T. Hirashima et al. (Eds.) (2011). Proceedings of the 19th International Conference on Computers in Education. Chiang Mai, Thailand: Asia-Pacific Society for Computers in Education

# The Implementation and Evaluation of Training Course for Chinese as Second Language Teachers' e-Learning Capacity

**Shu-Ping Chang [a], Huei-Tse Hou [b], Kuo-En Chang [c], Yao-Ting Sung [d]**

[a] *Department of Multimedia Design, Chihlee Institute of Technology, Taiwan*

[b] *Graduate Institute of Engineering, National Taiwan University of Science and Technology, Taiwan*

[c] *Graduate Institute of Information and Computer Education, National Taiwan Normal University, Taiwan*

[d] *Department of Educational Psychology and Counseling, National Taiwan Normal University, Taiwan*

cuteping@mail.chihlee.edu.tw

**Abstract:** In this study we made references to past literatures and developed a e-Learning training program for Chinese as Second Language (CSL) teachers. The class was held from July to August, 2010, in Chinese Culture University (Taiwan), and we designed a performance-evaluation questionnaire with the Delphi method. Three months after the training program was completed, the questionnaire was given to the 30 students of the class, and they were asked to answer questions regarding their use of e-Learning in the actual practice. We also asked 5 students to conduct experimental e-Learning for us to video-record and observe. This effort allows us to discuss the use of e-Learning among CSL teachers in Taiwan, come up with a conclusion and suggestions, and use the findings as references for course-planning and policies or research regarding the e-Learning of Chinese.

**Keywords:** e-Learning, CFL, CSL, CALL

## Introduction

David Graddol (2004), a British guru of linguistics, predicted that the most widely-used language in the world would be Chinese by the year 2050. According to a statistics by Ministry of Education (2010), the number of foreign students studying Chinese in Taiwan continues to increase per year. As the important of Chinese continues to increase in the world, nations in Asia, Europe and Americas have been establishing CSL-related institutes.

The development of the Internet and digital technology has also led to profound changes in the styles of CSL teaching. Many past studies also point out that CALL may be facilitated learning (Chang, 2007; Xie, 2007). The use of information and e-Learning may provide diverse ways to learn, but if we were to establish CSL e-Learning, CSL teachers must be equipped with e-Learning skills before they could provide diverse and quality CSL e-Learning. Facing the arrival of the digital era, the question of how CSL teachers apply digital technologies in teaching, whether using a technology as a main body for learning or to use it as a supplementary tool, has become extremely important.

Of the "Taiwan e-Learning and Digital Archives Program" (TELDAP)" that is being implemented in Taiwan, one of the sub-projects is the "Training of e-Learning Capacity for CSL Teachers" being implemented by the Ministry of Education. In our study that is commissioned by the Ministry of Education, we reviewed past literatures and developed an e-Learning training program for CSL teachers. The training class was implemented from July to August in Chinese Culture University, and we designed a performance-evaluation questionnaire based on the Delphi method. Three months after the

training program was concluded, the 30 students of the class were asked to participate in the online questionnaire and answer questions regarding the use of e-Learning in their actual practice. Five volunteers of them were also asked to conduct experimental classes and for us to record the sessions for observations. This effort allows us to discuss the use of e-Learning among CSL teachers in Taiwan, come up with a conclusion and suggestions, and use the findings as references for course-planning and policies or research regarding the e-learning of CSL.

## 1. The Planning and Implementation of e-Learning Training for CSL Teachers

### *1.1 Structure of the Training Program*

In early 2010, we (Chang et al.) formulated the indicators of CSL teachers' e-Learning abilities with the Delphi method, and the indicators were basically divided into two aspects: "CSL teachers' basic e-Learning capacity: and "CSL teachers' e-Learning core abilities." CSL teachers can be placed in different training programs based on their ability-indicators, and those in the entry-level class would learn about the fundamental computer skills and e-Learning design skills. The advanced class was then established to teach the application of e-Learning, including "e-Learning abilities of linguistic structure," "e-Learning abilities of linguistic skills," and "e-Learning abilities of linguistic culture." Based on these indicators, we invited five senior CSL teachers and five expert designers of e-Learning to participate in the meetings on curricular design in order to jointly formulate the structure of our training program and determine the specific goals of training. The structure is shown in Table 1.

Table 1 Structure of e-Learning Ability Training for CSL Teachers

| Curricular Module | Topic |
|---|---|
| Entry-level Class | Concepts of e-Learning and Types of Implementation<br>Fundamental Operations of Information Technology<br>e-Learning Ability |
| Advanced Class | e-Learning Ability of Linguistic Structure<br>e-Learning Ability of Language Skills<br>e-Learning Ability of Linguistic Culture |

### *1.2 Models of the Implementation of the Training Program*

After the curricular structure was formulated, we conducted meetings to determine the curricular objectives and determined the mixed-method curricular implementation. A company that assists in the implementation of this project developed a series of e-coursewares with systematic development procedures, and the material was to be read by the students in an asynchronous online environment (samples shown in Fig. 1 and 2).

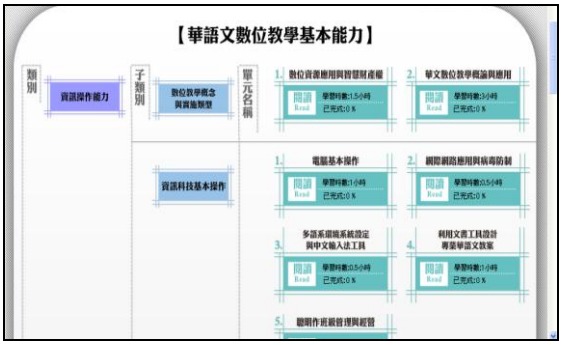


Fig. 1 Menu of e-Learning Courseware

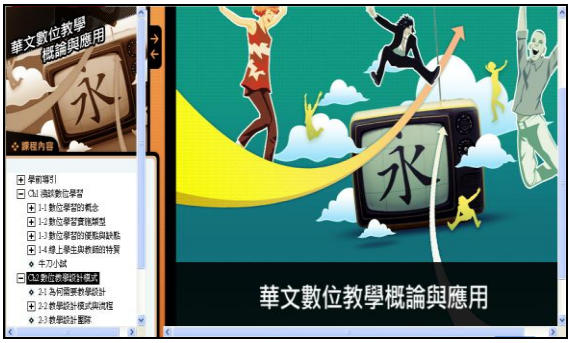


Fig. 2 Display of e-Learning Courseware

The training courses on the actual practice were also implemented in a face-to-face class (see Table 2 for details on the curricular syllabus).

Table 2 Course Outline of e-Learning Ability Training for CSL Teachers

| Topic | Course hours | Model |
|---|---|---|
| Concepts of e-Learning and Types of Implementation | 7/5~7/11 | ■ From Monday to Friday, students log onto the platform to read the weekly online courseware. |
| Fundamental Operations of Information Technology | 7/12~7/18 | ■ On Saturday and Sunday, students participate in face-to-face lessons in the computer classroom. |
| e-Learning Ability | 7/19~7/25 | ■ 7/26-31Submit the semester-end assignment to the platform. |
| e-Learning Ability of Linguistic Structure | 8/9~8/15 | ■ From Monday to Friday, students log onto the platform to read the weekly online courseware. |
| e-Learning Ability of Language Skills | 8/16~8/22 | ■ On Saturday and Sunday, students participate in face-to-face lessons in the computer classroom. |
| e-Learning Ability of Linguistic Culture | 8/23~8/29 | ■ 8/30-9/5Submit the semester-end assignment to the platform. |

### *1.3 Participants*

For the training program we conducted a public recruitment and recruited 6 males and 24 females; of whom, 21 are undergraduates and 9 have finished master's studies. All the participants work in CSL-related teaching, research, or administration in Taiwan.

## 2. Research Methods and Procedures

We made reference to course-evaluation methods adopted around the world and invited five experts on CSL-teaching and research to determine the key factors and indicators necessary to such an evaluation. The result is the initial draft of our "Evaluation Questionnaire for the Performance of CSL e-Learning Training Program."

### *2.1 Tools for Performance Evaluation*

With the Delphi method by inviting the five experts mentioned above, who are reputable individuals from domains such as CSL teaching, e-Learning, teachers' development, and related industries. Our research tool is the "Evaluation Questionnaire for the Performance of CSL e-Learning Training Program," with three sessions of Delphi-based research. We summarized experts' comments of high homogeneity and clarified their differences-in-opinion in order to add or delete the indicator-items outside the experts' consensus. At the end, 20 question-items for evaluating the participants' follow-up e-Learning applications were formulated.

### *2.2 Results of Questionnaire-answering*

The first question-item reads "After participating in the training program hosted by the Ministry of Education, have you applied e-Learning in CSL teaching?" Ten participants answered "yes," and 20 answered "no".

If the respondent answered "no," the online questionnaire system would skip to another item that reads "why do you not apply e-Learning?" which allows multiple answers. Fifteen respondents selected "the course I teach is not suitable for e-Learning,"

ten respondents selected "the place I teach at does not have enough hardware," and "the place I teach at does not provide computers for teachers." Eight respondents selected "the place I teach at does not have Internet access;" 15 selected "there is not enough e-Learning material in the market or it is not suitable for the class;" 3 selected "the available resources online are not suitable for the class;" 1 selected "not enough time to prepare the related materials." See Fig. 4 for the distribution.

Of the 10 respondents who answered they have applied e-Learning, all of whom indicated that they have applied information in face-to-face classes; 5 stated that they have taught classes in asynchronous online teaching settings; 1 stated that he/she has taught classes in synchronous online teaching settings; 4 stated they have designed their own mixed-method classes. These ten respondents also wrote down the difficulties they faced in teaching classes with e-Learning methods, including the places they worked at were not suitable for such lessons, they were unfamiliar with this kind of teaching, they lacked the appropriate materials or tools, or their organizations did not provide support.

In order for us to understand the participants' follow-up implementation of e-Learning, we asked the ten participants whether they would let us to film their classroom sessions and determine their styles and process of CSL teaching. Five of them agreed to let us determine the underlying limitations and issues through such a method.

### *2.3 Filming for Observation*

We did not provide any of these five teachers with advice on teaching. They designed their own teaching plans and their educational targets and objectives were all different from on another's. We set up two cameras in the classroom, with one of them at the back, in order to capture the teacher's movements and interactions with the students, and we also tried to record the whiteboard or projector screen. The other camera was placed by the front door of the classroom to film the entire class.

### *2.4Results of Video Analysis*

The video footages of the five teachers' class-sessions were then recorded as a verbatim text. After verbatim text is completed, the researcher conducts a qualitative content-analysis of the verbatim text. Our findings are listed below.

#### *2.4.1 Information-integrated Face-to-Face Lessons*

The most common method we found is that the teachers often produced slide-shows or film files and project the materials on screen to complement the lecture, or they would use multimedia to demonstrate a scenario or the evolution of a word with narrations in order to enhance the students' learning. Moreover, we also discovered that another reason why these teachers utilized information in teaching was to motivate the students. For example, several teachers asked the students to choose CSL-related games online or let them get into groups to produce multimedia works and to share them with the rest of the class. In general, these teachers focused more on the teaching styles that rely on deduction, lecturing, and material-analysis.

#### *2.4.2 Online Asynchronous Settings for Face-to-Face Classes*

In our video footages, we discovered that the teachers often moved several physical activities onto an asynchronous platform, which were mainly after-class discussions and submitting assignments. Further, the teachers also provided the students with online materials for them to download or read; the materials for were self-studies, and the teachers did not guide the students in the online setting.

## 3. Results and Conclusion

In terms of the background, all of the participants joined the CSL e-Learning training program for the first time, and this is sufficient to prove the uniqueness of this program. This does not only allow us to understand how e-Learning is applied in CSL but also encourages teachers to pursue further training.

In the open-ended questions on the last page of the performance-evaluating questionnaire, several participants expressed the wish to place students into different levels based on their information-literacy as well as their status such as being an adult, child, Chinese, or foreigner. In addition, the participants also wished to have more experience-sharing classes where experience teachers and novice teachers could communicate with each other more closely. We should also discuss the difficulties and obstacles faced by the participants who did not apply e-Learning and determine possible solutions, including the arrangement and planning of on-job training, the establishment of appropriate e-Learning policies, and designing e-Learning materials.

The questionnaire-survey and video-analysis demonstrate the gap between the teachers' educational actions and beliefs, and the possible reasons deserve future studies. They may be due to insufficient teaching-related knowledge or differences in experience or environmental support. Further, other studies indicate that online learning with teachers' guidance works better; however, we did not see any teacher guiding students in online teaching, and this is something to be looked into by future researchers as a way to improve the performance of CSL. For our study we will continue to complement the training hosted by the Ministry of Education and carefully analyze the use of e-Learning and the difficulties among CSL teachers. For our study we will continue to complement the training hosted by the Ministry of Education and carefully analyze the use of e-Learning and the difficulties among CSL teachers. It is our belief that the findings would serve as valuable references for related training organizations in other countries as well as policies on CSL e-Learning or related studies.

## Acknowledgements

This research was also supported by a grant from the Taiwan e-Learning & Digital Archives Program, Republic of China, under contract number NSC 100-2631-S-003 -005 and NSC 97-2631-S-003-002.

## References

[1] Chang, L.L. (2007). The effects of using CALL on advanced Chinese foreign language learners, *Calico Journal*, 24(2), 331-353.

[2] Chang, S.P., Hou, H. T., Chang, K. E. & Sung, Y. T. (2010).What Is the Competence Possessed by CFL Teachers for e-Instruction? Establishment of e-instruction Competence Indicator. The 8th International Conference on Chinese Language Pedagogy. Kumming.

[3] David Graddol(2004). The Future of Language. *Science.* Vol.303 .p1329 – 1331.

[4] Ministry of Education. (2010). *Stastics about foreign students in Taiwan.* Retrieved from http://www.edu.tw/statistics/content.aspx?site_content_sn=8956

[5] Xie, T. W.(2007). Blog, Wiki, Podcasting and learning Chinese language. *Journal of the Chinese Language Teachers Association.* 42(1).P55-67.