此成功之舉可以成為其他學校學習之範例，以將台灣推向成為國際學術性活動之舞台。

五、攜回資料名稱及內容

- (1) 紙本資料：大會手冊、會議議程表、參加論文發表場次之講義
- (2) 電子檔資料：論文摘要、與會人員資料與通訊錄
- (3) 大會所頒發之論文發表證書 (certificate)

六、其他

- (1) 由 Elsevier Ltd. 所主辦之各領域年度研討會傳單
- (2) 在會場推廣之期刊訊息
- (3) 國際友人之名片與相關聯絡資料



Learning Futures: Education, Technology & Sustainability

Manchester Metropolitan University, Manchester, UK, 13-15 April 2011

Certificate of Presentation

We hereby confirm that

Mei-hui Liu

Presented the following at the CAL Conference 2011
13-15 April 2011 – Manchester, UK

Discussing Teaching Videocases Online

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Discussing Teaching Videocases Online: Perspectives of Preservice and Inservice EFL Teachers

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Abstract

This qualitative study investigated the application of an online videocase discussion community into fostering preservice and inservice EFL teachers' learning to teach. Relying on the theoretical framework of *situative perspective of teacher learning* (Lave & Wenger, 1991), this investigation further revealed the nature and development of teacher reflection and video discussion discourse, the possible change of teachers' behaviors in classroom practices, and potential concerns or difficulties encountered by various community members. Various participants involved 21 preservice teachers, 7 secondary school teachers, and 4 university teachers. Multiple data collection methods included teaching videos, online discussion messages, interviews, reflection journals, and an open-ended survey. The findings revealed the professional development experience and online learning issues the participating teachers perceived in this virtual community. Pedagogical implication and research suggestions are offered for teacher educators and researchers to further codify and document the complexities of teacher development in various online videocase discussion contexts.

Keywords: Online videocase discussion; Online learning community; Teacher education; English language education

1. Introduction

In the past decade, scholars and researchers have advocated the rich potential of videocases as a powerful tool for connecting theory with practice in teacher education (e.g., Borko, Jacobs, Eiteljorg, & Pittman, 2008; Brophy, 2004; Kurz, Llama, & Sabenye, 2004; Sherin, 2004). Based on the case methodology, videocases can capture the richness and complexity of the classroom context and provide a very efficient way to expose the viewer to the authenticity of the classroom (Brophy, 2004). Specifically, videocases provide a common experience through which individuals or groups of teachers can analyze the issues, dilemmas, and opportunities of teaching (Kurz et al., 2004). As Borko et al. (2008) argued, applying videocases to teacher professional development “helps teachers to systematically investigate critical elements of the professional development experience, and to probe into the nature and evolution of teaching and learning” (p. 418). Moreover, videos present multiple layers of perspectives in the classroom environment and demonstrate how a variety of simultaneous events may impact, if not affect, teachers' instructional decisions in classrooms (Monroe-Baillargeon, 2002). When involved in watching, discussing, and reflecting on videocases, teachers are offered opportunities to “develop a different kind of knowledge for teaching—knowledge not of ‘what to do next,’ but rather, knowledge of how to interpret and reflect on classroom practices” (Sherin, 2004, p. 14).

In addition to face-to-face video discussion clubs, with the advent of digital technology researchers recently have started to store teaching videos on the computer and to share videos across the Internet, i.e., to apply online videocases to teacher preparation (e.g., Fishman, 2004; Koc, Peker, & Osmanoglu, 2009; Nemirovsky & Galvis, 2004). It is then coupled with establishing a virtual learning community of novice and/or veteran teachers, providing teachers an online professional development forum (e.g., Boling, 2007; Koc et al., 2009; Marsh, Mitchell, & Adamczyk, 2010; So, Pow, & Hung, 2009). Fishman (2004) raised two major reasons why researchers employed online videocase discussions to foster teacher preparation. First, online videocases are available to more teachers, compared to face-to-face video clubs which are effective small-scale venues for teacher learning. Second, less moderators and facilitators are needed to monitor the use of the online network by teachers and help them to define and meet individual goals for their own professional development. By involving themselves in such “video networks” (Sherin, 2004), teachers’ videos from their own classroom can be uploaded to the Internet, along with lesson plans or other background materials. All online community members can “visit” one another’s classrooms and access related lesson materials, facilitate the sharing of teaching practice, and engage in professional dialogues or discussions without time or geographical barriers (Perry & Talley, 2001).

The focus on videocases as a tool for teacher professional development has prompted a number of studies to investigate the video learning experience by preservice teachers (e.g., Beck, King, & Marshall, 2002; Masingila & Doerr, 2002; So et al., 2009; Stephens, 2004) or inservice teachers (e.g., Fishman, 2004; Santagata, 2009; Sherin & van Es, 2009). Yet, a paucity of researchers sought to involve both preservice and inservice teachers in the same learning community, except for a few extant studies (e.g., Koc et al., 2009; Maclean & White, 2007; Marsh et al., 2010; Nemirovsky & Galvis, 2004). As stressed by Koc et al. (2009), the number of the studies of this type is limited and further research is needed in this area. Moreover, given the extensive use of videocases in teacher education and professional development, far too little is known about how video supports teacher learning or influence teachers’ own practice (Borko et al., 2008; Sherin & van Es, 2009). Additionally, there is a burgeoning interest in applying online videocases to professional development projects, yet research on the effectiveness of such a media on teachers’ practices is still in its infancy (Boling, 2007; Koc et al., 2009). Furthermore, despite the prevalence of employing videocases in the general teacher education field, there remains a dearth of related studies in the EFL/ESL (English as a foreign or second language) teacher preparation.

Mindful of the above reasons, this study aligned with recent research trend in applying digital technology to teacher education aims to investigate the effectiveness of videocase discussions on fostering preservice and inservice EFL (English as a foreign language) teachers’ professional development in an online learning community. Maclean and White (2007) maintained that the integration of preservice and inservice teachers’ video sharing and discussions makes both groups of teachers “synergistically benefit from joint access to professional development activities” (p. 48). Relying on the theoretical framework of *situative perspective of teacher learning* (Lave & Wenger, 1991; Putnam & Borko, 2000; 2004), this investigation further reveals the nature and development

of teacher reflection and discussion discourse around videos evolving in a virtual learning community, and its influence, if not impact on the participating teachers' classroom practices. Also included are the concerns or difficulties perceived by various members when participating in this online video discussion forum. Borko et al. (2008) indicated that while involving teachers in videocase learning, "situative theorists draw our attention to the social nature of learning and the central role that communities of practices play in determining what and how people learn" (p. 418). As further argued by Sherin, Linsenmeier, and van Es (2009), the situative perspective of learning offers important implication for the use of teachers' videos because this framework highlights the need to ground teacher learning in the practices of teaching, i.e., to situate professional development in the context of teachers' work.

1.1. Situative perspective of teacher learning

Lave and Wenger (1991) proposed that learning is situated in authentic apprenticeship contexts which allow learners to participate in communities of practice. As further interpreted by Borko et al. (2008), this framework highlighted that learning is not only an individual process of understanding how to participate in the discourse and practices of a particular community but also a process of refining norms and practices based on the ideas or perceptions that the community members bring to the discourse. Hence, "The social relationships of apprentices within a community change through their direct involvement in activities; in the process the apprentices' understanding and knowledgeable skills develop" (Lave & Wenger, 1991, p. 94). In particular, the use of tools and artifacts by community members contributes to the development of activities, shared goals and understandings (see also Engestrom, 1999).

Putnam and Borko (2000) integrated previous literature and highlighted three conceptual themes central to the situative perspective regarding the nature of learning and knowing as follows:

- *Cognition as situated*: It refers to "the physical and social contexts in which an activity takes place are an integral part of the activity, and that the activity is an integral part of the learning that take place within it" (p. 4), which suggests the importance of authentic activities in classrooms.
- *Cognition as social*: This "sociocentric" view of knowledge and learning posits that "what we take as knowledge and how we think and express ideas are the products of the interactions of groups of people over time" (p. 5). That is, the process of learning is social. As learners participate in the discourse and practice of a particular community, they experience the enculturation into a community's way of thinking and dispositions in terms of specific concepts, skills, and procedures.
- *Cognition as distributed*: Instead of considering cognition solely as a property of individuals, it is distributed over the individual, other persons, and various learning artifacts.

Relying on the above situative learning theories, Putnam and Borko (2000) proposed new views of research on teacher learning, including "(a) where to situate teachers' learning experience, (b) the nature of discourse communities for teaching and teacher learning, and (c) the importance of tools in teachers' work" (p. 5). In essence, there is a need to ground teacher learning in authentic classroom contexts where teachers become knowledgeable in and about teaching (see also Putnam

& Borko, 2004). When involved in a discourse community recruiting teachers with various types of knowledge and expertise, the cohort members can “draw upon and incorporate each other’s expertise to create rich conversations and new insights into teaching and learning” (Putnam & Borko, 2000, p. 8). Furthermore, the tools or artifacts used to support teacher learning should be closely tied to the practices of teaching, such as curriculum materials, student work, and classroom video to situate professional development in the context of teachers’ work (see also Kazemi & Franke, 2004; Smith, 2002). More specifically, Putnam and Borko (2000) highlighted that videotapes of classroom lessons can convey more of the complexity of classroom events and contributes to the development of shared goals and understandings among teachers.

The rationale for this study to rely on the theoretical framework of *situative learning* is because this theory provides a powerful research tool, guiding researchers to not only pay attention to individual teachers as learners but also to their participation in professional learning communities (Borko et al., 2008; Putnam & Borko, 2000; 2004; Sherin et al., 2009). Moreover, research based on situative perspective “allows for multiple conceptual perspectives and multiple units of analysis” on teacher professional development (Putnam & Borko, 2004, p. 4). When applied to the educational field, situative perspective of teacher learning not only fosters novice teachers’ learning to teach but also reciprocally benefits expert teachers’ professional development, especially if interactions and dialogues with novice teachers elicit experienced teachers’ personal reflection (Putnam & Borko, 2000; 2004).

1.2. Research questions

This study aims to investigate preservice and inservice EFL teachers’ professional development when involved in online videocase reflections and discussions. The research questions to be addressed are as follows.

- What are the nature and development of videocase discussions between preservice and inservice EFL teachers in an online learning community?
- How do these teachers perceive their professional learning experience in this online videocase discussion community?
- What are the concerns or difficulties these teachers encounter, if any, during their participation in this online professional development context?

2. Methodology

2.1. Setting and participants

A web-based asynchronous videocase discussion board implemented on a user-friendly *Moodle* platform was set up by the present researcher to promote preservice teachers’ learning to teach and inservice teachers’ continual professional development. In total, 21 preservice and 11 inservice EFL teachers were involved in this project. Enrolled in a 3-year teacher training program at Tunghai University, Taiwan, these preservice teachers were taking teaching methodology courses, joining a service learning course to teach English at a nearby junior high school, or experiencing a semester-long practicum at different secondary schools located in central Taiwan. Throughout the

study, all the teacher candidates participated in the video-taped teaching sessions, online discussion forum, 3 interviews, monthly journals, and 1 open-ended survey. Furthermore, the recruited inservice teachers were 7 English teachers who have taught English for 2 to 12 years at junior or senior high schools in different geographical areas. Also included were 4 university TESOL teachers with 5 to 25 years of teaching experience at the English Language Center, Tunghai University. These inservice teachers cooperated with 3 interviews in addition to allowing teaching sessions to be video-taped and joining online discussions.

2.1.1. Roles of the present researcher

Lock (2006) maintained that to facilitate teacher professional development designers of online communities ‘*have a role in being agents in purposefully fostering the growth of community*’ (p. 673). The present researcher hence followed Fry and Bryant (2006-2007) to serve as a ‘*participant observer*’ who regularly reminded the cohort members to participate in the online activities by emails as well as promoted reflectivity among the cohort by providing guiding questions for videocase discussion and posting messages in response to the participating teachers’ questions, if needed. Furthermore, researchers reminded that available and instant technological assistance or support provided to participants is conducive to their positive attitudes and willingness to utilize new technological tools in their learning (e.g., Palloff & Pratt, 2005; Preece, 2000). With the assistance of a student majoring in the Information Engineering at Tunghai University, she provided the participants with instant technical support throughout the study.

2.2. Data collection

Multiple data sources were collected from early March 2010 to late January 2011, including online discussion messages, interviews, an open-ended survey and reflection journals. Prior to the start of data collection, an orientation workshop was offered to provide an overview of the goals and objectives of the online videocase discussion group, the roles and responsibilities participating teachers may play in this virtual community (e.g., consultant, consultee, and peer), and a focus on building trust among the cohort members. All the participants were informed of Brophy’s (2004) statement that videocases do not necessarily present “best practice” but a range of teaching that will stimulate analysis, discussions, and reflections. Moreover, they discussed how to establish a collegial learning community in which a higher level of trust and respect among teachers was required as their professional development centered on videos exposing actual teaching practices (Grossman, et al., 2001).

After the orientation, individual participant was interviewed to document their preliminary perceptions of videocase discussions in online learning community in March 2010.

In this study, the preservice teachers’ instructional practices were shot 3 times individually, and inservice teachers and university faculty 1 to 2 times. The shooting sessions were scheduled based on the participants’ available time slots. An unedited video of each class session was reviewed and edited into a 15- to 20-minute video clip by the researcher and individual teacher before being uploaded online for viewing and discussions among the community members. Each

video clip was edited into four sections which provided a timeline for the classroom events: introduction, presentation, activities, and closure (Kurz, et al., 2004). This initial viewing and editing gave teachers agency in controlling the aspects of their teaching to be discussed and created “multiple layers of reflection” (Maclean & White, 2007, p. 49). In addition to the video clips, tangible artifacts (e.g., the information of schools and teachers, lesson plans, curricular materials, or students’ work) were scanned and uploaded online together to situate teacher professional development firmly within the participants’ practice (Borko et al., 2008; Koc et al., 2009). The edited video clips with related artifacts were then uploaded to the *Moodle* system on which specific folders were organized for storing individual participating teachers’ videocases.

With free access to computers, the Internet, and technical support, all the participants joined the online discussion forum throughout the data collection process (see Figure 1 and 2 for sample screenshots). After the first set of preservice teachers’ videocases were uploaded online in late March 2010, the participating teachers started to post messages to discuss or reflect on what they observed in the videocases with the researcher’s guided questions to prompt online discussions. They were involved in this online discussion forum as more videocases of various teaching contexts were made and uploaded to the learning community. As a participant observer, the present researcher posted messages to schedule a period of time for the online community members to finish viewing and discussing certain sets of videocases. For example, the participants had 8 weeks to watch first two sets of video cases uploaded. Once most participants were familiar with this discussion forum, the duration of other sets of video observations and discussions was shortened to 6 or 4 weeks.

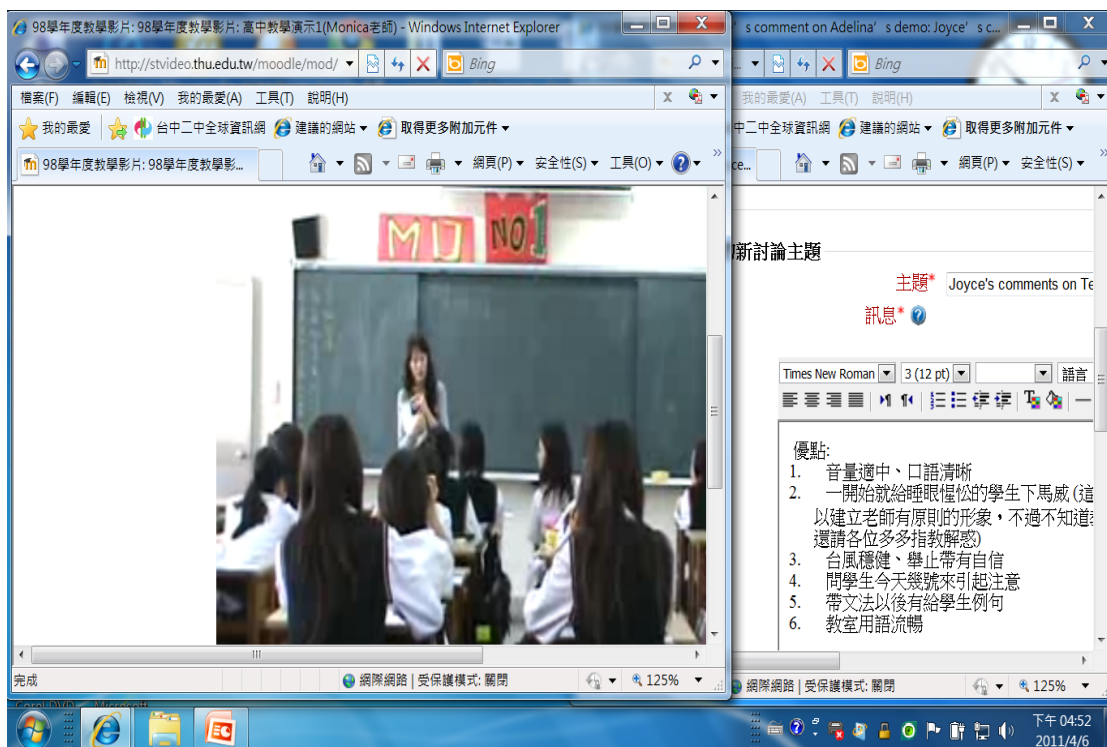


Figure 1. A screenshot of one preservice teacher’s comments on a videocase

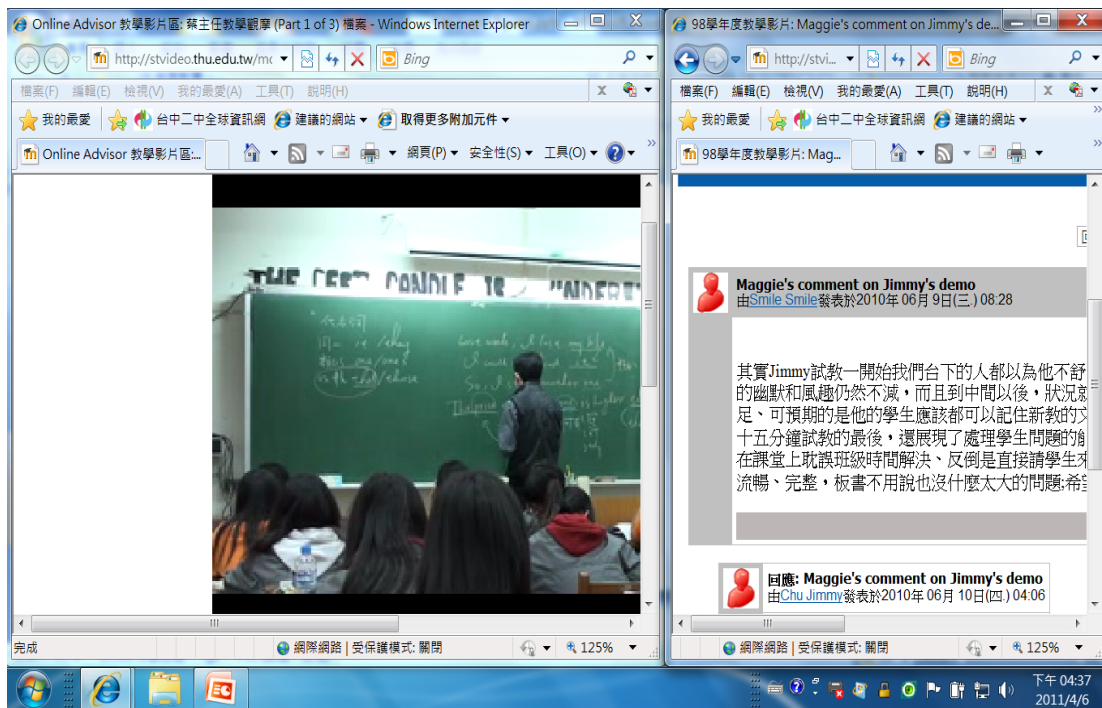


Figure 2. A sample of several participants' discussion on a videocase

Other than online discussion messages collected, all the participants were interviewed at the beginning, the middle, and the end of this study. Adapted from previous related studies (Koc et al., 2009; Kurz et al., 2004; Santagata, 2009), the interview questions kept track of the participating teachers' online video discussion experience and the change of their classroom practices, if any. Referring to the literature (Santagata, 2009; Santagata, et al., 2007; Stephens, 2004), an open-ended survey was designed to reveal how preservice teachers perceived relevance of the online video discussions for fostering their professional development. To offer more evidence of issues being discussed, the preservice teachers were further requested to keep monthly reflection journals with prompts related to the interview questions during this study.¹

2.3. Data analysis

Multiple data collected from various participants were analyzed and compared continuously until theories or patterns emerged (Glaser & Strauss, 1967; Silverman, 2006). The discourse analytic approach was employed to code the online posting messages (Koc et al., 2009; Maclean & White, 2007). To develop meaningful and valid coding categories, an "iterative process" was adopted from the relevant literature (Borko, et al., 2008; Koc, et al., 2009; Sherin & Van Es, 2009), including three major categories with several subcategories (see Table 1). The messages were coded by the researcher and one research assistant based on the themes (i.e., units of meaning) emerging from each posting (see Henri, 1992; Wever, Schellens, Valcke, & Van Keer, 2006). During the data analysis process, the two coders discussed and reviewed any codes which were not agreed upon.

¹ With heavy teaching workload, the inservice teachers chose not to cooperate with the open-ended survey and keep monthly journals.

Statistically, the inter-rater reliability between the coders was 82%, an acceptable percent agreement.

Additionally, qualitative data collected from the interviews and preservice teachers' open-ended survey and reflection journals were analyzed by *Nvivo 8.0 for Windows* and open/axial coding techniques (Strauss & Corbin, 1998) to organize groups of data in particular themes or issues being investigated. All sets of data were compared and contrasted to depict the changes, if any, regarding what participants focused on the video tasks and how they perceived their involvement in the online discussion forum (van Es & Sherin, 2008). Specifically, the data revealed both preservice and inservice teachers' learning to teach, possible changes of practices, and encountered concerns or difficulties in this online learning community.

Table 1

Coding categories of online messages on videocases

Categories	Subcategories
1. Participant in the discussion	(1a) year 2 preservice teacher (1b) year 3 preservice teacher (1c) inservice teacher (1d) university teacher
2. Type of discussion	(2a) setting up the discussion (2b) describing events (2c) evaluating events (2d) critiquing events (2e) asking questions on events (2f) interpreting events (2g) giving suggestions for improving events
3. Content of the discussion	(3a) video-taped teacher's role (3b) video-taped teacher's pedagogy (3c) video-taped students' learning behavior (3d) teacher and students interaction (3e) students and students interaction (3f) instructional tools or aids (3g) classroom management (3h) others

3. Findings

3.1. The nature and development of online videocase discussion messages

Data analysis shows that the preservice teachers had more frequent postings throughout the study while the inservice teachers appeared to join the discussions less often especially when they were occupied with heavy teaching workload before midterm and final exam weeks. In the 11-month online discussions, 21 preservice teachers posted 941 messages and 11 inservice teachers 151 messages, with an average of 85.54 and 13.72 messages per month respectively. Table 2 lists the frequencies of discussion types on the online videocases. Differences between the preservice and inservice teachers' discussion types reveal the roles they play on this discussion forum. Both sides appeared to often evaluate what happened in the teaching videos, give suggestions for improving teaching practice, and interpret what they had viewed in the videocases. Yet, the preservice teachers mostly described events in the videos and sometimes asked questions to clarify what was not clear to them, while their counterparts tended to set up the discussion for community members and further critiqued the scenarios occurring in the videocases.

Table 2

The frequency of types of online discussion messages

21 Preservice EFL Teachers		11 Inservice EFL Teachers	
<u>Types of discussion</u>	<u>Count</u>	<u>Types of discussion</u>	<u>Count</u>
Describing events	347	Setting up the discussion	82
Evaluating events	275	Evaluating events	65
Giving suggestions for improving events	197	Interpreting events	51
Asking questions on events	105	Giving suggestions for improving events	49
Interpreting events	90	Critiquing events	38
Setting up the discussion	27	Asking questions on events	19
Critiquing events	21	Describing events	17

As to discussion content, the inservice teachers posted longer messages with various themes in each posting, compared to the preservice teachers. As shown in Table 3, in terms of the five major discussion topics both sides discussed “teacher and student interaction” as their priority and showed their interest in “teaching flow” in each videocase at the beginning of this study. Yet, the preservice teachers paid more attention to teachers’ “stage manners,” whereas the inservice teachers highlighted more on “teacher’s pedagogy.” Furthermore, the preservice teachers often discussed “students’ learning behavior,” while the inservice teachers were sharing their experience in “classroom management” issues. Interestingly, after several months of online interaction, the five major discussion topics emerging from both sides became similar (see Table 4). The content mainly covered video-taped teachers’ teaching flow or pedagogy, followed by how they dealt with classroom management, interacted with students, and stage manner. The results may suggest that the participating teachers gradually encultured themselves into the community’s ways of thinking and dispositions.

Table 3

The frequency of discussion content during the first 2 months of the study

21 Preservice EFL Teachers		11 Inservice EFL Teachers	
<u>Discussion content</u>	<u>Count</u>	<u>Discussion content</u>	<u>Count</u>
Teacher and student interaction	84	Teacher and student interaction	38
Stage manner (oral & postures)	75	Teacher’s pedagogy	25
Teaching flow	62	Teaching flow	21
Students’ learning behavior	47	Stage manner (oral & postures)	18
Teacher’s pedagogy	36	Classroom management	16
Instructional tools or aids	18	Instructional tools or aids	9
Classroom management	15	Students’ learning behavior	7
Teachers’ roles	6	Students and students interaction	5
Students and students interaction	2	Teachers’ roles	3

Table 4

The frequency of discussion content during the last 2 months of the study

21 Preservice EFL Teachers		11 Inservice EFL Teachers	
<u>Discussion content</u>	<u>Count</u>	<u>Discussion content</u>	<u>Count</u>
Teaching flow	74	Teacher's pedagogy	44
Teacher's pedagogy	66	Teaching flow	39
Classroom management	61	Teacher and student interaction	36
Teacher and student interaction	48	Classroom management	27
Stage manner (oral & postures)	39	Stage manner (oral & postures)	22
Instructional tools or aids	19	Students' learning behavior	17
Teachers' roles	18	Instructional tools or aids	15
Students' learning behavior	11	Teachers' roles	7
Students and students interaction	4	Students and students interaction	6

3.2. Teachers' perceived professional learning experience

Three conceptual themes central to the *situative perspective of teacher learning* (Lave & Wenger, 1991; Putnam & Borko, 2004) provided a theoretical framework to explore the potential teacher professional development in this online videocase discussion community. The participants to some extent perceived the change of their teacher cognition, which in turn influenced their classroom instruction.

3.2.1. Cognition as situated

The teaching videocase discussion module in this project exposed participants to a variety of authentic instructional activities employed at different classroom contexts, which most participating teachers had seldom experienced before. At the beginning of this study, all but 2 university teachers reported limited opportunities to review their own teaching or to observe other teachers' practice in real classroom contexts. During the process of shooting and collecting teaching videos, it was obvious to notice how participating teachers, especially inservice teachers, were anxious about whether their performance in videos were "best practices" or not. As revealed in the second interview, a junior high school teacher confessed "I had several rehearsals before your assistant came to video-tape my teaching. I hope my teaching is not too bad and can contribute something to this community." In the reflection journals, several preservice teachers revealed great pressure of posting their teaching videos, such as "I am so stressed to expose the realities of my teaching practice to everybody online."

After participating in this project for several months, almost all the participating teachers perceived their learning to teach by watching and commenting videocases along with the artifacts of practice to capture the authenticity, richness, and complexity of classroom practices. For example, one preservice teacher described, "It is so great to learn from each other by just staying before a computer instead of rushing from here to there. I can observe what was happening to other teachers' classroom instruction again and again and pick up something I really need for my future practice."

In a similar vein, an experienced secondary school teacher commented, “With the web-based community, it’s very convenient to know what other English teachers are doing and how they cope with classroom management at various school contexts.”

3.2.2. *Cognition as social*

The data analysis showed that except for 3 university teachers all the other participants looked forward to learning from either preservice or inservice teachers with different teaching philosophy and experience at the beginning of this study. For instance, a preservice teacher expressed that “It’s great to have teachers from different schools gather together in this big family.” As revealed in the interviews or reflection journals, most participants valued their social learning experience in this online professional development community during the process of getting involved in videocase discussions. A junior preservice teacher reflected that “I really appreciate community members’ willingness to post precious comments on how to improve my teaching practices. I am a shy person with little confidence to consult people face to face, so this online learning experience does help me a lot!” A senior high school teacher further confessed, “Without joining this online community, I seldom have the chance to discuss with, not to mention to learn from, other teachers concerning how to teach English. So, I do cherish this web-based social interaction opportunity.”

A majority of participating teachers, especially preservice teachers, perceived their engagement in a professional online learning community where various teachers shared and discussed with an aim to develop knowledge of how to interpret and reflect on teaching practices. In her open-ended survey, a preservice teacher wrote “by watching current teacher’s videos, I got inspired to use more materials from the Internet and multimedia to make lessons more interesting.” The other said “Through online discussion, I am glad to see that other members discovered something I did not notice in the teaching videos...that means they pointed out something I neglected in my or others’ teaching procedures.”

Near the end of this study, it is obvious that more than half of the participants appeared to enculture themselves into the community’s disposition of making efforts to create an English-speaking learning environment for students. “Although we have the pressure of keeping pace of curriculum schedules and preparing students for entrance exams, we should learn from Teacher Jason [pseudonym of an inservice teacher] who has successful experience in teaching all course content in English.” “After watching and discussing Teacher Jason’s videocases for two months, I guess I will give it a try to teach students in English instead of mostly reading out the Chinese translation to them.”

3.2.3. *Cognition as distributed*

This online discussion community brought together collective resources for those participants who used to work alone in designing teaching activities or lesson plans. A preservice teacher taking service learning course reported that “After taking part in this community, I was made to work together with others to design and discuss lesson plans online for our teaching at Li-An Junior High School. Otherwise, I tended to prepare teaching by myself before.” A university teacher expressed

that “It’s great to see the young generation is learning how to share everybody’s work pieces rather than hide something for themselves in a selfish way.”

With a voice, more than two-thirds of the participating teachers appreciated such an opportunity in benefiting from the distribution of curriculum materials, teaching ideas/activities, and lesson plans to situate professional development in the contexts of reviewing and commenting on teaching videocases. As one junior preservice teacher said, “I usually refer to the other team’s lesson plans before drafting mine. It saved me a lot of time to figure out what teaching activities I may use in the class.” By the same token, an experienced high school teacher paid high tribute to this online learning community where “the collection of various teaching sources contributes to teacher professional development a lot.”

3.2.4. Teaching practice revisited

The experience of discussing online videocases contributed to how participating teachers adjust, if not change, their instructional practice. After watching and discussing a variety of cases, more than half of the participating teachers attempted to apply what they learned from the online discussions to their classroom practices. For instance, one preservice teacher’s use of harmonic tone to teach 12 months evoked the others to apply this interesting technique to teaching vocabulary. “I learn from Jean [Pseudonym] by using interesting tones to teach Sunday, Monday, and the other words of a week to my junior high students. My students were laughing and very happy about this learning experience.” Based on the comments she received from online discussions, a senior preservice teacher changed her teaching style and improved her second teaching practice at the practicum school, which not only received her students’ positive comments but also changed her mentor’s point of views about teaching reading. As she described, “My mentor said she’d like to follow me to play video clips introducing the background of reading sections before explaining the content. I am so happy about her compliment on my teaching.” Moreover, several experienced inservice teachers also benefited from this online video discussion. An inservice teacher confessed that she picked up several teaching activities from teachers’ videocases. For example, one junior high school teacher said “I learned from Teacher Jason how to apply the approach of Cooperative Language Learning to my classes last month. There are some great techniques I have never used before.”

On the other hand, several teaching videocases illustrating ineffective, if not unsuccessful, teaching behaviors and/or practices appeared to remind the other participating teachers of not making the same mistake again. As a preservice teacher described, “I saw how awful and boring it was for students to learn English when a video-taped teacher was translating the long reading passages about traveling word by word. So, when teaching the same lesson unit in my class, I used a map to describe what happened to the traveler in his journey.” An inservice teacher appeared to reflect on her practice after reviewing other community members’ comments on her interactions with students. “I guess I should pay more attention to the behaviors and reactions of students sitting in the corner while I was checking the answers of quiz paper.”

3.3. Encountered concerns or difficulties

Although tensions and conflicts among various participants were not existent in this online community, several concerns or difficulties appeared to hurdle 40% to 50% participants from frequently getting engaged in the videocase discussion forum. Table 5 summarizes four major issues encountered by the preservice and inservice teachers. Around 45% to 50% participants reported their difficulties in having limited experience in discussing videocases online before this study as well as their lags between watching videos and giving comments owing to heavy workload as teachers or interns. Some teachers regarded it a pressure to finish reviewing all the videocases and post discussion messages. Typically, a senior high school teacher maintained “I do enjoy watching the videos and join the online discussion. Yet, it seems impossible for me to finish all the videocase discussions as a busy school teacher. To be honest, sometimes it’s another pressure added to my workload.”

Except for university teachers, half of the preservice and secondary school teachers revealed nervous or unsteady feelings to view their own videotaped practices due to lack of confidence to show the “best practice” to other community members. Additionally, both secondary school and university teachers had concerns about identifying themselves as online learners because most of the time preservice teachers regarded them as “model teachers or authorities.” As one senior high teacher explained, “Most of the preservice teachers tended to make polite and complimentary comments on my or other inservice teachers’ teaching videos. They appeared to respect us as model teachers or authorities superior to them. So, from time to time it’s difficult for me to identify myself as a learner in this community.”

Table 5

Teachers’ perceived concerns or difficulties

Concerns or Difficulties	Preservice Teachers	Secondary School Teachers	University Teachers
Online stage fright when watching his/her own videocases	✓	✓	
Limited experience in discussing videocases online	✓	✓	✓
Self-identity as online learners		✓	✓
Lags between watching videos and giving comments	✓	✓	✓

4. Conclusion

As previous researchers argued, online videocase discussion has the potential to create opportunities for teachers to work collectively and probe into the nature and evolution of learning to teach (e.g., Boling, 2007; Fishman, 2004; Santagata, 2009). Through online videocase discussion beyond physical and time barriers, both preservice and inservice teachers in this study perceived their professional learning experience as a social process that took place when individuals

participated in a collective community (Sherin, et al., 2009). This research project further revealed that integrating preservice and inservice training in video professional development projects not only fosters preservice teachers to learn how to notice the issues or principles related to classroom instruction and develop an image of themselves as professionals (Koc et al., 2009; Maclean & White, 2007; Marsh et al., 2010) but also facilitates inservice teachers to reflect on and revisit their own instructional practice. Moreover, this study documented several concerns and difficulties emerging from joining online videocase discussions between preservice and inservice teachers, which have not been reported in the extant literature. In light of the above research findings, several pedagogical implications and future research suggestions will be offered in the following paragraphs.

4.1. Pedagogical implications

Integration of video technology and the Internet-based discussion forum is a new trend and development to foster teachers' learning to teach (Santagata, 2009; So et al., 2009), which echoes the argument of scholars and researchers to reform teacher education from the traditional transmission model to a community model of professional development in the future (e.g., Cochran-Smith & Lytle, 2001; Grossman, Winebur, & Woolworth, 2001).

Referring to the design of an interactive online video database for preservice teacher training (So et al., 2009), this project suggested extending such a collective learning community by further involving inservice secondary school teachers, university faculty, and teacher educators (see Figure 3). Through self-reflection and social interaction, various teachers engaged in the same community will learn how to enhance their teaching by making sense of the sharing experience and adjust their teaching practices to meet the perceived demands and educational goals of various school contexts (So et al., 2009, p. 775).

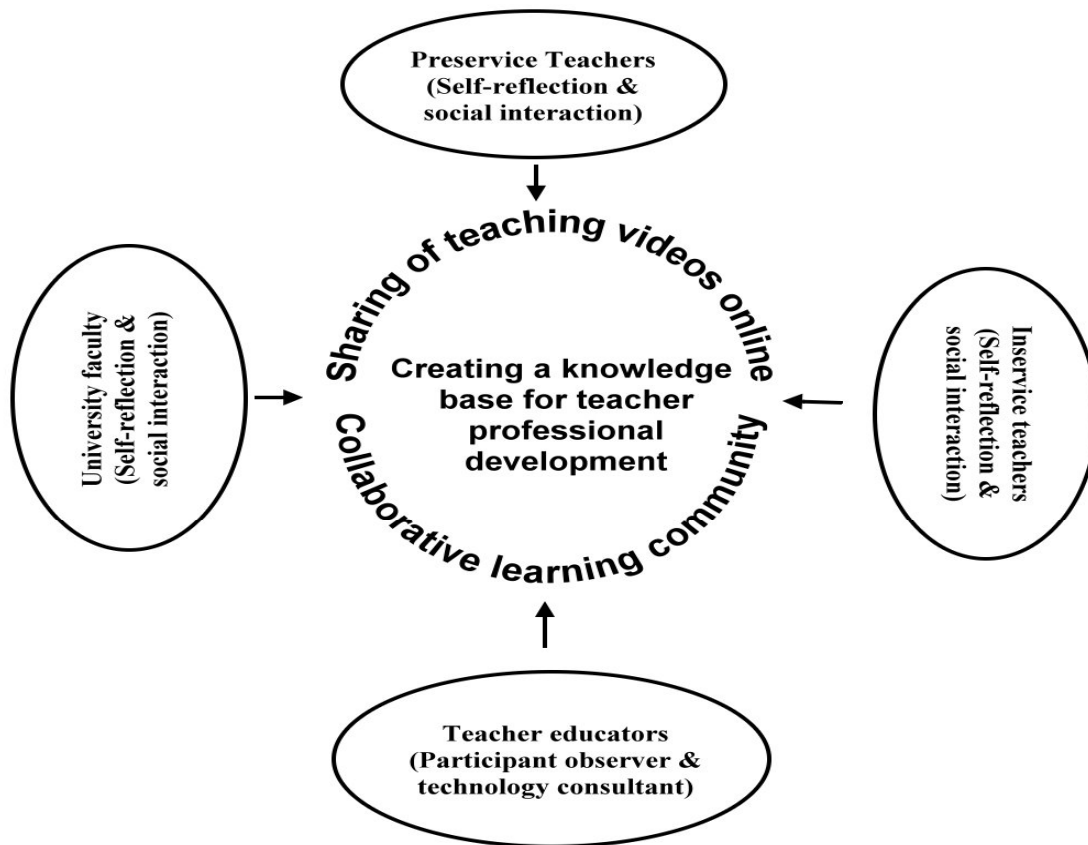


Figure 3. Creating a knowledge base for teacher professional development

To promote and strengthen situative perspective of teacher learning, several measures should be taken to implement online videocase discussions and help participating teachers with their concerns or difficulties. Firstly, to deal with online stage fright issue, on the one hand teacher educators are supposed to keep reminding the community cohort that videocases do not necessarily present the “best practice” but a milieu for teachers to analyze, discuss, and reflect on instructional practices (Brophy, 2004). On the other hand, more encouragement should be promoted among the cohort members to review individual teaching videos and engage in online discussions. Secondly, in case certain community members have worries about limited experience in discussing videos, the guiding discussion questions used in this study may include example answers for teachers’ reference. Thirdly, it is paramount to define the role(s) of inservice teachers in virtual communities (Hough, Smithey, & Evertson, 2004) with an aim to enhance the efficacy of their involvement in such a cohort where they not only contribute to but also benefit from preservice teachers’ learning to teach. Finally, the participating teachers should be convinced that more flexible time is available for them to finish reviewing certain videocases or there is no prerequisite for them to make suggestions on all videocases. In so doing, those teachers with heavy workload will relieve their concerns of lags between watching videos and giving comments.

4.2. Future research suggestions

The limitations of this study recommend the following directions for future research. This study involved a small number of multiple stakeholders in an online collaborative learning community. Future researchers may recruit a larger sample of inservice teachers and university faculty so that preservice teachers will see ‘*the greater alignment between curriculum theory and classroom practice*’ (Khourey-Bowers, 2005, p. 90). Additionally, a longitudinal study may be conducted to document preservice and inservice teachers’ continual process of online videocase learning and the change of their instructional practice. Finally, more related studies may be carried out in various contexts and disciplines to codify and discuss the effectiveness of integrating online videocase discussion into preservice and inservice teacher education.

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國科會補助計畫衍生研發成果推廣資料表

日期:2011/10/26

國科會補助計畫	計畫名稱: 透過網路討論「教學實況錄影案例」對提昇英語職前教師專業成長之研究
	計畫主持人: 劉美惠
	計畫編號: 99-2410-H-029-030- 學門領域: 我國教育制度
無研發成果推廣資料	

99 年度專題研究計畫研究成果彙整表

計畫主持人：劉美惠		計畫編號：99-2410-H-029-030-					
計畫名稱：透過網路討論「教學實況錄影案例」對提昇英語職前教師專業成長之研究							
成果項目		量化			單位	備註（質化說明： 如數個計畫共同 成果、成果列為該 期刊之封面故 事...等）	
		實際已達成數 （被接受或已 發表）	預期總達成數 （含實際已達成 數）	本計畫實 際貢獻百 分比			
國內	論文著作	期刊論文	0	1	100%	篇	本計畫案針對透過網路討論教學實況案例得以改變職前與在職英語教師之教學理念與課室教學之研究成果將投稿於國立台灣師範大學英語學系所發行之學術期刊：English Teaching and Learning (TSSCI 期刊)。
		研究報告/技術報告	0	0	100%		
		研討會論文	0	1	100%		
		專書	0	0	100%		
	專利	申請中件數	0	0	100%	件	
		已獲得件數	0	0	100%		
	技術移轉	件數	0	0	100%	件	
		權利金	0	0	100%	千元	
	參與計畫人力 （本國籍）	碩士生	0	0	100%	人次	參與本計畫之人力為 2 位學士級兼任研究 助理
		博士生	0	0	100%		
博士後研究員		0	0	100%			
專任助理		0	0	100%			
國外	論文著作	期刊論文	1	1	80%	篇	主持人整合 99 年計畫案之主要研究成果與 98 年計畫案之部分研究成果所撰寫之

						論文已經被國際學術期刊 Computers & Education: An International Journal (SSCI 期刊) 接受刊登；此期刊 2011 年之 Impact Factor 為 2.617，其於全球教育類期刊之排名為第五名。
	研究報告/技術報告	0	0	100%		
	研討會論文	1	1	100%		本計畫案之主要成果整合 98 年度計畫案之部分研究成果已經在 2011 年 4 月份發表於由國際知名 Elsevier Ltd. 所舉辦之 The CAL Conference 2011；會議後經修改過之論文已經投稿於 Computers & Education: An International Journal (SSCI 期刊) 並已接受刊登(如上述之期刊論文)。
	專書	0	0	100%	章/本	
專利	申請中件數	0	0	100%	件	
	已獲得件數	0	0	100%		
技術移轉	件數	0	0	100%	件	
	權利金	0	0	100%	千元	
參與計畫人力 (外國籍)	碩士生	0	0	100%	人次	參與本計畫之人力為 2 位學士級兼任研究助理
	博士生	0	0	100%		
	博士後研究員	0	0	100%		
	專任助理	0	0	100%		

其他成果(無法以量化表達之成果如辦理學術活動、獲得獎項、重要國際合作、研究成果國際影響力及其他協助產業技術發展之具體效益事項等,請以文字敘述填列。)

本計劃研究成果將具國際影響力,因為其主要成果即將刊登於全球教育類期刊排名第五名之 Computers & Education: An International Journal, 期刊相關資訊請參考以下網址: http://www.elsevier.com/wps/find/journaldescription.cws_home/347/description); 希冀本計畫案之成果將成為師資培育與英語教學相關學術界之重要參考文獻之一。

	成果項目	量化	名稱或內容性質簡述
科 教 處 計 畫 加 填 項 目	測驗工具(含質性與量性)	0	
	課程/模組	0	
	電腦及網路系統或工具	0	
	教材	0	
	舉辦之活動/競賽	0	
	研討會/工作坊	0	
	電子報、網站	0	
	計畫成果推廣之參與(閱聽)人數	0	

國科會補助專題研究計畫成果報告自評表

請就研究內容與原計畫相符程度、達成預期目標情況、研究成果之學術或應用價值（簡要敘述成果所代表之意義、價值、影響或進一步發展之可能性）、是否適合在學術期刊發表或申請專利、主要發現或其他有關價值等，作一綜合評估。

1. 請就研究內容與原計畫相符程度、達成預期目標情況作一綜合評估

達成目標

未達成目標（請說明，以 100 字為限）

實驗失敗

因故實驗中斷

其他原因

說明：

2. 研究成果在學術期刊發表或申請專利等情形：

論文： 已發表 未發表之文稿 撰寫中 無

專利： 已獲得 申請中 無

技轉： 已技轉 洽談中 無

其他：（以 100 字為限）

3. 請依學術成就、技術創新、社會影響等方面，評估研究成果之學術或應用價值（簡要敘述成果所代表之意義、價值、影響或進一步發展之可能性）（以 500 字為限）

因應全球師資培育之領先趨勢，本研究計畫案利用現代網路科技建立網路學習社群，使教師們克服時間與距離之障礙得以觀摩與討論不同學校、不同層級教師之教學實況錄影。本計畫案所研究之臺灣 EFL 情境樣本為了彌補先前文獻之不足，特別於此社群網站中彙集參加計畫案之職前英語教師、在職中學英語教師、與大學英語教師之教學實況錄影與相關教學資料；本研究結果印證 Lave and Wenger (1991) 之 Situative Perspective of Teacher Learning 理論架構中之重要教師專業成長概念；在此網路社群中觀摩與討論多元化之教學實況錄影之後，職前英語教師不僅能觀摩與討論國中、高中、與大學教師之授課情形，並且更能反思自我教學信念與課室教學；而在職國中、高中英語教師與大學英語教師也同時能有專業成長之機會。除此以外，本研究發現於納入多元化成員們在同一網路社群討論教學實況錄影時所需要面臨的考量或困境。

因上述研究發現得以彌補目前文獻所欠缺之部分，所以其研究成果深具學術價值。本年度計畫案之主要研究成果整合 98 年國科會計畫案之部份相關研究成果已經於 2011 年 4 月底投稿至 Computers & Education (SSCI 期刊)，並且於 2011 年 9 月 4 日被接受刊登，投稿之版本已經由 Elsevier Ltd 於 2011 年 9 月 16 日上載於其網站（請詳見以下網址：<http://dx.doi.org/10.1016/j.compedu.2011.09.004>）。此國際期刊 2011 年之 Impact Factor 為 2.617，其並被列為國際教育類期刊之第五名（期刊相關訊息請詳見網址：http://www.elsevier.com/wps/find/journaldescription.cws_home/347/description#）。

description)。

於應用價值層面而言，本研究結果不僅能提供論證使臺灣教育當局重視採用網路觀摩與討論教學實況錄影之成效，以增進職前教師或在職教師之專業成長機會；同時，根據研究結果所提供之建議，將有助於改善相關師培中心於建立類似之網路社群時可能遭遇到之問題。