Integrating English Learning Activities into Campus Culture

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Abstract—With the diversity of mobile devices, learning is no longer confined to the classroom. Mobile devices can seamlessly link formal and informal learning and provide a learning environment for teaching and learning that could improve students’ learning achievement. Also, in recent years, foreign education experts who come to China for visiting primary and middle schools and studying campus culture have increased dramatically. As beneficiaries of campus culture, students are enthusiastic about building campus culture. As individual knowledge building is unreasonable and imperfect to some extent, and student studying and living in campus is not existence in the form of a separate individual but as a member of the group to grow up through the communication and cooperation with others. The collaborative building learning style is helpful to individual knowledge construction. Therefore, from the perspective of combining formal and informal learning environments, this paper proposes a new approach to building a seamless learning environment by adopting the learning method of collaborative knowledge building in campus. By using the context-awareness function of tablet PCs, students can create a seamless learning space by adopting the collaborative knowledge-construction. This research applied both quantitative and qualitative analysis to investigate the impact of a seamless learning environment on the interest in learning English, campus identity, campus awareness, collaborative knowledge-building methods, and technology acceptance of primary school students.

Index Terms— Campus culture, Collaborative knowledge building, English learning, Seamless learning

I. INTRODUCTION

Nowadays, an increasingly number of subjects began to build context awareness seamless learning space and design seamless learning activities for students to learn in the scenarios. In biology, Gwo-Jen Hwang built the seamless learning space in butterfly ecology garden which improved the students’ mastery of the basic knowledge about butterfly ecology[1]. In science class, students visited and learnt in the science park in seamless environment that improved the students’ learning achievements[2]. Making the best use of resources and environment in campus, T.-Y. Liu built the seamless learning environment in campus that improved students’ English achievement of listening, speaking and writing[3].

As these researches above, seamless learning space was built by the researchers while students can learn in real world by using the seamless learning method. However, students’ learning process is not only a simple process of knowledge transmission but also a meaningful process of active constructing. Being a part of campus where students learn and live, they could take part in building seamless learning space in campus as well. Through the process of building, their degree of participation could be enhanced and the learning interest could be strengthened consequently. As individual knowledge building are unreasonable and imperfect to some extent, and student studying and living in campus is not existence in the form of a separate individual but as a member of the group to grow up through the communication and cooperation with others. So, Seah and Toh put forward the collaborative learning method to help the student build the individual knowledge[4]. Besides, Scardamalia and Bereiter designed a guiding learning environment to help the pupils build the knowledge under the guidance from external environment[5].

Therefore, this paper proposes a new approach that is building a seamless learning environment by adopting the learning method of collaborative knowledge building in campus to build a campus culture in English so as to investigate the impact of a seamless learning environment on the interest in learning English, campus identity, campus awareness, collaborative knowledge-building methods, and technology acceptance of primary school students.

II. LITERATURE REVIEW

A. Mobile Assisted Language Learning

With development of the mobile devices, Mobile assisted language learning (MALL) provides a new thought for language learning. In addition to the independence of space and time to the mobility of mobile

device itself[6], mobile devices can still provide as a communication medium to let students and teachers communicate timely with each other in two-way[7], and can promote the learner centered learning approach and personalized learning process[8]. In the mobile assisted language learning environment, forming a collaborative learning style among students and connecting formal and informal learning activities seamlessly become much more convenient[9]. The acquisition of a foreign language must be based on large amount of the input in the class learning and output outside the classroom practice to the target language. Students can use mobile devices which provides language learning environment to practice language after class to make up for the deficiency of formal learning in the classroom teaching[10].

B. English Learning in the Seamless Learning Environment

Many researchers built the seamless learning environment or designed the seamless learning system to promote the second language learning. The assisted language learning environment which combined the TVs and mobile phones allows the learners to do the informal language learning. This system can support the learners' language learning effectively and let learners obtain the cultural knowledge as well[11]. In order to perceive the position of the learners constantly, Ogata Hiroaki and Yoneo Yano designed knowledge perception map system that could perceive the position of the learners and provide corresponding learning content to learners while learners could go to many places on the system to learn different kind of English knowledge according to the different places. They also design a seamless learning space that can sense surroundings' position by scanning RFID tag to learn the location in English[12]. Tsung-Yu Liu designed an English learning system which using handheld devices to improve the English enthusiasm and learning achievement in different situation in campus[13].

Those researchers had focused on the advantages of inter-scenario and learners’ real situations perception in the seamless learning space that provide the informal learning opportunities to learners in scenarios. However, characteristics of the seamless combination of formal and informal learning and the learning community are ignored in the seamless learning.

C. Summary

As shown in Fig. 1, mobile assisted language learning, seamless learning and collaborative knowledge building are correlative. Above the related cases, the study of seamless learning are almost from the perspective of context-awareness and researchers utilize the mobile devices' position recognition technology, such as RFID to get students specific geographical location, then push the learning resources that meet the learner need according to their location. Most of the researchers just focus on making seamless learning in informal learning environment, while ignoring the seamless connection between the formal learning and informal learning environment. Furthermore, the close relationship between seamless learning and collaborative knowledge building is ignored as well.

Certainly, it’s not enough to only building the seamless learning space and using collaborative knowledge construction way to learn, but also need to determine which theme the learners construct in the seamless learning activity. Seamless learning emphasizes the combination of formal and informal learning – In weekdays, students have classes in the classroom and doing sports out of the classroom. That is to say, campus is a very suitable place to be the seamless learning environment where students could acquire knowledge formally and informally. Meanwhile, the campus culture has a great influence on English teaching and learning. Therefore, this paper proposes a new approach that combines formal learning and informal learning to build a seamless learning environment by adopting the learning method of collaborative knowledge building in campus. Students who are in the seamless learning environment could create the campus culture in English. Ultimately, this study applied quantitative and qualitative analysis to investigate the impact of a seamless learning environment on the interest in learning English, campus identity, campus awareness, collaborative knowledge-building methods, and technology acceptance of primary school students.
III. RESEARCH DESIGN

A. Participants
Students who are in sixth grade from a primary school in Chengdu province, China will use English to build campus culture in the seamless learning activity in campus.

B. Equipments
Every participant is equipped with a tablet PC which is provided by the experimental school. In addition, wireless network has been covered in the whole school. The learning platform for the collaborative construction is Learning Cell platform (http://lcell.bnu.edu.cn). Students can use the tablet PC to connect wireless network and log in Learning Cell platform to do the seamless learning, as shown in Fig. 2.

Taking the experimental school as an example, there are a lot of representative campus culture spots in campus, such as students own cooking kitchen, printmaking exhibition wall, and claiming plants garden. Students can use tablet PC to scan each QR codes of corresponding campus culture spot in order to get to know more about the campus culture then use English to build the illustration webpage of campus culture collaboratively on the Learning Cell platform, as shown in Fig. 3.

C. Period
The study’s period would last for eight weeks that can be divided into three stages. The first stage is the first week-- students receive technology training and experience the use of technology preliminarily. From the second week to the sixth week, students would communicate with each other, look for information and understand the campus culture in the form of collaborative building through text, picture, music, scenario playlet videos to demonstrate class characteristic culture e-posters and campus culture webpage in class and after class. In the seventh week, students would form the e-map of campus culture and use it to tour to know more about campus culture. The last week is the eighth week-- students would have a test about their understanding towards the campus culture by game.

D. Methods
This study adopted the quasi-experimental research method of pretest and post-test in the single group. All the participants would get a pretest firstly (O₁ in Table I). Then receive the treatment (X in Table II) which means providing seamless learning environment in this study and students will use English to build the campus culture collaboratively. Finally, measure the dependent variable after the seamless learning activity (O₂ in Table III) and compare the data of the pretest and post-test to make the conclusion, as shown in Table I.

The method of questionnaire and interview will be taken in the pretest and the post-test to investigate the impact of a seamless learning environment on the interest in learning English, campus identity, campus awareness, collaborative knowledge-building methods, and technology acceptance of primary school students. Meanwhile, interview the outstanding performers in the experiment to further analyze the process of collaborative building in the seamless learning environment.

E. Process
In the process of experiment, the researcher only provides support of technology, and platform to participants, such as Learning Cell platform and digital learning resources. Participants need to build learning content collaboratively according to their own thoughts. The experiment process can be divided into nine steps, respectively are perception, experience, building, modification, creation, performance, achievement, guidance and test.

The first step is perception. First of all, students accept the pretest about their interest in learning English, campus identity, campus awareness, collaborative knowledge-building methods, and technology acceptance. Meanwhile, interview the outstanding performers in the experiment to further analyze the process of collaborative building in the seamless learning environment.

Table IV THE QUASI-EXPERIMENTAL RESEARCH DESIGN OF PRETEST AND POST-TEST

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<td>experimental group</td>
<td>O₁</td>
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Figure 2 The composition of seamless learning space

Figure 3 Building the campus culture spots in seamless learning environment
could scan QR code they received to perceive the fun of QR code.

The second step is experience. Students collect the text, pictures, music and video in English version. Then use the Learning Cell platform to create the class characteristic culture e-poster and eventually form the corresponding QR code to experience the use of technology in order to lay the foundation of building campus culture in English.

The third step is building. Students firstly use tablet PC to learn the introductions and short passages created by the researcher together with the English teacher and are related to the 10 campus culture spots. Then, students are in the form of group to choose 1 of 10 campus culture spots to build collaboratively according to the group’s interest. Every campus culture spot just can be chosen by only one group. Group members could ask teachers or students to collect information such as texts and images about the campus culture spot and present group’s achievement on Learning Cell platform in English. After building the campus culture in groups, it’s turn to cooperate among groups. One group (called Group A) create a culture spot webpage, another group (called Group B) should improve and modify the webpage that created by the other group (Group A). After repeating 9 rounds of building among groups, 10 English webpages which represent 10 campus culture spots have been formed that all groups reach an agreement.

Modification is the fourth step. As the age of participants are still too young to ensure the accuracy of campus culture introduction webpage in English, teacher need to point out the mistake of English information and give suggestions to improve. The group who charge of the corresponding campus culture spot should revise the mistake. Then students among groups should do cross checking to form the campus culture spots introduction pages in English which have been recognized by both students and the teacher.

Script creation is the fifth step. Each group should create English script of scenario playlet according to campus culture spot the group chose in the third step in English class. Students need to create English scenario playlet and form a script that would be perfected by the researchers and the English teacher.

Performance is the sixth step. Students perform in groups according to the modified scripts, use tablet to record what they act, and then upload the video to the campus culture introduction webpage they built before.

Forming achievement is the seventh stage. The researcher generate the QR code that represent each final version of corresponding campus culture spot’s webpage and push to the corresponding groups’ tablet PC. Each group puts the QR code on the electronic campus map to eventually create the electronic campus culture guidance map.

The eighth stage is guidance. Each QR code is pasted to the corresponding culture spot in campus as well. Under the guidance of electronic campus culture guidance map, students can scan the QR code (which on e-map or actual QR code that pasted on actual culture spot) to learn the relevant knowledge from 10 webpages that the students create on the platform in actual situation.

Taking test through the game is the ninth step. Integrating game into English teaching and learning can promote the students’ interest in English learning and knowledge acquisition. Students play a game to detect the master degree of relevant knowledge to 10 campus culture spots. Firstly, students scan the QR code pasted on the gate of the campus. The QR code would push a campus culture question in English to the student randomly. After answering correctly, the student could go to the right answer’s culture spot then scan its QR code to answer the next question. After the game, a questionnaire and interview are given to the student.

Fig. 4 shows the corresponding specific implementation process and time allocation of activity design steps.

Collaborative building process among students is divided into formal learning in the classroom and informal learning based on the Learning Cell platform.

In the process of collaborative knowledge building in formal learning, firstly the whole class use the technology they learn in previous step and build collaboratively to create a class characteristic e-poster which can help students learn from and help with each other. Then, students write down the English scenario playlet scripts and act them out forming to the videos in groups in the way of collaborative knowledge building.

Informal learning in collaborative knowledge building based on the Learning Cell platform which is consist of a lots of learning cells that has the characteristics of the evolution and development that allows students to build, modify and perfect the content of learning cell collaboratively and generate new version of learning cell. In the Learning Cell platform, every version of the learning cell is matched with a corresponding QR code. Students can modify and perfect the learning cell that create by other students through the way of collaborative building, and eventually generate a QR code which is recognized by every collaborator.

Specifically, firstly students need to learn every campus culture spot’s introduction and the related English short stories that teacher create. Then, the first group makes a free choice of campus culture spot to build the first English guiding introduction and generate a corresponding learning cell and QR code. After that, on the basis of the first version of learning cell, the second group modifies, perfect and generates the second version of the learning cell, then the third group improve the learning cell again, and so on. Within the building process in groups and among groups, the final version of QR code and the campus culture introduction webpage that is modified and approved by all groups eventually formed. Fig. 5 shows the collaborative knowledge building process based on the learning cell platform.

F. Instruments

Pretest and post-test are adopted to investigate the impact of a seamless learning environment on the interest in learning English, campus identity, campus awareness, collaborative knowledge-building methods, and technology acceptance of primary school students.

There are 23 questions in the 5 - point Likert scale questionnaires to test the interest in learning English, campus identity, campus awareness, technology acceptance and the collaborative knowledge building satisfaction.

The questionnaires of the post-test are almost as the same as the pretest one. What different is that activity attitude and open questions associated with this
experiment are added into post-test questionnaire, a total of 33 items. And the outline of interview includes 10 questions focusing on the experience and opinions of the seamless learning and the collaborative knowledge building.

IV. FUTURE WORKS

As this proposal is only a seamless learning activity design, a lot of work need to be done in the future. An English teacher will be selected who is willing to participate in the experiment and design the teaching plans and materials with the researchers collaboratively. A pilot study will be carried out before the formal experiment in order to find out what need to be improved and make the corresponding adjustment to the formal experiment design to reach the experiment target in the real sense.
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*Figure 4 The mainly process of the experiment*
Figure 5 The process of collaborative knowledge building on the Learning Cell platform

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