The influence of an online virtual situated environment on a Chinese learning community

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Abstract: This study used an online virtual environment to create and develop a Chinese learning community. The purposes of research were (1) to enhance the Chinese learners' oral Chinese communication skills and (2) to change the community members' Chinese speaking and teaching behavior. This is an action research. The research tried to create a community in a virtual environment. The research results showed that (1) a virtual community can enhance learner's Chinese competence, and (2) future Chinese teachers' instructional and leading skills can be developed in a virtual community situation.

Keywords: Community; Chinese communication skills; Virtual environment

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1. Introduction

Learning Chinese atmosphere has been blooming. One reason is that Chinese population still remains the world's largest group, another is that the Chinese economic has developed and grown in the world trade (Graddol, 2004). Graddol (2004) has forecasted that by 2050, Chinese will become the world's largest and most important language. As more people want to learn Chinese, Chinese instructions has bloomed and developed. Current Chinese instructions follows three major types, they are: Chinese language school, private Chinese school, and clam school.

It is difficult for Chinese as a second language learner to access the Chinese resource in non-Chinese speaking countries. These learners cannot find the opportunities to interact with others, and do not have many chances to revise and adjust their Chinese speaking (Xin, 2001).

If we can put Chinese learning materials in a distance learning environments, Chinese learners will be able to find learning recourses in non-Chinese speaking countries. However, other challenges may arise. One such problem is that it is difficult to provide learning community and real life experiences within a distance learning environment. For example, many students cannot find classmates and peers, and learners may have trouble applying their learning into real life situations.

Many distance learning environments have been developed, and many of them are in a virtual environment. According to many studies (Au, 2008; Ruberg, Cummings, Piecka, Ruckman, & Seward, 2011), virtual environments can provide a learning community and virtual experiences. However, many communities in virtual environment are related to personal interests, such as music, sports, and so on *(*Johnson, Corazzini, & Shaw, 2011*)*. There are few language learning communities. If we can implement this community idea into language learning, we may be able to provide a learning community and real life experiences in a distance learning environment.

The researchers assume that distance and virtual learning environment can provide the needs for Chinese learning's market. If appropriate language is inputted into a situation, language acquisition can occur (Krashen, 1985). The researchers assume that language acquisition can be natural and innate, and that learning may occur in a situational context.

Therefore, the research followed situated learning theory to provide an open, epistemic and scaffolding learning community in a virtual environment. The objectives of this study were as follows:

(1) To observe whether the community helped the Chinese learners enhance their oral Chinese communication skills.

(2) To observe changes in the community members' Chinese speaking and teaching behaviors.

2. The theoretical framework

According to the study objectives, two theoretical frameworks were followed: language acquisition and situated learning.

2.1. Language acquisition

In order to define "language acquisition", we need to clarify the differences between "learning" and "acquisition". According to Brown (1973), "learning" happens when students have awareness, whereas "acquisition" is an unconsciousness and autonomous process. Language acquisition happens when people acquire language in an unconsciousness and automatic process (Brown, 1973).

There are several different theories of language acquisition (Table 1).

Table 1
Different belief on Language acquisition

Theory	Belief on language acquisition
Behaviourism	Language can be acquired by stimuli, reinforcement, and operation (Skinner, 1945).
Cognitivism	Language acquisition goes through the meaningful inquisition process. Learners would revise their intrinsic language until their oral presentation can fit the external environment (Piaget, 1926).
Humanism	Language acquisition is entirely innate. Language learning is the potential of human development; it is a spontaneous progress (Chomsky, 1993).
Social constructionism	Society itself provides the language experience; the society can scaffold learners' language and thought (Xie, 2001).

According the statement above, many scholars believe that language acquisition is an innate and social process (Chomsky, 1993; Xin, 2001). Language acquisition is like the concept of i+1. If appropriate language is inputted into a situation, language acquisition can occur (Krashen, 1985). The researchers assume that language acquisition can be natural and innate, and that learning may occur in a situational context. Therefore, the study would need to follow situated learning theory.

2.2. Situated learning theory

Situated learning theory states that knowledge comes from situation and interaction (Lave & Wenger, 1991; Schön, 1987; Suchmon, 1987). There are different perspectives of situated learning (Table 2).

Table 2
Perspectives of situated learning

Perspectives	Related terms
Specialized situations have distinctive quality and the instability; therefore, the instructors or educational workers need to make decision in the practical situation (Schön, 1987).	Knowing in action, reflection in action, reflection on action, and reflective practicum (Schön, 1987).
Knowledge cannot occur alone without any situation. If the knowledge is not related to the situation, the knowledge itself would become obscure and lacking details or specifics (Suchmon, 1987).	Situated action (Suchmon, 1987).
Learning can go through situation to be practical and reflective, but it is more important to have the community in the situation (Lave & Wenger, 1991).	Community of practice, legitimate peripheral participation, and apprenticeship (Lave & Wenger, 1991).

According to the statements, situated learning theory follows two learning principles. First, knowledge comes with situation. Second, learning can occur through interaction. We assume that learning can occur in a situated and community content. Therefore, we want to develop a virtual Chinese learning community in Second Life to help these learners learn Chinese.

3. Research questions

In order to clarify our purposes of the researches, here are the research questions:

(1) Can we use a virtual environment to enhance Chinese learners' communication skills?

(2) Can we use a virtual environment to provide community-communication?

4. Research design

According to the research questions, we would address the research in two ways of students' needs. One is students' communication skills; another students' virtual experiences. How can we develop a Chinese community to help students enhance their communication and virtual experiences?

4.1. Participants

Chinese learning community created for this study included two groups: a core members group and a peripheral members group. There were total of five core members and four peripheral members.

The core members were future Chinese teachers in Taiwan and most were the universities students who studying Chinese language education. The researcher was also

a core member, and she is a doctoral student in curriculum and instruction, and she has certificates of Chinese teacher in Taiwan.

The peripheral members were Chinese learners. These learners came from different countries including, Japan, America, and Canada. All of these Chinese learners were volunteers to join the class. Before all the peripheral members joined the community, we had tested their Chinese level, students' Chinese levels were considered as basic to intermediate level (Test materials followed TOP: http://www.sc-top.org.tw/).

4.2. Instruments

The community used two technical tools for communication: Facebook and Second Life. The Facebook was used asynchronous communication, and Second Life was used for synchronous and situational-based communication. Each week, all the community had two hour synchronous meeting on Second Life. All of the conversation and communication used Chinese.

4.3. Research methodology

This research's methodology used action research. The process of action research contains four steps: planning, action, observation, and reflection (Corey, 1953). Corey in the book of *Action research to improve school practices* (1953) developed principles of action research:

(1) A researcher needs to find the questions or problems in the situation setting.

(2) After finding the problems or questions, a researcher needs to design the research questions based on the researchers' assumptions.

(3) The researcher needs to record all the participants' actions in order to judge if the study achieved the assumptions.

(4) The researcher can find the questions or problem to plan next stages.

(5) All of the processes can be circulated and reviewed.

4.4. Research procedure

The instructional procedures were circulated into four steps: planning, observation, action, and refection.

4.4.1. Plan

According to all of planning, the researcher tried to plan the research in three ways.

(1) Finding members to join the Chinese learning community.

(2) Training core members to lead the conversation in a community.

(3) Training all the members to be familiar with Second Life and Facebook.

In order to plan the research, the researchers had interviewed with several professors of Chinese departments in California, USA. The issue of the interview was trying to find a way to develop a Chinese learning community.

In order to solve this problem, these professors had promised and invited their students to join our Chinese learning community, and many of these students had also invited their friends to join. All of the learners were volunteers.

The researcher also invited some university students who study Chinese language education in Taiwan, and the researcher had train these students to be community-core members. The community core members' job was to lead the conversation in a community.

After the community had been developed, the researcher planed a workshop to train all the students to use Second Life and Facebook.

4.4.2. Observation

All conversation in the community was recorded and reviewed, and all of behaviours were described in behaviour pattern form (Table 3 & 4).

After every meeting, all the core members discussed about today's observation. Each discussion covered three issues: (1) What do you think about today's conversation? (2) Is there anything to be improved? (3) Do you have any suggestions to other core members?

Therefore, observation had followed in two ways:

(1) Recording all of conversation and finding out students' behaviours patterns.

(2) Finding ways to improve the conversation.

4.4.3. Action

After the planning and observation, the community had changed and developed. There are total of two stages in action. Each stage was discussed and developed by the core members. There were two stages: a lecturing stage and a questioning stage.

(1) Lecturing stages: core members used a lot of lecturing in conversation.

(2) Questioning stages: core members used questions to lead the members to join the conversation.

After several meeting including lecturing stages, core member decided that lecturing did not provide a good way to converse, As a result, the core members agreed to change the leading action into questioning.

4.4.4. Reflection

All of the actions stages were discussed and reviewed by the core members. The refection happened in every meeting. After meeting, core members were gathered together to discuss about today's conversation. If there were any suggestion, the core members would changed their action in next meeting.

All of the stages are shown as Fig. 1.

4.5. Data collection

This research video recorded all the conversation in the Second Life. Each week, the researcher would review and calculate the frequency of behaviour patterns (Table 3 and 4).

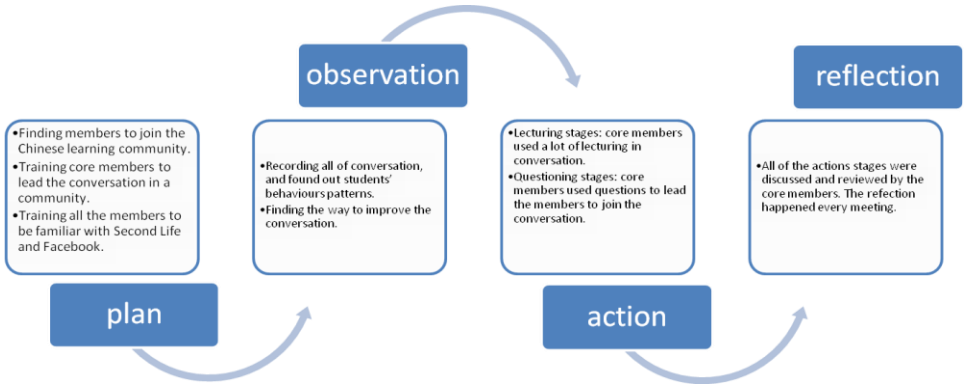

Fig.1. Research structure.

Table 3
Behaviours' patterns for Core members

Core members	
Category	Behaviour
C1: Explanation	B1: Core members can consider other member's level to explain a topic.
	B2: Core members can listen to others' question and make appropriate explanation.
	B3: Core members can understand members' experience to make a related interaction.
	B4: Core members can adjust other's Chinese grammar mistake.
C2: Assistance	B5: Core members can assist other members to use technology.
	B6: Core members can assist other members who have trouble to finish the whole sentences.
	B7: Core members can assist other members to define the new vocabulary.
C3: Leadership	B8: Core members can prepare a topic to share with others member.
	B9: Core members can care about others.
	B10: Core members can jump in the conversation and open a new related topic.
	B11: Core members can use others' experiences to ask questions

Table 4
Behaviours' patterns for Peripheral members

Peripheral members	
Category	Behaviour
C4: Expression	B12: Peripheral members can use telegram sentence to talk (Telegram sentence means speakers only use key words).
	B13: Peripheral members can type Chinese characters.
	B14: Peripheral members can use complex sentences to talk (complex sentences means speakers combined two or more sentences together).
	B15: Peripheral members can use simple sentence to talk (simple sentences need to have subject, verb, and object).
	B16: Peripheral members can use an adjective.
	B17: Peripheral members can use Chinese to explain the vocabulary.
C5:Listening and Answering	B18: Peripheral members can answer alternative questions.
	B19: Peripheral members can answer the question which only has one correct answer.
	B20: Peripheral members can answer the question to describe their or others' experience.
	B21: Peripheral members can answer the question to describe phenomenon.
	B22: Peripheral members can answer the question which needs them to describe thought.
	B23: If peripheral members don't understand the question, they will show they don't understand
	B24: If peripheral members don't understand the question, they will find the problem and ask again.
	B25: If peripheral members don't understand the question, they won't tell others until core members found out.
C6: Initiative participation	B26: Peripheral members will ask question initiatively.
	B27: Peripheral members will share information initiatively.
	B28: Peripheral members will share their thoughts initiatively.
	B29: Peripheral members will share their experiences initiatively.

5. Research results

According to the behavior patterns' frequency, the research have found that different behaviors and reactions happened in different stages. The table 5 had shown the different stages' reactions.

Table 5
Different stages' reactions

Stages		Members' reactions	Behaviours' patterns
Plan		1. Some members got frustrated to the technical problems. *(I am very angry at my computer now!!).* *(I think I will try again next time).* *(I have no idea how to use Second Life).* 2. Peripheral members used Chinese to introduce themselves *(My name is XXX, I learn Chinese for 2 years, I am a OOO's student, it is very nice to see you all).* 3. Core members did not show much sentences when introducing themselves to the community. *(My name is OOO).* *(I am XXX).*	1. Core members showed high frequencies on B5 (around 16-17 times/each meeting), however, other behaviours turn out very low (around 0-2 times). 2. Peripheral members showed some frequencies on B12, 13,15, 27 (around 5-6 times/each item).
Observation Action Reflection	Lecturing stages	1. Core members shared the virtual setting on related topic, and they used lecture to interact in the community. 2. Peripheral members did not have much chance to interact in the community. *(Core members: The story of Chinese New year is related to…).* *(Core members: It is a building from Greece culture, it has….).* 3. Peripheral members used private message to tell the community leader their difficulties to communicate in the community *(I think it is too hard….).* 4. The community leader decided to have a community meeting and discussed the way of interaction. *(In the meeting, leader asked "Do you think it is interested in this community's interaction?" one of core members answered: "No." The leader reflected "Why do you think it is not interested?" core member: "Because the topic is not related to our life, and also we talk too much").* 5. After the meeting, the community all agreed to use life-related questions to interact. Please see Figure 2 for Lecturing stages conditions.	1. Core members showed high frequency on B8 (around 30 times/ each meeting), but other behaviours turn out zero. 2. Peripheral members showed a little frequency on B18 (around 1-2 times). Most of these behaviours are yes/no answer.

	Questioning stages	1. Core members started to use questions to lead the community's conversation. *(What is your favourite music? Why?)* *(Do you think there is different than the rock music you just listen? What are the differences?)* *(Does your Second Life avatar dress just like you dress in the real life?)* 2. Peripheral members began to share a lot of experiences and information to our community. *(I don't like to listen techno music, because my ex girl friend love to listen it).* *(My dad is a great guitar player, I am just ok. Do you all want to listen my guitar music?) And he started to get a guitar to play a song for the community.* Please see Figure 3 for Questioning stages conditions.	1. Core members began to show frequencies on B1-B4 (around 8-9 times/each items , some frequencies on B6, 7, 11 (around 5 times/each meeting) and B9 (one time in one meeting). 2. Peripheral members stared to have a lot of behaviours on B12, 14, 15, 16, 20, 21, 22(around 4-7 times /each meeting), B23, 25 shows their needs (around 2-3 times) and shows some initiative participation, such as B27-29 (around 2-3 times).

Fig. 2 and 3 showed the different stages in lecturing and questions stages in Chinese learning community.

Fig. 2. Implemented condition for real experiment stage 2.

Fig. 3. Implemented condition for real experiment stage 3.

6. Conclusion

Situated learning theory believes that knowledge cannot occur alone without any situation. If the knowledge is not related to the situation, the knowledge itself would become obscure and lacking details or specifics (Suchmon, 1987).

The research followed Lave and Wenger's (1991) situated learning theory, and develop an open, epistemic and scaffolding community space. According to Lave and Wenger's theory, the following perspectives were emphasized in the community:

(1) Situated context include knowledge. Learners can participate the activity in the situation, and they will be able to acquire the knowledge.

(2) Learning should focus on a self automatic inquiry.

(3) Learning can start with peripheral participation.

(4) Learning can go through communication. Situation should provide rich language characterization, and learners can follow multiple communication formats to extend their learning opportunities.

According to this research, research questions had been answered.

(1) Can we use virtual environment to enhance Chinese learners' communication skills?

According to this research, a virtual environment can enhance communication behaviours. Students in the action stages showed that language behaviours' frequencies had been developed and grew. Therefore, we can say a virtual environment can enhance Chinese learners' communication skills.

(2) Can we use virtual environment to provide community-communication?

According to this research, the Chinese learning community had been developed and worked well; therefore, we can assume that virtual environment can provide community-communication.

Learning a second language requires many aspects, and a virtual environment can help Chinese learners and future Chinese instructors to create a community to practice speaking and teaching. Within this study, all of the community members were able to grow and develop. The group members improved their methods of communications, and the communications helped the group members improve their speaking skills.

In the future, we wish to keep developing the community. If more members can join this community, we may help more learners to learn Chinese in the virtual environment.

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