Mobile Learning Integrating Elementary Education─ Taiwan Elementary as an example

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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: Integrating Information.

1.Background

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[1]. 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.

| Disaster briefing by our students | Photo-taking with Japanese students |

Fig 1. Face to face sharing：Taoyuan Elementary and Yanagi Elementary(1)

2 Literature review

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[1,2].

3 Taoyuan Elementary's Project:「Me-Hu-Hu-Sun!」

3.1Details

(A)Summary

This proposal is to be worked out and applied to teaching characteristics of our school—international interaction on education. Hopefully, our students can contact with students of urban and foreign countries on learning sharing through network, and to extend their vision. We have cooperated with Yanagi Elementary School of Japan on the on-line seminar and learning sharing since Sept., 2005. Our school lies in a remote mountain with only six classes, insufficient manpower and budge. Students are guided to the palace of cultural sharing by virtual characters named「Taoyuan bear, Taoyuan monkey, Taoyuan pig」. The activity is just an access to cities and other countries. We expect the students can discover the beauty of the world by expanding their learning.

| Members of our school in 2006NDYS | Disaster briefing by Yanagi Elementary, Nagoya |

(B) Curriculum and innovative teaching

The curriculum is a design of theme activities for students by project learning, the virtual characters for cultural sharing are toys named 「Taoyuan animals」(kindergarten), 「Taoyuan bear」 for the first and second grads, 「Taoyuan pig」 for grade 5 and 「Taoyuan monkey」 for grade 6. Students learn to keep the friendship with 「Taoyuan animals」 by bringing them home and record the daily life. A month later, the activity of exchanging *students,*「Taoyuan animals」with those from cities and other countries began(see picture 6, 7, 8). We sent the virtual characters to Jhih Kai Elementary School by ourselves, and mailed to Fuyoh Elementary and Kanazawa Municipal Ougidai Elementary Schools in Japan. Now, the 「students」are proceeding their learning at the cooperative schools. Meanwhile, 「students」from Chi Kai Elementary and Japanese schools are learning at Taoyuan Elementary(see picture 9,10).

Virtual students are looked after by assigned students every day, their learning situation is also recorded in diaries by various ways（each animal has a diary and a notebook prepared by schools of both ends）. We expect all 「students」can bring the learning records back to their school after the project, and share the learning experience（Taoyuan animals）with their classmates or schoolmates（attachment 1）

We transmit information simultaneously via web platform to promote students' self-understanding, build the confidence and cultivate the active learning attitude; to cultivate the ability of team work, the trust and assistance to each other; to promote the understanding of the differences of various peoples and interaction with others; to inspire the imagination for expressing their ideas accurately, to improve their writing ability and cultivate their abilities of independent thinking and problem solving .

3.1.1 WHY(Why we insist to proceed the educational communication by ICT)

The weak people are usually the informational poor in digital society, too. Because of the unfriendly cultural and economic condition, there are difficulties and discrepancies for them to purchase computers and related accessories. Though the difficulty and discrepancy become less, the socioeconomic status of family still controls students' informational learning[3]. Digital discrepancies between cities and countries keep growing, but not getting better as the number issued by Hung-Chih Chan on the investigation of Taiwanese consumers in 2004. The people of 「country-folk」remind the obvious insufficiency of informational equipment and application[4].

All citizens in informational society are authorized to use computers and network equally. The U.S., France, Japan, Finland and Germany not only focus on the basic building of information, but also the development and application after. It shows that individual's informational equipment in informational society is related to his/her job-obtaining, living quality, even the competence of whole nation.

Owing to our efforts on educational interaction with other countries and the cultivation of aboriginal students' worldview, wireless Internet equipment in this project is the key expected by all parents, teachers and students of our school. Students can sharing their learning with foreigners like the urban students by video conference simultaneously or asynchronously any time and any where, and apply the skills of on-line interaction to their daily life. If on-line working is necessary in the future life, student's right of learning can't be sacrificed. Thus, promoting the learning vision and effect for aboriginals is a target in future.

3.1.2 WHAT, WHEN, WHO, WHERE, HOW(What are we doing? When we do it? Whom to be with? Where we do it? How we do it?)

ICT instruction is carried out by three years gradually. In the first year, students share the learning results on culture with urban and foreign students through web video conference; in the second year, they share the learning on ecology through discussion board on platform and web video conference by team work automatically; in the third year, students expand their learning individually[1,4]. Regarding to the curriculum development, the learning direction of our students is based on **the globalization of local school-based curriculum** in the first year. The curriculum framework for all grades and cooperative schools is list on table 1.

Through the curriculum development of this project and the encouraging to students' expressing in English, Bunun Language and Chinese, also the emphasis of integrating the curriculum and life with the assistance of information technology, students can share their learning with cooperative schools by video conference; we plan to arrange the face-to-face interaction on education once a year at least for cooperative schools . Parents, teachers and students of Taoyun will go to Japan for interaction on Feb. 1st -8th in 2007（schedule as attachment 2）. Name list is on table 2:

Fig 2. We exchange the students with Japan by virtual

characters named「Taoyuan bear, Taoyuan monkey, Taoyuan pig」, right down are Doraamo & Baby elephant from Japan.

Table 1. Training Schedule of Taoyun Elementary Before Trip

Date	Time	Course name	Counselor	Remarks
96/01/13 (Saturday)	0900~1000	Knowing each other	Chi-Jen Lee	
	1000~1030	Making friends	Chi-Jen Lee	
	1030~1130	Understanding the climate and geography of Japan	Jia-Sui Weng	
	1130~1200	List the clothing and related materials after discussion and expression	Jia-Sui Weng	
	1200~1330	Lunch time		
	1330~1430	Discussion on shows and costumes	Ya-Fing Tseng	
	1430~1530	Show practice in groups	Ya-Fing Tseng	
	1530~	Go home	Jia-Sui Weng	
96/01/27 (Saturday)	0900~1000	Understanding the eating in Japan	Cai-Fan Chou	
	1000~1030	Attendants prepare easy food if needed after understanding the Japanese food.	Cai-Fan Chou	
	1030~1200	Prepare the learning results of Japanese virtual animals by groups, discuss on gifts.	Yo-Ching Lin	
	1200~1330	Lunch time		
	1330~1400	Show practice	Ya-Fing Tseng	
	1400~1430	Check the show practice	Ya-Fing Tseng	
	1430~1530	Group representatives express the animals' learning results	Yo-Ching Lin	

Table 2. Schedule of educational interaction, by Taoyuan Elementary

Date	Time	Activities	Counselor	remarks
96/02/02	0930	Arriving at Yanagi Elementary School	Chi-Jen Lee	
	0930~1000	Mutual introduction and presenting gifts.	Chi-Jen Lee	

		Gifts exchange by classes of both schools(students of Taoyuan gather in computer classroom in Taiwan)		
	1000~1030	Expression of animals' learning result.(Students of Taoyuan express the learning result simultaneously in computer classroom in Taiwan, representatives of grade 5 and 6 greet every one in English and introduce the animals' life in detail.)	Ya-Fing Tseng	Video conference simultaneoussly at Taoyun Elementary
	1030~1130	Show time(students in Taiwan are off)	Jia-Sui Weng	Video taking
	1130~1200	Group activities, exchange name cards and gifts	Cai-Fan Chou	
	1200~1330	Lunch time		
	1330~1400	Group representatives express their learning condition today in English	Yo-Ching Lin	
	1400~	Take photos and leave		
96/02/05	0930	Arriving at Kanazawa Municipal Ougidal Elementary School.	Chi-Jen Lee	
	0930~1000	Mutual introduction and presenting gifts. Gifts exchange by classes of both schools(students of Taoyuan gather in computer classroom in Taiwan)	Chi-Jen Lee	
	1000~1030	Expression of animals' learning result.(students of Taoyuan express the learning result simultaneously in computer classroom in Taiwan, representatives of grade 5 and 6 greet every one in English and introduce the animals life in detail.)	Ya-Fing Tseng	Video conference simultaneoussly at Taoyun Elementary
	1030~1130	Show time(students in Taiwan are off from school)	Jia-Sui Weng	Video taking
	1130~1200	Group activities, exchange name cards and gifts	Cai-Fan Chou	
	1200~1330	Lunch time		
	1330~1400	Group representatives express their learning condition today in English	Yo-Ching Lin	
	1400~	Take photos and leave		
96/02/06	0930	Arriving at Fuyoh Elementary School		
	0930~1000	Mutual introduction and presenting gifts Gifts exchange by classes of both school(students of Taoyuan gather in computer classroom in Taiwan)	Chi-Jen Lee	
	1000~1030	Expression of animals' learning result (students of Taoyuan express the learning result simultaneously in computer classroom in Taiwan, representatives of grade 5 and 6 greet every one in English and introduce the animals life in detail.)	Ya-Fing Tseng	Video conference simultaneoussly at Taoyun Elementary
	1030~1130	Show time(students in Taiwan are off from school)	Jia-Sui Weng	Video taking
	1130~1200	Group activities, exchange name cards and gifts	Cai-Fan Chou	
	1200~1330	Lunch time		
	1330~1400	Group representatives express their learning condition today in English	Yo-Ching Lin	
	1400~	Take photos and leave		

＊ Schedule at Ougidai and Fuyoh may be adjusted on the real distance.

We emphasize student's learning opportunities during the interaction. Therefore, we contacted some enterprises to sponsor the students whose contribution confirmed by teachers and whose families can't afford the expenses. Thank to their generous help sincerely.

The purpose of this trip is to bring the Japanese virtual animals home, and let our students announce the animals' learning results there by groups. All attendants have to take a twelve-hour training before the trip（see table 3）and prepare all activities well. The main subject of this trip is titled「Go home, animals」. There are shows, issues of learning results, exchange of name cards, and friendship interaction for schools of both ends. The activity process will be transmitted to Taoyuna Elementary via video conference. Taoyun Elementary will hold some cooperative activities and let all students here can experience the as same activities as in Japan.

Main curriculum of the second stage is focused on natural ecology（estimated to start in 96th school year）. We have arranged to let teachers and students develop their learning motivation and interests in integrative context. Firstly, we arranged an expert guidance on local ecology of fireflies, birds, snails, and frogs（see picture 11）. Then, we developed an creative classroom decoration（see picture 11 performed and designed by teacher-student team work. We also built an ecological pool with water recycling at school（designed and finished by teacher-student）（see picture 11）and let every one discover it without notice. Dragonflies, frogs and butterflies were attracted by the pool when it's built up, students put fish in it themselves, too. Teachers and students made a huge rope spider web at the entrance of school. To integrate the art and humanity courses, students' art works about ecology will be slung on the web. We are running a proper environment for students' learning and ecological instruction to make the ecology curriculum go smoothly in next school year.

Our teachers and students often put on the traditional clothes of Bunun Tribe to take part in various activities after school. Students keep in contact with foreign students by Email. Teachers and students usually watch the birds, frogs and stars at our campus. What they do shows the learning effect. Therefore, we have been being active on the building of ICT learning environment. The wireless Internet was finished in Nov., 2006 and students can receive web message at home. We also persuaded some enterprises to donate and sponsor under the name of 「Send computers and Internet to students' houses for free」. This way is to response the expectation of the parent association to the developing direction of our school features, and our new vision of 「Work out the tradition of oracle, do international marketing ; match the

world view by wing of informational technology 」.To cooperate with the CIS identification of our school and develop the characteristics of ICT, we are working on several fundraising and related activities as listed below:

● President of Shui-Lai Chen Cultural and Educational Foundations promised to sponsor NTD50,000.00 this year and NTD200,000.00 per year for the next coming years to let students have computers for free.

● To make the activity of 「Deliver computers to students' houses for free」 go smoothly, we sent an official document to China Steel and they agreed to move some used computers to our school.

● Have contacted with Aborigine Association to sponsor related activities of our school and communities, also related equipment.

● Have contacted with Kaohsiung Aborigine Bauera to strive for a stop of WinMAX wireless network of Kaohsiung County at Taoyuan(presented), to make up the insufficiency of network and bandwidth for our students[5,6,7].

● Have contacted with the Informational Management Branch of Kaohsiung county Government Planning Office to strive for the delivering assistance of used computers and related accessories .

● The graduate students of Department of Informational Management of Sun Yat-Sen University come to do the informational instruction on weekends aperiodically(first activity held on 16th and 17th in Dec., 2006) to upgrade the informational ability and equipment for our teachers and students[8,9].

The key points and practice schedule of related work for integrating information to instruction is listed as table 3:

Table 3. Key points and practice schedule of related work for integrating information to instruction by Taoyuan Elementary School, Kaohsiung County

	Event	Working points	date
1	International communication on education	Build the platform for interactive learning.	95.07.01~ 96.06.30
		proceed the interaction at the three cooperative schools in Japan.	96.02.01~ 96.02.08
2	Attend division instruction seminar	Attend the instruction seminars of different counties or cities.	96.08~ 96.12
3	Develop web-based	Host a four-week web-based learning for students.	96.09~
	learning curriculum		96.12
4	Teaching demonstration and discussion	Host the division-based experience sharing on the development of integrating information to teaching and informational education, also the result demo and discussion.	Unsure
5	Fulfill related equipment for ICT instruction	1. Improve related equipment 2. Set up the wireless network at the whole learning zone. 3. Carry out the idea of 「each student has a computer at home and can be on-line」.	95.07~ and on

(C) Building of teachers' community
Proceed the sharing and professional dialogue on line simultaneously or asynchronously by the assistance of cross platform (http://khc.k12.edu.tw)
(D) Explanation of applying resources from great teaching websites and other supports
(E) Inspire students for active and effective learning with ICT (Please refer the details of 5W2H[10,11,12]: Why, What, Who, Where, When, How and How much)
1. WHY, WHAT, WHO, WHERE, WHEN, HOW as described at Curriculum and innovative teaching[14,15].
2. HOW MUCH: We overcame the difficulties by applying existed equipment (we only have bandwidth of ADSL 2MB/256KB because of our remote location), computers, Webcame and microphone of NTD3,000.00. To
3. improve ICT instructional equipment and match our curriculum development for the best benefits, there's estimated budget for related activities and equipment as below:

（F）Proceed the international interaction and cooperation with ICT（Briefing of cooperative or interactive schools and present interaction should be inclusive）

We created the virtual characters of 「Taoyuan bear, Taoyuan monkey, Taoyuan pig」 to catch student's heart. Students have been recording their daily interaction with Taoyuan animals in diary since the term began. There are more assignments for the animals. They are going to study at the cooperative schools and experience the urban and overseas life for our students, and help us have more understanding on the partners, also proceed the sharing and interaction on culture.

One month after the term began, Taoyuan animals packed. We had the first contact with cooperative schools through video conference and introduced our animals and expectation to them. Then, our teachers and students mailed the animals to the cooperative schools and received the animals mailed by them, too. The students all did their best to leave a good impression for each other. They finally parceled the animals and wished they have a hopeful trip.

Teachers of Taoyuan designed the instruction activities on the virtual characters of 「Taoyuan bear, Taoyuan monkey, Taoyuan pig」. They merged the characters into children's mind for more fun of learning; they also helped students expand their vision through the educational interaction with urban and foreign schools. Students' learning becomes multiple. Moreover, teachers used the superiority of our aboriginal children to upgrade their learning confidence and experience the idea of boundless learning.

We have had several times of interaction through video conference with Japanese schools, and exchanged the virtual students to take the job of cultural ambassadors. Related curriculum has been being proceeded.

4.1 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. This learning mode integrates learning of life experience and inter-disciplinary courses.

4.2 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.

4.3 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.

4.4. 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]. (Hsu, 2001; Huang & Hsu, 2001)

4.5 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.

5   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.

6   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)
     .   Develop interactive mode of learning online.
     .   Search for foreign partners.
     .   Decide purposes and methods.
     .   Train teachers with action research.
     .   Learn interactively online.
2.   Cooperation Period (August, 2006-July, 2007)
     .   Advanced international exchange. (It holds interactive and non-interactive activities.)
     .   Encourage teachers to have international exchange.
3.   Creation Period (August, 2008-July, 2009)
     .   Learn collaboratively.
     .   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.

7   Collaborative Online D-Learning Experience in Taiwan

7.1   Experience in Taiwan
. To connect with the international society.
. To develop students' ability of project-based learning.
. To explore international issues.
. To enhance students' abilities of foreign languages.

7.2   Set up the Website
The website is set up as the center of communication. Teams, information, and interactive functions will be provided online, including:
. Teaching platform: including courses and members management.
. Interactive platform: including interactive texts, emails, international members, and the discussion board.
. Web server: providing storage space for members.

7.3   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.

7.4   Procedure of the activity (6 months for each session)
a.   Organize teams.
b.   Search for international partners.
c.   Register to attend.
d.   Propose the plan, and set the title.
e.   Start international activities.
f.   Record the process.
g.   Write reports.
h.   Attend related international competitions. (Optional)
i.   Publish results on the website.

j.   Invite experts to evaluate the results.
k.   Announce outstanding groups and award
     them.
l.   Hold international workshops to share
     experiences.

7.5   Modes of Activities

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

7.6   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.'

8   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 innovation
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.

9.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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Taoyuan Elementary School, Kaohsiung County
Estimated Budget for Hosting the Innovative
development Plan of Integrating Information
into Instruction and Informational Education

Unit:NTD

Item	Title	Quantity	Unit	Unit price	Total	Remarks	Sub total
International interaction on education	Platform building	1	Model	3,000,000	3,000,000	Self-collecting	0
	Educational interaction in Japan	3	person	40,000	120,000	Subsidized by Ministry of Education	
Attend division-based instruction seminar	Trip expenses	18	Person-time	4,500	81,000		120,240
	Cost for substitute teachers	126	Class-time	260	32,760		
	Cost for substitute teachers	18	Class-time	360	6,480		
Develop web-based learning curriculum	Attending fee for supervisors	2	Person-time	2,000	4,000		50,303
	Transportation for supervisors	2	Person-time	614	1,228		
	Payment for writing the curriculum	4	Thousand words	630	2,520		
	Translation fee for the curriculum	4	Thousand words	1,390	5,560	Pay by English words	
	Cost of making website	1	Model	5,000	5,000		
	Payment for web-based teaching	12	Hour	800	9,600		
	Payment for face-to-face teaching	4	Hour	800	3,200		
	Material fee	60	Person	60	3,600		
	Fee for tea and refreshment	60	Person-time	20	1,200		
	Cost for spot decoration	1	Model	3,000	3,000		
	Edition of consequence	1	Model	9,000	9,000		
	Other expenses	1	Model	2,395	2,395		
Teaching demonstration and discussion	Attending fee for supervisors and officers from Ministry of Education	5	Person-time	2,000	10,000		87,780
	Payment for instructors	3	Hour	800	2,400		
		2	Hour	1,600	3,200		
	Teaching aids	1	Model	30,000	30,000		
	Data fee	130	Person-time	100	13,000		
	Missed-chow fee	130	Person-time	80	10,400		
	Fee for tea and refreshment	130	Person-time	20	2,600		
	Printing	1	Model	9,000	9,000		
	Cost for spot decoration	1	Model	3,000	3,000		
	Other expenses	1	Model	4,180	4,180		
Fulfill related equipment for ICT instruction	Computers in six classroom and the audio-classroom	8	Set	20,000	160,000	Self-collecting	351,677
	Notebook for teachers	12	Set	40,000	480,000	Self-collecting	
	Portable interactive E-whiteboard of 150 inches	3	Set	26,800	80,400		

	Interactive E-whiteboard(W21.9xH91.4cm, diagonal 60 inches/152.4cm)	1	Set		160,000	160,000	
	Ground setting of computer classroom(cable-setting inclusive)	1	room		100,000	100,000	
	Computers for students at home	127	Set		20,000	2,540,000	Self-collecting
	Wireless network in learning zone	1	Model	225,600	225,600	Self-collecting
	Other expenses	1	Model	11,277	11,277	
Total	Total is NTD7,135,600.00 including self-collecting of 6,405,600.00 and subsidy for overseas visiting by Ministry of Education of 120,000.00. **We plan to apply the subsidy of year 96th at 610,000.00** (above budgets can be adjusted if needed)						