

A Study on the Development of Performance Model for International Education Cooperative Projects based on Online Learning Community

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Educational cooperative activities between countries for human capacity building are expanding in accordance with the international stream of modern globalization and information. A variety of models on exchange activities are also appearing based on this stream. These trends made many changes in the field of traditional education through online-based activities which anyone can access to beyond spatiotemporal barriers. This study aimed at developing the performance model to support the activities of members who carry out cooperative projects under online learning community, applying it to actual performance case, analyzing the results, and deriving improvements. The developed performance model consists of three components. The first component is the core principle for management and implementation of the performance model. The second one is the process of performance model and activities of each step, and the third one is online workrooms (websites) to support the performances. Moreover, members of the community applied core progressive strategies to accomplish projects and a few suggestions were raised so as to make aggressive and dynamic activities of online learning community. Based on the 'Online Learning Community', the members who carry out international educational cooperative projects acquired meaningful knowledge not by one-way giving from others but by forming recursive process, where the members with various cultures and backgrounds could be an instructor at one time or a learner at the other time, so they experienced social learning process acquiring knowledge cooperatively.

Keywords: Online learning community, International education cooperative project, Performance model

Introduction

Globalization becomes the general trend in every field as ICT (Information Communication Technology) makes the world draw closer together. Also this trend accelerates international educational cooperation for human capacity building which is one of the most important national policies of each country. In this context, multinational corporations already have made

use of online-based activities for training their employees and the traditional educational fields get transformed by these activities beyond spatiotemporal barriers.

Recently, 'Online Learning Community' comes into the spotlight in discussing cooperative activities. The articles on the cyber space and relevant studies on the online learning community are dealt in all educational fields for adults and enterprises as well as traditional schools' spheres (Kim, Lee & Choi, 2006; Choi, 2005; Kim, 2005; Lee & Kim, 2003; Rha & Hong, 2003; Holton, 2001; Cho, 2000; Hildreth et al., 2000; Jung, 1999).

In particular, there was a case in the educational field to promote a part of the classes of the graduate school as an international cooperative project using internet over territorial barriers (Cho, 2000). Other cases proved the importance of collaborative team working to utilize the talents of team members living in different regions (Duarte & Snyder, 1999; Hildreth and others, 2000; Holton, 2001). These cases pointed out the needs of international activities for current situation and emphasized pre-design, communication, and team organizing strategies.

Nowadays, there is a new type of online-based international educational cooperation which is more complicated and diversified activity done by spontaneous global participants. The project of ALCoB (APEC Learning Community Builders) is an international cooperative activity implemented by expert teachers in the APEC region (<http://alcob.com/new2/html/index.htm>) with an official endorsement and supports from APEC.

Principles of ALCoB activities

An ALCoB-Teacher is an expert teacher who has proficiency at communicating in English and using ICT and interested in exchange activities with teachers and students from other APEC economies. The activities of ALCoB are based on spontaneity and self-regulation. The following special and unique principles of activities play an important role in successful conducting ALCoB online community (Kim, Lee & Choi, 2006). First, there is the virtue of caring in ALCoB activities. The virtue of caring is shared naturally in the community and is handed down by learners (students) as well as newly participating teachers. Secondly, ALCoB mainly involves community members' participation in learning activities. Also, by providing materials of high quality online, ALCoB aim to support the learning activities of each members in the community. Third, another principle of ALCoB activities is the revelation of self-regulation and spontaneity through collaborative activities. ALCoB are leading in promoting cooperative projects between members within their own economies and with others outside their own economies. Forth, the friendly relationships among community members are a core part of ALCoB membership. Although there are always barriers of culture and language, ALCoB help to overcome these obstacles by helping individuals to easily become friends with other community members.

ALCoB-Teachers' Projects

Since 2003, every year, ALCoB-Teachers have been conducting projects on their own interests according to the guidelines of "APEC Learning Community for Shared Prosperity"(ALCom) project. APEC and Korean Ministry of Education and Human Resource Development (MOE)

support ALCoB-Teachers' project through IACE (Institute of APEC Collaborative Education). Although ALCoB-Teachers have minimum financial support (about 4,000US\$ per group) to pay for their international communication fees and to purchase limited amount of software and hardware, this project comes from a bottom-up approach based on autonomous activities of teachers and learner (Kim, Lee & Choi, 2006; Choi, 2005; Jang & Kim, 2004). It also can bring an effect to improve international cooperation not only for the individual exchanges but also for the exchanges of classes or schools to share the methods of teaching and learning including cultural understandings.

Necessity of the performance model

In accordance with increasing international cooperation in education through online, the number of similar cases is expected to rise in the near future. However, especially for the improvement of participants' performance in international cooperative projects, it seems rare to go through relevant researches on the online-based international cooperation so far. Most of the research on online learning community can be categorized into the following three areas: reports focused on the general case study (Shin, 2006; Kim, 2005; Choi, 2005; Holton, 2001; Cho, 2000; Hildreth so on, 2000), the studies for models and development processes of the online learning community (Rha & Hong, 2003), and the studies on building strategies and principles for the online learning community (Kim, Lee & Choi, 2006; Lee & Kim, 2003; Jung, 1999). Therefore, it is needed to research the performance model on promoting process or supporting system for favorable implementation of international cooperation in education.

On this background, this study aimed at two purposes: First, developing the performance model to support the projects of international cooperation in education brought by international participants who preceded online activities with common interests. Secondly, finding the way of improvement of the model with formative research on the ALCoB-Teachers' two year projects. The particular research tasks are as follows:

Task I. What is the performance model which can support the international educational cooperative projects on the basis of the online learning community?

- 1-1. What are the core principles for management and implementation of performance model?
- 1-2. What are the process of performance model and activities of each step
- 1-3. What is the web-based supporting system for the model?

Task II. What are the problems of the model and how can we improve them?

In order to accomplish the tasks, this research had been done with two phases during two consecutive years. So this study includes the one phase developing performance model related to task I and the other phase applying the model related to task II.

At the first year, task I was completed and task II was finished at the second year. Detailed methods are as follows.

Methods

Formative Research

This research adopted a formative research methodology. Reigeluth's (1989) formative-research methodology is based on the principle that instruction is developed under the strict guidance of a theory, without using any other prescriptions, the instruction(product) is an "instance" of that theory, and the results of the evaluation of the instruction will reflect the weakness, strength, and ways of improving the theory (Kim, 1994). This formative research used the researchers, in their role as expert manager of ALCoB-Teachers projects, as an internal evaluator. This was beneficial in two aspects. First, since the investigator had a role to manage ALCoB-Teachers projects for last two years with the co-author of this paper and a founder of ALCoB, the investigator had great potential value here as an internal evaluator as well as a manager of the projects. Secondly, if the investigator had not been the manager of ALCoB-Teachers projects, this would have added another variable to the study—the problem of training the manager on the complicated characteristics of the ALCom (APEC Learning Community for Shared Prosperity) project itself.

Trustworthiness

As the importance of trustworthiness, the formative research is suitable to follow the researchers' criteria for trustworthiness including credibility, transferability, dependability and confirmability (Lincoln & Guba, 1985). In order to satisfy the reasoning of trustworthiness, we used the following three methods: 1) there were several expert interviews during two years of whole process, 2) after having interview with participants, we conducted telephone interview and e-mail interview with other participants, 3) for every meaningful data, it was cross-checked with other participants from different economies.

Data Gathering

Data were gathered by three different processes: 1) self-observation and self-reflection by the investigator, 2) debriefings with the peer-debriefer, and 3) interview with expert groups. Each process made a unique contribution toward the accomplishment of the goals of this study.

Participants

For the first phase, 80 Korean ALCoB-Teachers participated as a target audience of a pilot test and 105 international ALCoB-Teachers from 7 different APEC economies (Korea, China, Indonesia, New Zealand, Philippines, Chinese Taipei, Thailand) participated in the process of the task I. Also, there was five times interview with six experts: two educational technologists, two experts on international cooperation in education and two web-system designers. For the second phase, 126 international ALCoB-Teachers participated from 14 APEC economies as audience of e-mail interview and survey. For the peer-debriefing, one staff from IACE was asked to be present as an observer. The peer debriefer was a doctoral student in educational technology and had two years of experience in working for ALCoB projects. The debriefer was

asked to check and record the nature of any problems occurring during the research process.

Process of study

This study consisted of ten steps. The first phase for task I developing performance model included steps one through eight. The second phase for task II was the ninth and tenth steps.

- 1) Searching of components of the models through literature review
- 2) Analysis for international educational cooperative projects
- 3) Expert interview: To build the performance model, during three months, there have been five workshops with the six experts: two educational technologists, two experts on international cooperation in education and two web-system designers.
- 4) Construction of tentative online web pages: After the conference, the tentative plan of online web pages was constructed by two web-system designers. The tentative plan of online web pages made for 6 months from March to August in 2003 going side by side with revising works occasionally from experts during that time.
- 5) The pilot test for tentative online web pages: Imperfections of constructed online web pages were revised through the pilot test related with convenience of using by revealing them to 80 domestic teachers who are practical users.
- 6) Construction of tentative plan of the performance model for international educational cooperative projects based on online learning community: Based on the components of the performance model derived from conference of experts and literature analyses, initial models were constructed in order to perform the cooperative projects and the tentative plan was carried out with the advice of an expert who took in charge of general management of the projects of international cooperation in education and participated in the conference.
- 7) Conference of experts on tentative plan of the performance model: We held the conference to examine feedbacks and feasibilities on the constructed tentative plan of performance model. The five experts participated in this conference: two educational technologists, two experts on international cooperation in education and one web-system designers.
- 8) Execution of formative research on the performance model: With being opened at the offline events, the tentative plan of developed performance model was used with carrying out of international educational cooperative projects. From that time, the researcher collected materials for 1 year with exchanging feedbacks from participating teachers who were at each step.
- 9) Data analysis on online web page related to international educational cooperative projects: Three web pages were analyzed for this study: "ALCoB" homepage (<http://alcob.com/new2/html/index.htm>), the homepage of 1st project (http://www.alcob.com/new2/html/projects/projects_04_1th.htm), and the homepage of 2nd project (http://www.alcob.com/new2/html/projects/projects_05_2nd.htm).
- 10) Survey to collect participants' viewpoints: All "ALCoB-Teachers" who participated in the 1st and 2nd international educational cooperative projects took part in the survey.

Results of Task I

Following the outcomes of this study, the performance model was needed to consist of three components: general core principle for management and implementation, the process of the

performance model and activities at each step of the process, and web-based supporting system for the model. The details on these three components are as below:

The core principles for management and implementation of performance model

1) The core principles for management

First, an efficiently constructed interaction system on the basis of online enables members living in different economies to interact each other continuously. This system is one of important factors in the online learning community.

Second, the advice of experts or colleagues who have enough experiences in international cooperation in education is help of teachers who just start or never participated in international educational cooperative activities.

Third, continuous monitoring is essential to avoid the alienation of members from long distance and lead positive team activities.

Forth, we expect the improvements in quality by providing the systematic guidelines of time management and giving enough time for participating members to conduct projects. When managing the activities by connecting international areas, there are needed to have the course of exchanging members' opinions. In result, the time management is a main factor to affect the outcomes of projects (Cho, 2000).

2) The core principles for implementation

On the other hand, the core principles of international educational cooperative projects through the performance model are as following.

First, common concerns and interests mainly motivate members of online learning community to build and maintain a team and affect the existence of the community and cooperative activities of members.

Second, taking positive and effective leadership is necessary for members to conduct and precede their activities under lasting direction and essentially prerequisite to construct and manage online learning communities at the early step.

Third, sharing the information of individual activities and projects strengthened the unity among members and enhanced mutual understanding. As a result, participants could get involved in key roles in implementing projects as online (Tuckman, 1965).

Forth, unifying the gate of various communications with members can guarantee effective conducts of projects as well as social interactions between participants. In the online environments, selections and efficient usages for creating meaningful dialogues within members are able to communicate deeper between them and it can be important step for forwarding construction of reliance and effective cooperation through this course (Holton, 2001).

Fifth, the meeting of face to face in the offline along with online activities speeds up the online

activities. Intelligent team leader and its members construct the opportunity of meeting of face to face within inside of the team in order to build up the online learning community functioning effectively (Hildreth and so on, 2000; Holton, 2001). Through this face to face meeting, members are having the opportunity to build up the unity and reliance to accelerate online activities.

Sixth, enhancing the understanding of the participants who have various linguistic and cultural backgrounds decreases the troubles in the communications and lack of understanding aroused by executing projects. In particular, the expansion of online educational environment can satisfy the requirements of international members (Holton, 2001). Therefore, it is needed to seek linguistic and cultural factors and their influences on the implementation of online-based international cooperative projects followed by strategies to minimize the effects of the above mentioned factors.

The process of performance model and activities of each step

As the second component, the process and activities at each step of the performance model are as following:

Table 1. *Process for Performance Model of International Education Cooperative Projects*

Process	Activities at each step	Components
Introducing and creating ideas	1. Creating ideas for projects 2. Publicizing ideas through the online	<ul style="list-style-type: none"> • Uploading contents at a menu of the online website, "ALCoB Proposal" • Uploading a project at a menu of the online website, "Group Info"
Team Building	1. Making a team 2. Forming rapport 3. Arousing interests and abilities of each person	<ul style="list-style-type: none"> • Registering team members at the online website • Gathering team members through domestic and international events(offline)
Selecting projects	1. Discussing ideas brought by each person 2. Proposing a project	<ul style="list-style-type: none"> • Finalizing the substance of each team project at offline events
Making and sharing the plan for execution	1. Setting up a rule for conducting projects 2. Role playing for participants	<ul style="list-style-type: none"> • Setting up a practical plan through offline events • Uploading a proposal at "ALCoB Proposal"
Executing projects	1. Conducting activities for projects by on/offline 2. Inspiring team members 3. Sharing and publicizing the outcomes of projects	<ul style="list-style-type: none"> • Using the menus of online workrooms: "Notice", "Learning ICT", "Working Together", "Best Practice", "Gallery", "ALCoB Messenger" on the online workrooms
Sharing outcomes of projects	1. Disseminating the final projects 2. Evaluating activities as offline 3. Concluding a project and proceeding follow-ups	<ul style="list-style-type: none"> • Using the menus of online workrooms: "Notice", "Learning ICT", "Working Together", "Best Practice", "Gallery", "ALCoB Messenger" on the online workrooms • Implementing next activities and sharing the outcomes of the projects at the international events (offline)

The steps and activities in the above table were derived from expert interviews and literature

reviews such as team learning theory (Senge, 1990; Dechant et al., 1993), a study on the pattern of development sequence in small groups (Tuckman, 1965), and a study related to the design of electronic performance support for team learning (Park, 2001). And the tentative plan was revised and completed after the first applying to international educational cooperative projects participating teachers and students in the APEC region.

Web-based supporting system for the performance model (Online workrooms)

Online workrooms (websites) for the effectiveness of communication among team members were the first component for the performance model made by the sysop's decision. Further specifications are as following:

First, we authorized the proponents to upload their proposals at the online workrooms (websites). Second, the medium of communication is English for team working with foreign participants except the occasions of difficulties in using English or unfavorable situations.

Therefore, all menus of websites are composed of bulletin board for sharing projects and activities and communicating with each other using data room or messenger.



Figure 1. *Web-based Supporting System for the Performance Model*

Results of Task II

As improving the performance model, the developed model was applied to the activities of team projects and then the reaction of the team members were analyzed to verify the performance model with the methods of observations of researchers, depth interview, survey, and all kinds of online contents.

For the verification, 126 ALCoB-Teachers consisting of 85 teachers from Korea and 41 from 11 economies participated in the application of the performance model.

According to the result of investigation, this study carried out main factors for completing the online-based ALCoB international educational cooperative projects from each step as follows: carrying out ideas and logics to make a participant interested in international educational cooperative projects at the first step, selecting members who have interests in promoting co-projects at the second step, compromising each member's different interest for one goal at the third step, figuring out members' capabilities and concluding the projects for practical activities at the fourth step, communicating with each other and learning together for achieving errorless projects at the fifth step, and strengthening teamwork for offline activities as well as online activities at the sixth step.

Additionally, a few suggestions were raised so as to make aggressive and dynamic activities of online-based international educational cooperative projects. First, all members should agree with and concern about project themes. Secondly, the information about the themes and members were needed to be extended to exterior groups (related organizations or institutes) as well as internal group members' activities. Third, strategies for keeping members participate constantly are required. Forth, a tool for efficient communication is one of essential factors of the activities like strengthening a sysop's authority. Fifth, driving force is necessary for members to participate in the project for self-development and capacity strengthening.

Conclusion

This paper researched for the cases which are applicable to classes in schools and in which members with different cultural backgrounds and characters work for international cooperation in education in accordance with their needs and concerns. In addition, this paper tried to develop the performance model and verify it after its application in order to support those activities.

Firstly, the performance model developed in this paper was required three components: principals for management and implementation of international educational cooperative activities, the process of the model and activities at each step, and the web-based supporting system for it.

For verifying the performance model, the study proceeded interviews with proponents (team leaders), surveys to collect participants' viewpoints, and analysis for the substance of the projects listed on the online website. In accordance with the outcomes of thorough this investigation, some suggestions of each step for implementing online-based "ALCoB" projects

were derived to support international educational cooperative activities.

Through analyzing online-based international educational cooperative projects, the meaning of this study is to present possibilities of an alternative model in international educational cooperation which still focuses on cultural exchanges and mutual collaborative learning through sharing members' experiences and interests.

Note

This paper is a summary of Ms. Lee, Ji-Yon's doctoral dissertation.

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Related Sites

1. <http://www.alcob.com> (Nov. 30, 2005)
2. http://www.alcob.com/new2/html/projects/projects_05_2nd.htm (Nov. 30, 2005)