

## Collaborative Online D-Learning Experience in Taiwan

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*Abstract:* Over the last few years, Dealing with digital learning and information explosion, Students enhance their global vision via collaborative online d-learning Experience. Therefore, through digital multimedia students' interacting with other nations on the web is a very important skill in this digital era. The study of this project intends to understand course material while interacting through online web learning. It stimulates students' cultural experience and expands learning fields. Many outstanding examples of d-learning were produced, Student Support: d-learning is not the same as distance learning, collaborative online d-learning courses are not usually whole programs, but teaching units available on the Internet. They replace conventional university lectures, many of which are held in severely overcrowded auditoriums. At this stage, it should be emphasized that collaborative online d-Learning is not aiming to transfer entire courses of study to the Internet.

Collaborative online d-learning is used on campus and here the important factor of providing support to students becomes much easier to manage. E-learning becomes a component of blended learning, but a good student support facility is still essential. The project provides collaborative online d-learning problem solving model and encourages students to try to solve problems by themselves. The project recruits middle schools and primary schools to make international contact. Four hundreds teams of parents, teachers, and students involved in a web platform to discuss international issues. The topics can be related to natural resources, human and society, human and self-renunciation, and there are many more multi-cultural learning. Project also intends to do collaborative online d-Learning exchange, experience sharing, and will submit findings for related educational administrators and d-Learning for further reference. The team finishing the special project and uploading the achievement finally adds up to 645 teams, the students separately from 12 different countries, have offered a collaborative online d-learning success experience in Taiwan.

*Keyword:* Collaborative, Online D-Learning,

### 1 Introduction

Due to the liberalization of global economy, all trades and professions emphasize on the promotion of comprehension in order to expand their international markets, and to keep themselves in the same pace with global economic development. To improve the competitiveness of the country, the government has proposed that

enhancing students' comprehension as an important policy. The Ministry of Education suggests the perspective of 'Creative Taiwan, connecting globally', in which 'fostering talents with foreign language abilities' is one of the action plans. Due to the universal availability of the internet and the rapid development of multimedia techniques, e-learning has become an important learning tool. Digital teaching materials

produced with multimedia films and pictures provide various and more active content of courses. Meanwhile, there is less restriction on space and time using digital teaching material and that provides a more interactive and convenient learning environment. Therefore, using multimedia digital teaching material on international interactive teaching is a necessary way of learning in this digital era.

The Ministry of Education has provided many resources of learning, such as the teaching resources center, the Six Major Learning Systems, and seeded schools to encourage teachers applying computer into their teaching, and to encourage students using internet. The digital plan of augmenting manpower will bring wireless internet to each school, each city and county. Thus, instructing teachers and students in using online information to connect with the world currently becomes an important issue.

## 2 Literature review to Project

E-learning has been developing in recent years. There are many academic organizations using internet as a learning bridge among students to enable them to make use of online resources and to connect the world. Multimedia and interactive e-learning are used to narrow the gap among students, to promote international cooperation, and to implement international exchange. Currently, there are 3 million students and 250,000 high school and primary school teachers. If we can strengthen the use of internet on teaching, it will be helpful for interactive learning.

### 3.1 Collaborative Online D-Learning Experience with the World

Recently there have been teachers trying Project-based learning (PBL) which is different from the traditional teaching method. PBL emphasizes on helping students apply what they have learned into daily life innovatively. PBL is a constructivist approach which provides learners a complex and authentic project in order to have students find subject matter, design questions, draw up action plans, collect information, solve problems, set up policies, complete research process, and present a learning mode of the project [3]. This learning mode integrates learning of life experience and inter-disciplinary courses.

### 3.2 Collaborative Online D-Learning Courses and Problem-Based Learning

Bean [1] pointed that interdisciplinary courses have four features. First, inter-disciplinary courses are based on important issues in real life and thus it is similar to the nature of project-based learning. Second, inter-disciplinary courses apply knowledge of context rather than limited to knowledge of subject matter. It conforms to the feature of project-based learning that it is inter-disciplinary and designed to explore a question which combines contexts in real world. Third, inter-disciplinary courses do research on current issues, not on a subject. Project-based learning also does researches on current social or scientific issues and aims at fostering student's ability in exploration and research. It is not limited to the aim of the courses, either. Fourth, inter-disciplinary courses emphasize on applying knowledge and solving problems which are also one of the key features of project-based learning.

### 3.3 Collaborative Online D-Learning Experience with Constructivism

Constructivists consider that knowledge is understood by a learner's construction. Students should express the learning results by applying surface features of diversified knowledge. Knowledge and techniques already possessed by a learner may influence on learning something new. Learning cooperatively and learning to interact with communities will help in depth learning [2]. PBL also emphasizes on a learner's construction of knowledge, and thus adopts a learner-centered model. Instructor will not tell the answer but instruct students in exploring questions and trying to solve problems. Learner constructs his/her knowledge by himself/herself in the process of exploring. Products of PBL can be presented with oral presentation, website, and briefing, etc.

### 3.4 PBL and the Collaborative Online D-Learning

Added on the elements of science and technology, PBL is different from the traditional teaching method either on the development of course content, or the way of delivery. Teachers can apply internet technology to create different learning opportunities, obtain learning resources,

manage teaching resources, and evaluate students' learning results through internet [5]. Information Technology-Assisted PBL can help students develop diversified skills, enhance research skills, and master diversified evaluation methods, such as self-evaluation, peer evaluation, and learning process files, etc. Furthermore, it can promote common consensus in a community through online discussion board and interaction between peers, instructors, and experts [6] [8].

### **3.5 The Internet Provides Learning Communities Channels for Collecting Distributed Knowledge**

Learning communities are formed by learners based on different social relationship, such as schools, clubs, organizations, and neighbors, to provide learners a learning opportunity. [7] In this learning environment, the emergence of knowledge relies on the interaction in the community to integrate professional knowledge possessed by different members. Therefore, Brown [8] indicated it as 'distributed cognition' in a learning community. Learners can share their views on how to solve the problems and reach an agreement to examine and solve the problems collaboratively. The Internet plays an important role as the medium for communication in integrating distributed cognition.

## **4 Project and Collaborative Online D-Learning**

This project aims at providing opportunities for students attending international activities under their teachers' supervision. The purposes of it are as followed:

1. To foster juveniles' abilities of attending projects, and promote their competitiveness.
2. To broaden juveniles' views, develop their scientific and humanistic care.
3. To encourage juveniles' interests in international cultures and affairs.
4. To enrich international teaching activities, and develop friendship.
5. To enhance students' ability of communication, and students' global vision.
6. To advance students' communication ability in English.

This project combines digital information and the Internet to instruct students using PBL to

search information to progress online teaching and learning.

## **5 Schedule of the Collaborative Online D-Learning Project**

This project is scheduled from August, 2005 for three years in three phases:

1. Starting the project (August, 2005-July, 2006)
  - (1) Develop interactive mode of learning online.
  - (2) Search for foreign partners.
  - (3) Decide purposes and methods.
  - (4) Train teachers with action research.
  - (5) Learn interactively online.
2. Cooperation Period (August, 2006-July, 2007)
  - (1) Advanced international exchange. (It holds interactive and non-interactive activities.)
  - (2) Encourage teachers to have international exchange.
3. Creation Period (August, 2008-July, 2009)
  - (1) Learn collaboratively.
  - (2) Attend foreign web-based competitions.

This project is designed because juveniles should be encouraged to care the important issues around the world, to work collaboratively with team members, and to broaden their global views.

## **6 Collaborative Online D-Learning Experience in Taiwan**

### **6.1 Experience in Taiwan**

1. To connect with the international society.
2. To develop students' ability of project-based learning.
3. To explore international issues.
4. To enhance students' abilities of foreign languages.

### **6.2 Set up the Website**

The website is set up as the center of communication. Teams, information, and interactive functions will be provided online, including:

1. Teaching platform: including courses and members management.
2. Interactive platform: including interactive texts, emails, international members, and the discussion board.

3. Web server: providing storage space for members.

### 6.3 Members

The major members are students from primary schools and high schools in Kaohsiung, as well as those in southern Taiwan. Each teacher instructs 3-5 students. 400 teams are expected to join this program.

### 6.4 Procedure of the activity (6 months for each session)

1. Organize teams.
2. Search for international partners.
3. Register to attend.
4. Propose the plan, and set the title.
5. Start international activities.
6. Record the process.
7. Write reports.
8. Attend related international competitions. (Optional)
9. Publish results on the website.
10. Invite experts to evaluate the results.
11. Announce outstanding groups and award them.
12. Hold international workshops to share experiences.

### 6.5 Modes of Activities

1. Titles can be decided freely by each team, either learning subject matter or English.
2. Partners can be searched by each school or assisted by this project.

### 6.6 Contents

This project is aimed at building a high-quality online learning environment, integrating learning resources, improving online learning environment, and stimulate teachers' motivation of learning. It is hoped to promote e-learning at domestic schools and to achieve the perspective of 'Creative Taiwan, connecting globally.'



## 7 fruitful results

Group	1 Natural disaster	2 Plural culture	3 Environmental protection topic	4 Life of the school	5 Regional ecology	6 Scientific and technical innovatio n
high school	20	15	20	43	2	4
Professors group	15	20	20	23	22	28
Middle school	35	35	30	30	20	20
primary school	20	40	40	100	20	23
Total	90	110	110	196	64	75
						645

By above-mentioned statistical data, the groups of high school, professorship, and middle school accept the questions from per group of the platform. Due to this reason, the group is distributed averagely. Primary school obviously focuses on school life that the team counts. Therefore, the platform studies, should divide according to the age and theme interest, then, it should be better for activity. In the theme six, many teams registered; obviously it must divide to more sub-themes. According to the educational policy and international trend implementing, the plan in the future should make this platform study more realistic to all groups.

## 7 Conclusion

Finally, this study group has been collaborating with collaborative online d-Learning partner to help students develop d-learning while in Primary and Middle School. We have learned that transfer students who initiate online d-learning did some preparation before they start collaborative online d-learning. This project intends to provide some experience for Successful Online d-Learning:

1. D-learning is a valid training solution, training excellence can be achieved at a distance
2. A successful d-Learning leads to e-Learning and m-Learning.
3. Students learn thru his own way. Sometimes just a tip, other times a complete explanation, very often they need an example. Many times they need to practice.
4. D-learners need diversify learning.

5. Create collaborative online d-learning model once and use it many times.

6. D-learners evolve international scope of changes.

This project is aimed at building a high-quality online d-learning environment, integrating learning resources, improving d-online learning environment, and stimulating teachers' motivation of learning. It is hoped that through this study we can promote d-learning at domestic schools and achieve the perspective of 'Creative Taiwan, connecting globally.'

Through communication we can build a sense of community. We can let learners know how they are doing and give them useful information on an ongoing base, let them find ways and bring them back.

Furthermore, the purpose of this study also intends to describe the team development and group processes of virtual learning teams as they forming teams, establishing learning environment, playing roles, grouping norms, and modeling. The other goal of this study was to generate recommendations for successful virtual learning teams to integrate internet-based training courses.

This paper provides a glimpse of how virtual collaborative online d-learning teams develop and carry out its tasks. Like many descriptive studies, the results of this study were not meant to be formally generalized to other virtual teams, but the uniqueness of these virtual collaborative online d-learning teams and their environment. To provide insight into how they develop and progress throughout their team life. Further research should address the issues of dynamic interaction during online meetings, the role of the instructor in establishing and supporting virtual collaborative Online d-learning teams, how teams select and use technology to support group performance, and what actions help teams better collaborate and lead to greater team performance and individual learning.

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