Chapter 3 Learning to Engage the Digital Generation in Teacher Education

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Abstract The impact of digital technology in education sectors has been overwhelming. To prepare teachers in this digital era, teacher education programmes should explore opportunities for student teachers to experience e-learning pedagogies. This chapter reports a completed project on the development and use of digital lectures (DL) as an additional resource to augment conventional face-to-face lectures in a higher education institution. Working in a non-ICT background, a team of lecturers has adopted a "start from small" approach to seek answers to the following questions: (1) What forms of DLs can be adopted to facilitate student learning in courses of different nature? (2) What are the effects of DLs in facilitating students to learn in the respective course contexts? (3) What lessons have the lecturers learned in the attempt to engage students through such innovative e-learning strategies? By a "one course one digital lecture" principle, a total of nine DLs were produced by the lecturers of respective courses ranging from language studies, literature, to language teaching methods. To evaluate the effectiveness of the DLs, reflections of all the lecturers concerned were collected through in-depth interviews with the lecturers individually. Toward the end of term, a voluntary online survey and focus group interviews were conducted to solicit students' feedback. A variety of pedagogies emerged with regard to the specific DLs produced. Sharing of practices boosted the lecturers' confidence in adopting digital tools, and professional growth is evident in individual reflections on teaching and continuous attempts to pursue innovative pedagogies with DLs. Students in general agreed that the DLs were conducive to their learning, but they disagreed that these could replace the face-to-face lectures. In gist, regardless of ICT competency level, "reflection-in-action" is proven to be rewarding for teacher educators who are willing to explore e-learning opportunities for engaging students in the learning process.

Keywords Digital lectures • Teacher education • Digital generation

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3.1 Introduction

Students entering universities have been variously described as digital natives, neo-millennial learners, the Web 2.0 generation, the Google generation and the Net generation, etc. They are accustomed to communicating in a complex web of online networks and communities (Baird & Fisher, 2005; Prensky, 2001). Their learning methods are considered to be different from those of previous generations since they have grown up in a digital environment in which they are intensively exposed to computer-based technology (Sandars & Morrison, 2007). Recognizing that traditional live lectures have insufficiencies and are unable to fulfill the expectation of the "Net Generation", contemporary educators have begun to use Information and Communication Technology (ICT) in the higher education sector (Shivetts, 2011). Online interactive tools such as wikis, blogs, and WebOuests are adopted as learning activities to engage students (Blessinger & Wankel, 2012). Although Learning Management Systems (LMS) such as Blackboard and Moodle have already been widely used in many tertiary institutions in Hong Kong for over a decade, the extent of e-learning implementation, and its effectiveness in enhancing the quality of learning and teaching, varies across different academic disciplines.

In light of a global trend of using ICT (particularly e-learning) in the higher education sector, The Education University of Hong Kong (EdUHK) adopted the creation of technology-enhanced learning environment in its strategic reform to provide a "total learning experience" for students. While the ultimate goal of any teaching innovations is for the improvement of student learning, the institution has provided various professional development opportunities to engage its staff in the pursuit of scholarship of learning and teaching (SoLT). From bidding for funding support to sharing of good practices within and outside the institution, staffs were involved in systematic inquiries and careful deliberations on the effective ways of addressing student learning needs.

As a part of the institution-wide reform, a "One course one digital lecture" project (the project) was launched in a Chinese education context. Funded by a teaching development grant, the project was an attempt to search for alternative means of teaching that would suit students' needs. As most lecturers have little experiences in digital lecture (DL), the project has taken a broad definition to set up a non-threatening atmosphere for teaching innovations and professional development. A product is accepted as a DL, if as defined by Boffey, Gerrans, and Kennedy (2010, p. 170), it is "a digitally generated or computer-mediated counterpart of a face-to-face lecture...digital lecture can be in different forms, in their essence they are a series of words and/or pictures in a digital form". The diversity of DL format allowed a lecturer to use various approaches in accordance with his/her teaching style. Not only were conventional software such as Microsoft Office and mp3 recorder used as the supplementary materials in direct lecturing, filming live lectures for post-production treatment was also accepted as an alternative in DL production (Demetriadis & Pombortsis, 2007). In EdUHK, Moodle was used to display links to the DLs in respective courses and collect responses from students.

The literature has attributed some benefits to DL. Students can enjoy autonomy in deciding venue and time to learn or do revisions. Besides, the "blended learning" (i.e., DL with conventional face-to-face lectures) approach has been much commended. This is because blended learning enhances students' analytic emphasis by repeating step-by-step explanations in the digital material, and DL can create a feasible atmosphere for students to learn without the distractions often accompanying classroom lectures (Brecht & Ogilby, 2008). Nonetheless, DL also possesses shortcomings. While courses adopting DLgenerally drop-failure-withdrawal (DFW) rates compared to fully online courses due to the support structure of classroom (Vaughan, 2007), Bell, Cockburn, McKenzie, and Vargo (2001) revealed that the availability of flexible DL may obstruct students' intention to attend live lectures. More importantly, students may deceive themselves about utilizing such digital medium to catch up the normal class schedule but would probably not view these digital lectures at all eventually.

Regarding the teaching effectiveness of DL, on the one hand, the role of learners is critical in DL and in an e-learning environment. On the other hand, the success of DL mainly depends on students' self-motivation. Without such self-motivation, DL may become meaningless, because the students will not take the initiative to access the online materials on their own (Shivetts, 2011). Simultaneously, multiple studies have concluded that DL actually has no significant impact on students' learning compared with the traditional live lectures. Spickard, Alrajeh, Cordray, and Gigante (2002) carried out a study to investigate the impact of online video lectures versus conventional lecture given to medical students and found that students in both the control (conventional lecture group) and experimental (video lecture) groups demonstrated similar levels of knowledge and learning satisfaction.

As the institution has decided that technology could play a part in SoLT, the project team thus attempted to explore whether the adoption of DL contributes to the quality enhancement of teaching and learning in Chinese teaching, the following sections report the experiences gained in the project.

3.2 Case Description

Being a leading tertiary institution focusing on professional teacher education, the EdUHK has been endeavoring to promote and support the strategic development of teacher education in Hong Kong since its establishment in 1994. Among more than 7,000 students studying in a wide range of academic programmes at different levels, about 15% are Chinese majors. Compared to other modern disciplines, Chinese Studies in Chinese societies including Hong Kong are often regarded as "traditional", because Chinese is the mother tongue language of most local students. In addition to developing language skills, fostering traditional Chinese thoughts and values in students is another major objective of Chinese language education. Teaching is usually conducted in a traditional classroom context, where the teacher takes the dominant role, and exemplary writings and literature of distinguished

authors are adopted as teaching materials. Understandably, most teachers of Chinese, as well as teacher educators, were taught and trained to teach in a similar tradition.

As a faculty member of the Department of Chinese Language Studies, this author considers the "one course one digital lecture" scheme a meaningful step to promote e-learning in Chinese language education and a step to implement the institute's e-learning initiative. A modest goal—one DL per course—has been set to avoid putting too much pressure on the teacher participants.

The author first approached individual colleagues in the department to invite them to participate in the collaborative project. A total of nine lecturers (including this author) in department formed a project team. Each member was committed to producing a DL for a course at their own choice and being engaged in reflective inquiry into the effective pedagogies for DL. A research assistant was employed for providing technical support and general teaching assistance. As the DL only constituted a part of a course, the course lecturer had to explore how to integrate it with the conventional face-to-face teaching. The DLs that were produced became resources for students' self-directed learning. They also served as tangible outcomes for professional discussions on learning and teaching, and facilitated the lecturers to learn from each other.

Throughout the 2013/2014 academic year, the project roughly took three key stages from preparation, production to evaluation. Unsurprisingly, the literature review at the preparation stage did not yield much insight into the use of DL in the field of Chinese language education. While the literature has focused on studying the analytical aspects related to the positive and the negative impacts of DL on learning and teaching in other disciplines, the lecturers did learn about the different possible approaches to DL design and became more confident in designing their DLs to align with the intended outcomes of their courses. To facilitate a shared understanding of the project aims and create a common purpose for building a true learning community (Graham & Ferriter, 2010), the lecturers met from time to time both in formal settings and casual gatherings. All data of the project were documented and shared online for members' reference. Table 3.1 reveals the major activities conducted.

Table 3.1 A summary of major activities in the "One course one digital lecture" project

| Stage | Activities |
|-------|---|
| I | Preparation phase • Literature review |
| | Teacher and student online survey |
| II | Production phase |
| | Digital lectures production |
| | • Interim sharing meetings among team members |
| III | Evaluation phase |
| | Student focus groups |
| | Teacher individual interviews |
| | • End-of-project sharing seminar within the |
| | department |

A total of nine DLs in Chinese language studies and related fields were produced at different times and uploaded to Moodle for students' access at anytime and anywhere. Apart from Moodle, Mahara (an e-portfolio platform) was also used to help the lecturers keep records and build up a collection to showcase their teaching and learning achievements by including detailed explanation and relevant materials of the DLs. Table 3.2 summarizes the courses in experiment and the role of each DL in the specific courses, and Fig. 3.1 depicts a collection of DL entrance pages on Mahara.

Table 3.2 Use of digital lecture in courses involved in the "One course one digital lecture" project

| Course description | Use of digital lecture | | |
|---|--|--|--|
| 1. Chinese etymology Students learn to master the basic content of Chinese characters and apply the knowledge to solve the literal problems encountered when reading Chinese literatures | Video capturing one of the face-to-face lessons | | |
| 2. Classical Chinese language Exemplary literature and proses in the pre-Qin dynasties are adopted as main teaching materials to help students building up perceptual understanding of Classical Chinese written language | Production of online teaching videos as a replacement of a routine lesson | | |
| 3. Chinese language teaching methodologies II The course introduces advanced theories, content, and teaching methods related to the areas of Chinese language and literature, Chinese culture, morals, and virtues | Digital assignment for students and video-taped sharing session | | |
| 4. Children's Literature The course introduces the basic concepts and theories of children's literature | Digital assignment followed by a video-taped sharing session | | |
| 5. Fairy love in Chinese literature The course introduces Chinese literature related to the theme of fairy Love and facilitates students to analyze the ideas, contents, functions of Chinese folklores, religious literature, poets, and plays | Digital assignment and online supplementary teaching videos for students, video capturing of one of the face-to-face lessons | | |
| 6. Chinese language teaching in primary school II The course guides students to explore the strategies and possible combination of models of language proficiency training in the field of language teaching | Production of online teaching videos as a replacement of a routine lesson (continued) | | |

Table 3.2 (continued)

| Course description | Use of digital lecture | | |
|---|---|--|--|
| 7. Language teaching and information technology literacy The course facilitates students to inquire the issues of Information Technology Literacy in the field of teaching, including learning and teaching philosophy and barriers in applying information technology | Introduction of common application software followed by digital assignment for students | | |
| 8. Literature and film The course helps students explore the essences of literature and film, as well as the similarities and differences of their expressing styles through lectures on theories and studying of filmography | Video capturing one of the face-to-face lessons | | |
| 9. Instruction design and development of Chinese language for NCS The course enables students to understand the key contents of the "Chinese Language Curriculum supplementary guidance (Non-Chinese Speaking students)", and hence, select or develop appropriate teaching materials which can be applied to the teaching strategies and assessment methods for NCS students | Production of online videos which provide feedback on students' assignments | | |



Fig. 3.1 A collection of nine DL entrance pages in the "One course one digital lecture" project

3.3 Evaluation

As eight out of the nine lecturers chose to produce their DLs for courses offered in the first semester of 2013/2014, the evaluation of the project started as soon as the second semester started. An online survey was designed to collect feedbacks of DLs from students. A total of 58 students from the related courses completed the survey. In addition, two focus group discussions involving a total of eleven students were held to further reveal students' comments on the production of DLs and their learning experience through attending DLs. Semi-structured interviews were conducted with all staff participants individually on the insights gained and lessons learnt from the project. Results of the student online survey are presented in Table 3.3. Findings from focus groups and teacher individual interviews are organized around three themes, namely ideal forms and proper use of DLs, effects of DLs in various Chinese language education contexts, and insights gained in the professional development process.

3.3.1 Overall Feedback from Student Participants

At the end of each of the two semesters, students of the courses concerned were asked to participate in an online survey after they had viewed the respective DLs. The major purpose of the survey was to collect students' general feedbacks on the DLs produced. As shown in Table 3.3, the overall results reveal that students were quite satisfied with the quality of the DLs. They also agreed that watching the digital lectures was conducive to their learning (M = 4.19), such as facilitating them to reflect (M = 4.02) and have a better understanding of the course

| Table 3.3 | Student online survey | results in the | "One course of | one digital lecture' | ' project ($N = 58$) |
|-----------|-----------------------|----------------|----------------|----------------------|------------------------|
| | | | | | |

| | Mean | S.D. |
|---|------|-------|
| 1. The digital lectures for the course supplement my learning in class | 4.19 | 0.661 |
| 2. The technical effects (e.g., the smoothness, visual, and audio effects) of the digital lectures were good | 4.00 | 0.562 |
| 3. The digital lectures enhance my understanding of the course content | 4.19 | 0.606 |
| 4. The digital lectures facilitate me to reflect | 4.02 | 0.737 |
| 5. The teaching effects between traditional lecture and digital lecture are almost the same | | 1.000 |
| 6. After watching the digital lectures, I am keener to consult teachers | 3.67 | 0.781 |
| 7. After watching the digital lectures, I hope there will be more digital lectures for different courses | | 0.846 |
| 8. Compared with traditional lecture, I think digital lecture is more effective in facilitating learning outcomes | | 0.994 |
| 9. In general, I think digital lectures can replace traditional lectures | 2.69 | 1.217 |

Note Strongly disagree = 1, Disagree = 2, Fair = 3, Agree = 4, Strongly agree = 5

(M = 4.19). Regarding the teaching effects, however, students were less inclined to treat DL in the same was as traditional lectures (M = 3.02); there was even a strong disagreement on the issue of replacing traditional lectures by digital lecture (M = 2.69).

3.3.2 Ideal Forms and Proper Use of Digital Lectures

In the project, DL has been considered as an extension of face-to-face lectures. More than 90% of the lecturers believed that traditional lectures could not be replaced by digital means. This was echoed by the students who thought that traditional lectures offered unique learning environment that could not be replaced by DLs.

Among the nine DLs, video-taping PowerPoint-aided lectures and student presentation sessions were the most common. The comment of the students on this format is that although these DLs were well-organized and helped their revision and self-study, they were unable to engage students' learning. For the few DLs that recorded a scheduled lesson, students generally had negative feedbacks. For instance, a student said that,

I do affirm the effort of teachers in making DLs, but it (producing DL by video-taping lecture activities only) does not contribute to our learning as the majority of students already heard (the content) once in live lectures and jotted notes...The feature of e-learning resources was not used well (FG20140428, S1).

The effectiveness of incorporating DL in face-to-face lectures may also depend on the teacher's beliefs. Some participants raised a concern that even the majority of the courses in Chinese language education were compatible with DL, the investment in terms of effort and resources is questionable because traditional methods might be equally effective. For instance, a participant stated that,

It is difficult to comment that whether (DL) is a suitable (pedagogy) in teaching my course....For instance, I cannot see any differences in using conventional method (i.e. listing main points in an word document), if I need to teach creative writing...It is just a matter of presentation format (CSC, T1).

While the purpose of introducing DL was not to replace the face-to-face lectures, the course content seemed to be critical in determining the potential usefulness of DLs. Using short DLs (i.e., less than 10 min) published in the format of electronic books with audio effects, the course on Fairy Love in Chinese Literature received generally positive feedback from students. However, the lecturer had reservations,

In terms of increasing the incentive of students in self-learning...I believe that it is a matter of the teaching content rather than the medium of knowledge delivery. The element of multimedia may slightly enhance students' motivation...but even if you do not use an appropriate digital means to publish the DLs, it is unlikely that students would be demotivated (MYL, T2).

Obviously, there is room for improvement. In terms of professional production standards, some students had higher expectations of DLs than lecturers. For instance, a student commented that

To improve the readability (of the DL), I think teachers should refer to the format of radio programmes on the internet (e.g., a talk show)...I still remember one show which aimed to introduce Chinese Literature was so impressive as the presenter linked his speech content using the linguistic characteristic of Cantonese (FG20140428, S2).

Whether the content of DLs should be restricted to the original course design, a few participants have thought beyond the box to redefine the role of DL in learning as the preparation or consolidation of learning and extension of teacher–learners' interaction in assignments and reflections. For instance, to address the problem of not having enough time to provide feedback to student presentation drafts, a lecturer recorded the audio feedback over different parts of the printed drafts as DLs, and a student of the class observed that

It is common for teachers to have insufficient time for providing feedback to students as the lectures were always overrun...By recording her feedback on students' drafts in DLs, both the time of the teacher and students can be saved (FG20140428, S3).

Some students considered putting items including introductions and top-up contents in DL useful. Not only were precious lecturing time saved, individual differences among students were also resolved as learners with higher learning ability and incentive could access supplementary resources individually.

3.3.3 Effects of DL in Various Chinese Language Education Contexts

This project was initiated on a recognition that contemporary students living in "Net generation" and being familiar with the usage of digital media might not be satisfied with "digital immigrant" (their teachers) using media from pre-digital age in learning and teaching (Prensky, 2001). The project sought to reactivate the learning motivation of these "digital natives". In contrast to our original expectation, students generally were not motivated in using DLs. While a few DLs designed for the purpose of assessment and evaluation, the majority relied entirely on voluntary participation. The pragmatic and utilitarian mentality of the students proved to be the main obstacle in utilizing electronic assets in self-learning, as suggested by a lecturer,

Without (the encouragement of GPA) as the external factor, it is hard to mobilize (students) to watch DLs...I found that pragmatism becomes the main reason of DL failing to motivate students (ISL, T6).

In retrospect, the majority of DLs and the LMS (i.e., Moodle/Mahara) in the project were mainly used as the medium of supporting conventional lectures or tools for assessment rather than a platform for facilitating interaction. As the

end-user of DL, some students were worried that the use of DL would alienate teacher–student relationship, even though some lecturers encouraged students to raise questions through emails. Difficulties in resolving the issue of learning diversity emerged, echoing the findings of Shivetts (2011). As a student stated,

If teachers solely rely on DL, it would be difficult for them to evaluate students' performance...It is possible that slow learners may be discouraged, or even give up, if they cannot seek help from the teacher face-to-face when encountering learning difficulties (FG20140429, S4).

In some courses in which IT in education was emphasized, the degree of interaction among the lecturer and students was governed by the students' IT competency. While highflyers reckoned that the knowledge delivered in the lessons were not challenging, the low achievers may be unable to meet the standard of designated learning outcomes. In addition, some lecturers produced their DLs by requiring students to complete digital assignments. Students who possessed limited IT skills and knowledge might not be competent to complete the task on their own and required assistance. Therefore, the lecturers had to strike a balance between maintaining student motivation and the dynamics of the lectures in order to suit both groups so as to attract more students to watch the DLs.

In the successful cases of motivating students, the lecturers invited students to construct their own DL and share in the class. Such an attempt in empowering students and affirming their contribution followed the principle of leadership development that respects students' will. Not only does this reduced students' misbehavior and low learning attitude, but also increased their motivation toward lectures (Glasser, 1992).

3.3.4 Insights Gained in the Professional Development Process

As aforementioned, the project in general served not only as the digital resources for students' self-directed learning, but also as a tangible base for further professional discussions on learning and teaching. The project team's attempt to incorporate DL in course delivery in a traditional discipline constituted a mini staff professional development programme. A number of lecturers in the team highly praised the function of internal meetings and sharing in bringing synergy in nurturing innovative approaches in engaging students to acquire Chinese and related subjects, while empowering student—teachers specialized in Chinese language education to acquire techniques of adopting elements of IT in education in their future teaching career. Throughout the process, the project has enabled members to experiment unconventional teaching practices with digital technology and perform systematic inquiry on any possible change, realizing the gist of SoLT.

3.3.4.1 Adhesive Power of a Learning Community

While as noted above it is debatable if the students have benefited from the project, the lecturers definitely have gained much. On the one hand, the published DLs formed an e-portfolio for the lecturers to record their e-learning practices and for further professional exchange and sharing. On the other hand, through the sharing of personal experience and insights within the project team, the lecturers were stimulated to explore more possibilities of effective e-learning pedagogies and teaching practice. Such continuous sharing occurred in either formal occasions, such as seminars and workshops, or informal leisure chat. It can even be said that a culture has emerged in the department as there were subsequent projects on the development of DLs within the framework of Chinese education. As a lecturer remarked.

I believe that (this project) has effectively organized colleagues in sharing their insights, so we can conclude from these fruitful experiences useful pedagogical practices through brainstorming (MYL, T2).

Developing a Community of Practice (CoP) (Wenger, McDermott, & Snyder, 2002) was in fact a key objective of this project. From the start, participants have viewed the project as a journey of exploring e-learning pedagogies in the context of Chinese education. Several lecturers commented that they were able to redesign their course content and adjust their intended learning outcomes by putting themselves in student's shoes during the process of the project. They generally commended the project for allowing them to discover the diversifying nature of DL and thus inspiring them to create new teaching methods under a supportive professional community. The author, as the project leader, has succeeded in using the DL project as an adhesive to bond the specialists in Chinese language education, facilitating the exchange of knowledge and diffusion of innovation (Rogers, 1995).

A secure sharing community for teachers' professional development is thus nurtured. Using rubrics for assessment suggested by Cambridge and Suter (2005), the effectiveness and quality of CoP in the project can be revealed under four progressive criteria:

Building relationships

The foremost criterion emphasizes that a strong professional community is fostered by frequent synchronous and asynchronous interaction to build relationships of trust, mutual respect, and commitment which motivate group members to share ideas. In this project, the participants met frequently to share their ideas and insights about the design of DL with each other. Sharing and observations not only enriched participants' understanding, but also they enabled the participants to reveal more possibilities of DL. As some lecturers reflected,

It (the literature review) actually enlightens me on the understanding of DL...DL should not be considered as the tool of distance learning solely...My wrong conceptions are probably from the impression of distant learning programmes... (CSC, T5).

I finally realize the format of DL can be as diversified as what we did after joining the project... It is not necessary to operate the lesson with DL entirely (MYL, T2).

I am always searching for alternatives in maximizing potentials of DL for promoting teacher-student interaction...In the light of making an effort to experiment new electronic pedagogies, I am very excited (LPW, T3).

In some circumstances, the lecturers were re-energized, and they amended their e-learning strategies after reviewing the positive feedback and results of student evaluation of teaching, echoing the initiative of Scholarship of Learning and Teaching (SoLT) (Ochoa, 2012).

As the project progressed, a few lecturers revealed interest in producing more DLs. Undoubtedly, the project has helped enlighten the participants about various teaching strategies and practices, including the acquisition of new digital technology such as new software. In an attempt to engage student learning, the lecturers became actively engaged with the learning community.

Learning and developing the practice

The second criterion stresses on how the participants' personal practice can be integrated and knowledge organized in a way that reflects their perspectives. For a successful practice development, both physical productions, including documents and tools, and individual thoughts from community members should be well balanced and established in the final outcome of the project. In this regard, the project team organized several seminars to share their experience in applying DLs and the project findings within the EdUHK community. A paper on the project was presented at an international conference. Besides, an individual reflection on the use of DL was collected from each lecturer and uploaded to the Mahara platform for online sharing. The ideology of showcasing all members' ideas in a systematic way and fostering deep learning experiences for members under the concept of CoP was realized. The completion of the initial project signaled the start of its follow-up phase to further promote the production and adoption of DLs in the same department. Providing opportunities for sharing SoLT experiences publicly was proved to be an effective means to stimulate members' interest in continual improvement of learning and teaching.

Taking action as a community

To define whether a community is successful, the community should reveal the characteristic of helping members create personal relationships and producing the resources for practical usage. In this project, participants successfully produced nine DLs in various Chinese language education domains. These included Chinese Etymology, Chinese literatures and IT in language education, and Chinese language teaching methods for first language speakers and for non-Chinese speaking students. All DLs were produced under a secure and supportive community, with technical assistance provided by the research assistant. Digital technology has not only facilitated the project participants to broaden the conceptualization of learning, but also supported their capacity building in changing teaching practice. With the feedback collected from the lecturers and students, the DLs produced laid a solid

foundation for reviewing course development and delivery within and outside the department.

Creating knowledge in the domain

Finally, the fourth criterion is that members who belong to a successful learning community should have the ability to go beyond current practice to explore the cutting edge of the domain, or work with people from other aspects to explore emerging ideas. At first, the project has set a modest target to explore possible teaching innovations in the field of Chinese language education. Throughout the project, the participants have gained a better understanding of the genuine needs of the "Net generation" and discovered the potentials of DLs in facilitating student learning in the typical conservative discipline. These insights were important catalysts of change in the participants' teaching practices. Besides, systematic inquiry on the change has deepened the participants' reflection on their teaching and enhanced their capability to create knowledge in the domain. When asked about the project sustainability at a sharing seminar, the project team was excited to announce that there would be a serial of DLs with a focus on enhancing the quality of Chinese language teaching. To a certain extent, the project has contributed to initiating and developing e-learning, both at the individual lecturer level and in the discipline in general.

3.3.4.2 Importance of Maintaining Staff IT Proficiency and Administration Support

Given the fact that this project was a fresh attempt in large-scale production of audio-visual e-learning materials for Chinese language education in the department, the project team's computer literacy for establishing multimedia assets in learning and teaching was rather limited. Less than half of the members reckoned that they had sufficient ability in adopting DL. Other members who were novice in this field encountered more difficulties owing to insufficient time and heavy workload for acquiring additional IT techniques in producing DLs. Even students in the focus group interviews were concerned that the limited digital literacy may hinder lecturers in adopting this digital approach for teaching. Hence, these students also had doubts as to what extent they should use DL in their future career. For instance, a student who completed a digital assignment on producing a DL stated that

It is hard to handle the massive workload of the DL production by myself...without the assistance from a technique support team...I do not think I can follow the group project and continue my DL production throughout the whole semester (FG20140429, S5).

Against this backdrop, the research assistant played an important role in providing IT support for the project members. Most importantly, the individual-based consultation provided by the research assistant avoided the embarrassment for the lecturers who had only relatively low IT proficiency. The assistant not only helped ease the digital divide, but also he served as a mediator in organizing administrative tasks systematically without hindering the work schedule of the lecturers. A few lecturers mentioned that without the presence of an assistant competent in detailed

planning and setting reasonable timeframe, the implementation of this project would bring adverse impacts on their routine work. To this end, the teaching development project funded by institution provided critical support to the development of SoLT which required digital technology in particular. All the lecturers agreed that proper administrative support and sufficient IT proficiency were crucial to the success of future e-learning projects.

3.4 Concluding Thoughts

This chapter reports how the "One course one digital lecture" project has facilitated Chinese language educators to adopt innovative e-learning strategies and engaged students in the learning process. With limited IT proficiency, the project team has not produced immensely innovative DLs, but the project has succeeded in enlightening the lecturers to search for alternative e-learning approaches with the formation of an effective learning community in an academic department.

In terms of developing e-learning pedagogies and putting these into Chinese language teaching and learning, the project accomplished the objectives by providing supplements and assignments in various Chinese disciplines, such as Chinese language teaching methods, Chinese literatures, and instructional design of Chinese language for non-Chinese speaking students, using Moodle and Mahara as dissemination platforms. Not only have the teacher participants gained from the project, but also other colleagues in the department also participated in regular sharing meetings. The wider community in the EdUHK has benefited through open seminars organized by the project team too. These activities allowed the project team to present their personal experiences and reflections related to the project and motivated other colleagues to try this approach on their own. Eventually, a professional learning culture in the department was cultivated with some success, providing colleagues with opportunities to critically reflect on their own teaching and learning practices (Clarke & Hollingsworth, 2002) through scholarly conversations.

To implement an e-learning project such as this one, it is important to recognize that most teacher participants would encounter difficulties in adopting new pedagogy combined with unfamiliar IT techniques. As a result, not only should sufficient logistic support be provided, the design of project should also allow members to gain satisfaction through discovering the effectiveness in engaging students. Below are some principles and experiences obtained from this project,

- Graded assignment should be included in the DL design for boosting the usage of electronic learning and teaching assets,
- Secure learning atmosphere is essential for nurturing a community of practice,
- Lectures with multimedia and storytelling context can effectively motivate students,

- Though DL cannot entirely replace conventional face-to-face lectures, it can used in preparatory and consolidation phases of a course, and
- Administrative and technical support is needed in facilitating e-learning project implementation.

While there is still room for improvement, students were generally satisfied with the quality of the DLs produced. Also, lecturers in the department have gained confidence in using digital means for promoting learning and teaching in Chinese. The overall positive feedback obtained from this attempt motivated the project team to continue its endeavor to use IT in Chinese education. DL will definitely not replace conventional lectures, at least in the near future, but with good planning and realistic expectations, the project has concluded that the potentials of DL could be exploited in order to facilitate Chinese language education in tertiary education.

References

- Bell, T., Cockburn, A., McKenzie, B., & Vargo, J. (2001). Digital lectures: If you make them, will students use them? Constraints on effective delivery of flexible learning systems. *Interactive Multimedia Electronic Journal of Computer-Enhanced Learning*. Retrieved August 30, 2015, from http://imej.wfu.edu/articles/2001/2/06/.
- Baird, D. E., & Fisher, M. (2005). Neomillennial user experience design strategies: Utilizing social networking media to support "always on" learning styles. *Journal of Educational Technology Systems*, 34(1), 5–32.
- Blessinger, P., & Wankel, C. (2012). New directions in higher education: An introduction to using wikis, blogs, and webquests. In C. Wankel & P. Blessinger (Eds.), *Increasing student engagement and retention using online learning activities: Wikis, blogs and webquests* (pp. 3–16). Bradford, GBR: Emerald Insight.
- Boffey, R., Gerrans, P., & Kennedy, S. (2010). Using digital lectures to assist student learning. *eCULTURE*, *3*, 169–186.
- Brecht, H. D., & Ogilby, S. M. (2008). Enabling a comprehensive teaching strategy: Video lectures. *Journal of Information Technology Education Innovation in Practice*, 7, 71–86.
- Cambridge, D., & Suter, V. (2005). Community of practice design guide: A step-by-step guide for designing and cultivating communities of practice in higher education. EDUCAUSE Learning Initiative (ELI).
- Clarke, D., & Hollingsworth, H. (2002). Elaborating a model of teacher professional growth. *Teaching and Teacher Education*, 18(8), 947–967.
- Demetriadis, S., & Pombortsis, A. (2007). e-Lectures for flexible learning: A study on their learning efficiency. *Educational Technology and Society*, 10(2), 147–157.
- Glasser, W. (1992). *The quality school: Managing students without coercion* (2nd ed.). New York: Harper Perennial.
- Graham, P., & Ferriter, W. M. (2010). Building a professional learning community at work: A guide to the first year. United States: Solution Tree Press.
- Ochoa, A. (2012). The scholarship of teaching: Yesterday, today, and tomorrow. *Journal of the Professoriate*, 6(1), 100–116.
- Prensky, M. (2001). Digital natives, digital immigrants. On the Horizon, 9(5), 1-6.
- Rogers, E. M. (1995). Diffusion of innovations (4th ed.). New York: The Free Press.
- Sandars, J., & Morrison, C. (2007). What is the net generation? The challenge for future medical education. *Medical Teacher*, 29(2–3), 85–88.

Shivetts, C. (2011). E-learning and blended learning: The importance of the learner: A research literature review. *International Journal of E-Learning*, 10, 331–337.

- Spickard, A., III, Alrajeh, N., Cordray, D., & Gigante, J. (2002). Learning about screening using an online or live lecture: Does it matter? *Journal of General Internal Medicine*, 17(7), 540–545.
- Vaughan, N. (2007). Perspectives on blended learning in higher education. *International Journal on E-Learning*, 6(1), 81–94.
- Wenger, E., McDermott, R., & Snyder, W. M. (2002). *Cultivating communities of practice: A guide to managing knowledge*. Boston: Harvard Business School Press.