

Strategies to Promote Students' Engagement in Web 2.0 Environment: Qualitative Approach from Korean Perspective for the Australia and Korea BRIDGE Project

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The purpose of this study is to propose strategies to promote students' participation in web 2.0 environment for the international collaborative project called BRIDGE (Building Relationships through Intercultural Dialogue and Growing Engagement) between Korean and Australian students. The BRIDGE is a project which was initiated and supported by Australian government for primary and secondary school students since 2009 in order to introduce Asia in Australia and Australia in Asia. BRIDGE used the web 2.0 wikispaces as the platform for students' online activities. This study used the 2011 activity for data collection which was done from the mid April to September of 2011. Total 16 teachers (8 pairs) of Australian and Korean schools and 446 students participated. Strategies for active engagements for the international collaborations require clear understanding the school culture and the school calendar (very specific information from schools and classes), governance over ICT policy (state governments as well as the schools), ownership of class activities for BRIDGE, and pedagogical strategies by schools and individual teachers. A model is suggested with activities by stages of executing BRIDGE.

Keywords: BRIDGE, Australia, Korea, web 2.0, online engagement, international collaboration

Introduction

There has been a various international collaborative activities using ICT (information communication technology) for education among primary and secondary school students. It seems natural to use ICT for their learning space as ICT can provide synchronous as well as asynchronous communication environment when communication is the important element to consider to overcome the time and location barriers. The second reason to use ICT for educational activities is that students who are digital natives would be motivated in using ICT for learning. But when the study was conducted, students and teachers are not as motivated as expected although some of commonly recognized motivational factors were employed. Thus, this study tried to suggest strategies how to promote teachers' and students' participation in web 2.0 environment for the international collaborative project called BRIDGE (Building Relationships through Intercultural Dialogue and Growing Engagement) between Korean and Australian primary and secondary high school students.

With the popularity of web 2.0 and smart technology, web 2.0 wikispaces is expected to create students' and teachers' active engagement as the platform for instructional interaction. The pre-assumption is that students will participate in using ICT for instructional activities actively as they do in popular SNS (social network system) spaces on web sites and applications on smart phones like Facebook, Kakao talk, and Naver blog. Yet this study showed digital native students were not as attentive as expectedly in using the ICT. It is needed to investigate why students and teachers are not participating actively and how to promote them to get engaged in the cyber instructional environment. This study tried to find first, how students are engaged in the international collaborative activities in using Wikispaces and secondly key difficulties to create low interactions, thirdly how to solve those difficulties. The purpose of this study is to suggest strategies to promote students' engagement for international collaborative activities in using web 2.0 space. This study was initiated to support the students learning through the BRIDGE (Building Relationships through Intercultural Dialogue and Growing Engagement) project between Australia and Korea students.

BRIDGE Project

Introduction for the BRIDGE Project

BRIDGE is the international project initiated by the Australian government during the leadership of Mr. Kevin Rudd (former Prime Minister of Australia) to promote Asian awareness to Australian society. During his regime, he emphasized the importance of Asia in Australian society and BRIDGE was initiated to promote the awareness of culture, society, history, relationships through education. The first country for the BRIDGE partner was Indonesia as Indonesia is the closest neighbor country and the country has a big influence in Australian society. BRIDGE emphasized teacher training twice a year: one in each country. Teachers from both countries are paired by school level and they plan and execute the activities together based on their plans. Teachers are invited to the host country to attend the one week long workshop and another week long home stay of the partner teacher's home and school. Teacher training is done first so that teachers in pair develop ideas about the students' activities until they meet again in the partner country hosts the next workshop.

Table 1. *BRIDGE Workshop Schedule*

Activity	Contents	venue
Teacher workshop 1	During the Korean teachers' vacation time One week: orientation Second week: home stay and school visit	Australia
Students' activities	Collaboration in wikispaces	Online/offline
Teacher workshop 2	During the Australian teachers' vacation time One week: orientation Second week: home stay and school visit	Korea
Students' activities	Collaboration in wikispaces	Online/offline

As the first BRIDGE project was evaluated as a successful model for international collaboration to promote ICT use in education and Asia awareness in Australia (http://www.asiaeducation.edu.au/teachers/bridge_school_partnerships/bridge_school_partnerships_landing_page.html), the BRIDGE model was considered to be implemented with other countries. The second country for BRIDGE was chosen Korea. Chungbuk National University in Korea and University of Melbourne in Australia had a long history of collaboration for the similar project, "teacher exchange" to promote students' collaboration in using ICT from primary and secondary schools since 1996. This project was conducted annually in Australia and Korea but it was the time to find other course of funding.

The new project BRIDGE has bought the ideas and the infra-structure for the teacher exchange project (<http://korea.bridge.wikispaces.net/>). As did earlier, the ERI (Educational Research Institute, the Chungbuk National University) and AEF (Asia Education Foundation, the University of Melbourne) conducted the BRIDGE as acting bodies.

School Selection

School selection process was done through governmental administrative line which means that AEF asked the help to choose schools through the ministry of education and the Australian embassy. The selecting school selection was based on the conditions: (1) regional educational board selects schools and support the BRIDGE project financially if possible, (2) school leaders should provide strong supports, (3) teacher workshop will be done in Australia and Korea, (4) instructional activities will use wikispaces in English. It turned out that Gyunggi and Daejeon educational boards participated. Gyunggi educational board could not support teachers' expense for travel financially but administrative matters were supported while Daejeon educational board could support the travel expense and provided administrative support also. Four schools from the Gyunggi region supported the expense from the school budget. The strong support from the school leaders was promised during the selection but in practice, it was interpreted differently in various contexts. Since it is the international collaboration, school leaders provided the ownership of the project to English teachers. All from 8 schools in Korea including primary schools are English teachers. Yet Australian teachers have diverse subject areas. Two primary schools, two junior

high schools and four senior high schools were selected and matched with the Australian schools by school level.

Teacher Preparation for the BRIDGE Project

The 8 Australian teachers and 8 Korean teachers were invited to participate in the workshop in Korea in April and in Australia in July-August for two weeks in order to promote BRIDGE activities. During the workshop, teachers learned digital literacy and develop ideas for ICT based collaboration activities for students.

For the international collaborative activities in the cyber space, 'Wikispaces' was used because it is easy to use and free web 2.0 space (Kim, K., Kim, S., Lee, I., & Kang, S., 2010; Kim, Y., & Jeong, H., 2010). But the Wikispaces required a few days of teacher training to understand the use and how to use the technology to promote curriculum related instructional activities. Teachers were paired and each team practiced how to use the wiki tools by developing their own web pages on Wikispaces and the plan for the collaboration.

Themes for the International Collaboration

Each team set their theme and activities for the students' international collaborative work as the following table (Table 2). Their activities were planned to do online and offline. They performed activities in Wikispaces as well as in offline like the exchange of flat travelers, culture boxes and letters through regular air mail (Figure 1). Teachers chose topics based on their curriculum and activities which can motivate students with something new, different culture and students' life. Teachers from each side have the full authority as far as the pedagogical activities are concerned.

Table 2. *Themes and Activities for BRIDGE 2011*

Partner Number	Nationality	Name of School	Theme	Activities
1	Australia	Rosedale State School	1:1 Penpal friend	Writing letters Powerpoint materials
	Korea	Daejeon Gao Elementary School		
2	Australia	Jindalee State School	We're Travelers!	Exchanging flat travelers writing letters
	Korea	Daejeon Moksang Elementary School		
3	Australia	Wynnum State High School	Business and cultural proposal guide book	KWL charts Sharing photos e-pal matching
	Korea	Suwon Foreign Language High School		
4	Australia	Eventon Park State High School	It's Iconic, The cooking Show	Flat travelers Exchanging culture boxes
	Korea	Daejeon Maebong Middle School		
5	Australia	Indooroopilly State High School	Exchanging Diaries	Introducing best place to visit (Information materials)
	Korea	Dongtan Global High School		
6	Australia	Bribie Island State School	People patterns	Group Brainstorming Knowledge hunt
	Korea	Deaseong Middle School		
7	Australia	Bremer State High School	Cultural Exchanging between Korea and Australia	Sharing photos Exchanging culture boxes
	Korea	Sungnam Foreign Language High School		
8	Australia	Mitchelton State High School	Exchanging Food Culture and Culture Box	Exchanging culture boxes Making films
	Korea	Goyang Global High School		



Figure 1. Example of off line activities: students' letters

Even each team have the freedom to choose a theme but most of them chose themes related to cultural understanding between Australia and Korea. Teachers plan the instructional activities for the first and second semester collaboratively. This planning was done through face to face workshops and deployed during the semester. The workshop is held in Australia when Korean schools have vacation and in Korean when Australian schools have vacation. The home stay and school visit during the visit to the host country give opportunity to teachers to meet students in the class doing the BRIDGE activities. Students and teachers could get engaged more through the physical contact.

Data Collection and Interpretation

Total 16 teachers and 446 students from Korea and Australia participated in this study. Data was collected through the Wikispaces of teachers and students' interaction and participation. Informal focus group interview were done for educational board officers and teachers. The semi structured questionnaire was made and used through e-mail, phone interview and in face to face meeting.

In order to investigate the reason for the low participation from the students and teachers, the semi structured questionnaire is made and used through e-mail, phone interview and face to face meeting.

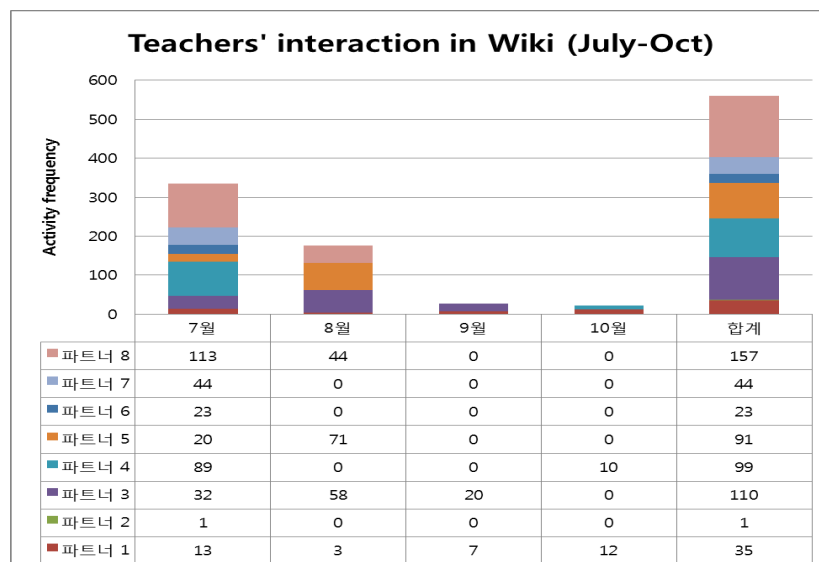


Figure 2. Teachers interaction

In order to investigate the reason for the low participation from the students and teachers, the semi structured questionnaire is made and used through e-mail, phone interview and face to face meeting. Data to show the interaction in the cyber space was collected from the Wikispaces. The number of interaction shown from the Wikispaces was interesting: in total 560 interactions from teachers and 448 interactions from students. Considering the population size, 16 teachers made more interactions than 446 students. It means that teachers use the Wikispaces far more than students. Teachers usually had interaction evenly through the semester yet teachers from number 3 and number 8 high schools had much more interactions in the cyber space and it led to the students use also, that is students from 3 and 8 schools had the dominant interactions. This data shows that teachers' preference of using digital technology influence to students' use directly. Teachers from 1,2,5,7 did not have active use and the students from this school had no Wikispaces interaction use (Figure 2 and 3).

The number of interaction frequencies varies dramatically according to the months and by school. When school have events, the interaction rate was low. Also, the primary schools prefer to conduct instructional activities through offline. For small kids, using English and the new digital technology at the same time was a big burden which requires a lot of teacher's support. Thus teachers preferred off line activities to draw students' engagement in easier way.

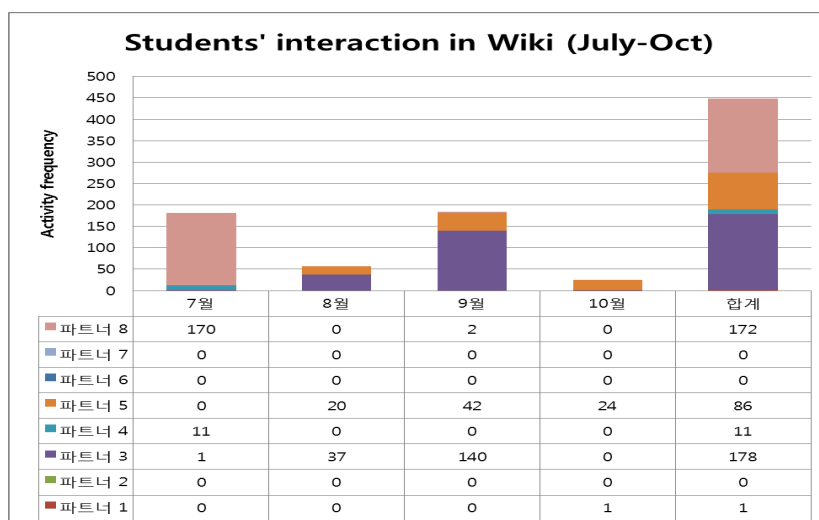


Figure 3. Students interaction

However the low frequency rate of the interaction by students does not mean necessarily low interaction, thus most of materials uploaded in the Wikispaces were done by teachers and also primary school students used a lot of off line activities, Students participated in the activities through offline and teachers used individual e-mails often which the wikispaces does not show the individual e-mail correspondents.

Teachers and students used more diverse communication means than just Wikispaces. They prefer to use digital tools that they are familiar with, although Web 2.0 space Wikispaces was not intuitive for them to use. They do not see the value of using it when not many other peer groups use it. In order to provide meaningful technology platform, it is more important to give meaningful instructional tasks to them, more authentic and more suitable in their contexts.

It is a task that what kind of functions digital environment should be provided to meet the needs from the teachers and students. They prefer to use digital tools that they are familiar with, although Wikispaces were introduced with training. It is necessary to understand how to embed the popular sites digital natives use seamlessly with the wikispaces. Web 2.0 environment does not promote students' engagement by virtue of its own web 2.0 technology. It needs genuinely meaningful and fun instructional activities.

Barriers to International Online Collaboration

The barriers of BRIDGE participation were collected in November by semi structured questionnaire from the Korean teachers and staff of the education board. The questionnaire used three sections: 1.

Participating schools' culture (how the school leadership was governed, who has the ownership of the project?, support from the peer group, recognition from the authority, type of school and number of students for the school and for the BRIDGE project, school location, theme, schedule for the activities), 2. Teachers' response toward workshop contents: strength and weak points, suggestions for the next time, activities during the home stay schedule, good points for the professional growth, 3. Activities on Wikispaces (activities done as planned?, otherwise, why?, how can students become engaged more?). Those questionnaires are qualitatively conducted.

First barrier is technology problem. Major barrier for the international collaboration was the technical problem. Teachers are not familiar with the technology Wikispaces, teachers do not know how to use Wikispaces enough to lead the class activities. It is also school policy: some Australian schools do not allow students to access to Social Network Service such as Facebook or Twitter at school in schools so that the instructional activities using the Wikispaces were not possible until the school allows its access. It is not only school policy problem. Some schools in Australia did not match the technology access to Korean schools (computers and network speed). Some Australian schools do not allow individual students to use e-mail individually for security reason. It is quite different culture in Korean schools: students can access to Social Network. It is something that Korean teachers did not expect.

Also, the skills for the multimedia development became the barrier. Korean students are far more exposed to develop various forms of multi-media information. The knowledge skills to use of Wikispaces for teachers and students are limited in both sides but they have their own tools to create and edit multimedia so that as long as it is allowed to use gadgets in Wikispaces, it is expected that students can be motivated more. One noticeable phenomenon is that those students who are known as digital natives are not familiar with using technology as expected. They are only mostly simple consumers of technology, rather than being information generator even at a simple level.

Second barrier is the time factor: as usual, shortage of time for the preparation. All the Korean teachers participated in are English teachers. It means that they have a lot of other jobs to do at school as it is usually the case that English teachers have heavy teaching load as well as other duties at school. Due to their heavy burden, they can not concentrate on the BRIDGE project solely. English teachers could not find time to prepare online activities since the BRIDGE project was started from April which means that the semester has already started and BRIDGE program has to be imbedded in some slot in the school activities. Once the plan for the whole year of the school is done, it is difficult to find time or class for the BRIDGE activities. Therefore, some Korean schools use after school class, or extra curricular class. It seems that Korean schools have more problem with the class time arrangement than Australian schools.

Third barrier is the English language skill level. For Korean students, using English is not easy task as they learn the language only for a short time. It means their activities are heavily rely on English teacher's help. To English teachers, it becomes a burden. As a result of it, teachers do not promote students' participating in Wikispaces activities as much as they should have. The imbalance of English skills between Korean and Australian students create serious imbalance of the textual contents. It is wise to add non textual form of information such as image, graphics, pictures, music if possible. Activities should not be limited by language barrier, yet it can be overcome by creative work.

Fourth barrier is lack of understanding the different school calendar. Many Australian schools have different academic calendar and schools are operated differently. Sometimes, Korean schools can not understand neither can not expect. For example, Australian teachers were on holidays in May for 4 weeks, and Korean teachers were busy in May for mid-term exam. As a consequence, they couldn't communicate with each other very well but did not know why the other partner teacher did not respond. It then made the teacher lose the motivation to correspond. Schools have their own agenda and it has to be known ahead before the BRIDGE project starts so that teachers can expect what is expected.

Fifth is the recognition from the school community is low. BRIDGE teachers took the responsibility with the understanding that the school leader provide full support. It includes that BRIDGE is the school project to be recognized and praised by the colleague teachers. Teachers who participated in the BRIDGE gets the opportunity to visit the partner country and the school and the school community takes it as a benefit to those English teachers. The time and efforts from the English teachers are not counted as extra efforts. Also the cost for activities in school for BRIDGE is not well covered by the school level as other peer group thinks the cost should be borne by the individual participating teacher. Although it is the school activity, the cost for running the BRIDGE activity was not covered by the school. There were differences of view points toward the BRIDGE activity in schools. The BRIDGE activities should be considered as a regular school activity thus those activities need to be included as a part of the regular

school calendar. Recognition and rewarding for the school leadership are necessary in order to build the culture of mutual support amongst teachers.

Suggestions for the Strategies

Based on the barriers found from the survey and interviews, suggestions are made for each stake holders like teachers, students, and policy making staff.

Table 3. *Strategies by Activity Stages*

Stages	Recommendations for strategies
School selection	<ul style="list-style-type: none"> Find schools with strong school leadership in one semester ahead Select schools with enthusiastic teachers in one semester ahead Prefer teachers of diverse subject areas Rearrange the teaching load for those teachers Allocate the bridge class and authorize it officially by the school leadership
First PD (host country)	<ul style="list-style-type: none"> Making social bond with the partner Understanding the school culture, curriculum and pedagogical difference Digital literacy (wikispaces, multi-media tools) Creating cyber space in wikispaces with the partner teacher Selecting a theme/s for the international collaboration Planning for activities according to their own school academic calendar (matching the schedule) Support the travel expense for the teacher of the international collaboration
First home stay (Host country)	<ul style="list-style-type: none"> Room and board supply for the partner school teacher School visit and conduct classes (2-3) at the host school teacher's bridge class Activities with participating teachers of the host country Support the expense for the home stay
Online activities	<ul style="list-style-type: none"> Conduct activities as planned Provide a regular class hour activity Digital literacy to students (wikispaces, multimedia tools, collaboration tool etc) Create creative materials and upload in the wikispaces Promote active participation Keep the calendar on time Lead the communication with the partner school teacher and students if they are not active
Off line activities	<ul style="list-style-type: none"> Discuss ideas with students and teacher from the partner school Letter exchange, culture box, flat travelers etc
Second PD (partner country)	<ul style="list-style-type: none"> Reflect activities online Reflect activities offline Find the students' and teacher's engagement for the theme Readjust the schedule by the school calendar Reassure the social bond with the partner teachers
Second home stay (partner country)	<ul style="list-style-type: none"> Conduct 2-3 hour classes for the partner teacher's BRIDGE classes Developing understanding and relationship with the partner school students
Online activities	<ul style="list-style-type: none"> Conduct updated instructional activities Increase active instructional activities through the social bond developed during the visit to the partner school Promote use of wikispaces, msn, or skype other web 2.0
Off line activities	<ul style="list-style-type: none"> Conduct the updated plan Decrease activities and promote to use more cyber space Upload the product from the off line activities to lead the students' active participation
Evaluation	<ul style="list-style-type: none"> Reflect activities by stages, by roles of teachers, students, and school leaders Find ways to have sustainability of the bridge project

The suggestions for activities to major stakeholders are listed by stages of BRIDGE project. The first stage is school selection, the second stage is the first cycle of the workshop (teacher professional development and home stay) and students' activities. The same cycle will be run after the first semester.

During the first professional development, school calendar has to be announced with details so that the BRIDGE activities can be planned and embedded as a part of the school activity. It is crucial to find proper class time so that teachers and students can enjoy the activities as a part of their legitimate activity which can lead to the blessing from the school leadership. Most of all, the key to the success is the trust among teachers from the host school and partner school. It is crucial to create the social bond in that context thus the school visit and home stay need to be handled with more careful plan. It is the optimal time to get to know each other personally and professionally so that the home stay experience can generate more productive plan for the instructional activities among them and their students. It is obvious the success of the project rely on the teachers' performance, their acceptance of this project. It is also highly recommended to conduct online activities as well as off line activities. It is proven that off line activities motivated students and gave them the sense of communicating highly. It is particularly important to students at lower grades. Students are the primary school enjoyed the hands on experience of making flat traveler's experience, storytelling letters, drawings, etc.

Conclusion

BRIDGE project has been an effective model for Asian Education in Australia and this model was embedded in Korea and Australia educational collaboration.

Table 4. *Recommendations for Institutions by Activity Stages*

Preparation	<ul style="list-style-type: none"> • Select participating schools before the new semester starts • Selection of schools should consider school levels to match with the partner schools • Distribute budget and authority of consulting to participating schools and consulting institutions • Provide contact numbers and personnels of the participating schools through the institutions in each country • Plan and prepare for the workshop for teachers • Provide arrangements for the accommodation and meals for the partner school teachers • Manual development for the use of ict in education • Provide cultural experience program
First PD (host country)	<ul style="list-style-type: none"> • Conduct ICT use in education program • Cultural experience program
Home stay (host country)	<ul style="list-style-type: none"> • Monitor the program at the host school during the home stay period • Support the teachers from host country and partner country
Online international activities	<ul style="list-style-type: none"> • Constant monitoring of the online activities and technical support • Developing database with the instructional activities collected from the monitoring
Offline international activities	<ul style="list-style-type: none"> • Monitoring the off line activities and e-mail or telephone contacts • Developing database with the instructional activities collected from the monitoring
Second PD (partner country)	<ul style="list-style-type: none"> • Plan the workshop for the use of ICT in education and home stay schedule • Support the expense for the teachers to participate
Second Home stay (partner country)	<ul style="list-style-type: none"> • Monitor the partner school program during the home stay period • Monitor teachers from host school and partner school
Online & Offline international collaboration	<ul style="list-style-type: none"> • Repetition
Evaluation	<ul style="list-style-type: none"> • Reflect the online and off line activities in the database and develop suggestions • Collect survey to participating teachers and students • Implement the ideas from teachers and students to the next bridge program

This study investigated the ICT in education in 2011 between the 8 pairs of schools (2 primary, 2 primary and four high schools) for 5 months. From survey, in-depth interview and frequency and content analysis, the study suggest a model for activities by stages of the project.

In order to make this study successful, there are recommendations which show the support for such international collaboration required multi facet dimensional support. For participating schools, the support from the school leadership should come in various ways but mainly in the form of time and resource allocation. Participating host school and partner schools first of all need to recognize the BRIDGE program as a part the school activity. The school leader should support the teacher and students which requires more resources than other regular activities for the international collaboration.

For supporting institutions like the Educational Research Institute at the Chungbuk National University and Asia Education Foundation at the University of Melbourne require resources to support ongoing consulting to those participating schools. The Daejeon Board of education in Korea supported Korean teachers travel expense but the other did not. The support in the Australian Queensland board of education has also different support from Korean board of education. For the governmental level, it is all different depending on the regional educational governor or regional minister of education. It was noticed that the support for the on-going consulting to the schools are vital for success.

The sustainability of the project is another big challenge. Those schools in 2011, the on-going support was not included but for the success of the project, it is highly recommended to provide on-going consulting support is inevitable.

Conclusion

In education, ICT can provide many advantages. It can overcome time and space limits which exist in traditional classrooms, provide new information to students and teachers immediately and constantly, support students' with rich authentic materials which can lead to the authentic learning experience, individualized study and cooperation working environment, and more. Educators pay attention to the potential of ICT in education and this BRIDGE project is one of them. Educator in Australia and Korea collaborated to make the use of the ICT for the international project. Through this study, the digital native students do not participate in the educational activities automatically and they are as well equipped with using the digital technology as expected.

It is clear that educating students with digital literacy and providing well organized instructional plan can lead them to active participation in the instructional activities. It was also found that as Lee and Lim (2003), Jenkins (2006, 2009) and White (2009) already mentioned, social bond among participating teachers and students are the basis for the successful international collaboration project.

Those barriers found during the project can be solved through careful plan by stages and negotiations among participating institutions with careful details.

This suggestion can lead to building a model for the successful international collaboration in the web 2.0 space in Korea. It remains the further study that the comparison of the suggestions from this study can be applicable in other countries like Indonesia and China where currently the BRIDGE program are in action in more massive scale. It will be interesting whether the model can be applicable in different educational culture of Indonesia and China.

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