



## **E-learning Constructive Role Plays for EFL Learners in China's Tertiary Education**

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### **Abstract**

Recently, speaking has played an increasingly important role in second/foreign language settings. However, in many Chinese universities, EFL students rarely communicate in English with other people effectively. The existing behavioristic role plays on New Horizon College English (NHCE) e-learning do not function successfully in supplementing EFL speaking classes. The present study aims at investigating the implementation of constructive role plays via NHCE e-learning and its effect on Chinese EFL learners' speaking in college English classes. Speaking pretests and post-tests, student role play recording analysis, student questionnaires, and student interviews have been employed to collect data during the 18-week instruction period. Results show that the e-learning constructive role plays have positive effects on improving students' speaking in terms of language quality and language production, and students express positive opinions towards the implementation of e-learning constructive role plays. The findings from this study are

directly beneficial to other researchers aiming at developing students', as well as teachers', L2 speaking instruction.

**Key words:** CALL, E-learning, Constructivism, Scaffolding, Role Play

### **Introduction**

Among the four language skills, speaking is increasingly important in second/foreign language settings. However, in China, it is very difficult for students to communicate with other people in English effectively. In this case, such scholars as Hu (1988) and Weng (1996) described the situation of English learning in China as “dumb English” during the 1980s and 1990s (as cited in Wang & Motteram, 2006). “Dumb English” refers to the situation when students want or need to communicate in English but they cannot perform the task successfully due to such possible reasons as tension, shyness and/or lack of effective communication skills in English. Even though China has the largest population of English language learners in the world (Xiao, 2009), most students still finished their college English courses as good test-takers, but poor communicators (Li, 2001). English is learned as a foreign language (EFL) in China and Chinese EFL students rarely speak English in their daily lives. Nevertheless, in order to, for example, take part in international seminars, or present research papers at international conferences, situations which students may eventually encounter in their academic and/or working lives, they do need to be able to give oral presentations and discuss with other people in English. Therefore, being able to speak English efficiently has a particular importance to Chinese university students and thus also to the L2 learning and teaching processes. Continual attention must therefore be given to the processes of learning and teaching speaking for EFL university students in China.

In order to develop college English learning and teaching in China, computer assisted language learning (CALL) has been suggested to be one plausible way to improve the situation. Computer technology is nowadays becoming more and more prevalent in many aspects of people's lives. The development of computer technology and the Internet has become the trend in language learning and teaching. In this light, the New Horizon College English (henceforth, NHCE) e-learning system has been introduced to some Chinese universities since 2004, according to the College English

Curriculum Requirements. It is designed to conform to the requirements set forth by the national college English teaching syllabus (Li, 2007). The NHCE e-learning has been developed for online EFL courses where students can engage in self-study activities. Moreover, it can also be incorporated into a traditional classroom setting to assist EFL instruction and learning (Xu, 2007). However, the existing NHCE e-learning does not function properly in supplementing EFL speaking classes. From students' evaluation, the problem of the NHCE e-learning rests with its behavioristic nature, especially in the speaking section. It involves such speaking activities as behavioristic role-playing, recording and comparing, and listening and retelling, which require students to repeat the speaking materials over and over again. Students reported to losing interest in doing behavioristic role plays and they pay less attention to practicing their speaking. Therefore, it is necessary to develop and implement new kind of role plays in the speaking classes. Hence, constructive role plays could play a role in NHCE e-learning to improve students' L2 speaking.

### **Constructivism, CALL and e-learning in language teaching**

Constructivism is a psychological theory of knowledge which argues that humans construct knowledge from their experience. In parallel with the development of computer technology, the constructivist view of language learning and teaching is applied and incorporated as one major theoretical framework for CALL pedagogies and development. Bonk and Cunningham (1998) pointed out that "the blending of ... technological and pedagogical advancements has elevated the importance of research on electronic learner dialogue, text conferencing, information sharing, and other forms of collaboration" (p. 27). Active and collaborative construction of knowledge instead of knowledge transfer from one person to another (Cobb, 1994; Jonassen, 1994; O'Malley, 1995; Schank & Cleary, 1995), engagement in contextualized authentic tasks as opposed to abstract instruction, and less controlled environments versus predetermined sequences of instruction where "conditions for shared understanding" are created and "alternative solutions and hypothesis building," (O'Malley, 1995, p. 289) are promoted through learners' interaction.

From the educational point of view, CALL is closely related to many aspects of second/foreign language learning and teaching. CALL is administered not only as a teaching method but also as an effective tool to help teachers in language teaching, and to promote learners' interactive learning (Shi, 2006) as it can be employed in many ways, and both in and out of the classroom. From Feng's (2006) study on the implementation of CALL in a college English class in China, results show that it provides a constructive language learning environment to students and can improve students' interest in learning English. It is noticeable that in an L2 speaking class, the use of computer as a teaching tool has a significant effect on enhancing learners' motivation (Bax, 2003; Merrill & Hammons, 1996; Molnar, 1997). In Zheng's (2006) research study on the tentative educational reform of current college English teaching in China, the recommendations on the use of CALL are provided to create self-learning and learner-centered consciousness for both learners and teachers, which can motivate learners to practice more by actively constructing new knowledge instead of passively accepting what teachers teach.

E-learning has become the main trend in CALL because of its technicality, practicality, diversity, and interactive nature. Learners can access the Web to go through sequences of instruction to complete the learning activities, and to achieve learning outcomes and objectives (Ally, 2002; Ally, 2004; Ritchie & Hoffman, 1997). According to Dawley (2007), e-learning can encourage learners to seek information, evaluate it, share it collaboratively and, ultimately, transform it into their own knowledge.

### **Constructive role play in e-learning**

According to Brown and Yule (1995), constructive role play can help students become more interested and involved in classroom learning by addressing problems, and exploring alternatives and creative solutions in terms of not only material learning, but also in terms of integrating the knowledge learned in action. Naidu and Linser (2000) pointed out that constructive role plays increase motivation. They encourage students to engage in L2 speaking freely and creatively, as well as explore options through the creative use of language (Xiao, 2003). According to Ladousse (1991), the

incorporation of constructive role play activities into the L2 classroom adds variety, a change of pace and opportunities for a lot of language production, and also a lot of fun. In this study, constructive role plays refer to speaking activities with pre-described conversations in NHCE e-learning, which students can modify and vary when taking computer lab classes.

### **Scaffolding as teaching support**

Scaffolding is a term given to the provision of appropriate assistance to learners in order that they may achieve what alone would have been too difficult for them. Scaffolding is a good way to provide comprehensible input to EFL learners so that not only will they learn essential subject content but they will also make progress in their acquisition of English (Daniels, 1994). Chaiklin (2003) claimed that following the use of scaffolding provided by a teacher, students can engage in interactive learning. Wood, Bruner, and Ross (1976) pointed out that EFL learners are particularly dependent on scaffolding. However, the purely oral scaffolding undertaken by the teacher is not enough. More scaffolding from the teacher is necessary because it helps learners understand why they are doing the work and why it is important. In this light, EFL learners greatly benefit from scaffolding.

### **Research questions**

This study aims at investigating the implementation of e-learning constructive role plays on Chinese EFL learners' speaking in college English classes. To achieve this, the present study addresses the following research questions:

- 1) Does constructive role play have any positive effects on improving the speaking performance of students with different levels of proficiency?
- 2) What are second-year non-English major students' opinions of the e-learning constructive role plays in their college English speaking classes?

### **Participants**

300 second-year non-English major undergraduate students enrolled in college English advanced classes were chosen to be the sample in the study. They had

experience of and were familiar with using the existing NHCE e-learning. In addition, all of them had undergone basic speaking skill trainings from their previous college English studies. The students were classified into three groups in terms of language proficiency level – high, medium, and low – based on the  $z$  scores from their previous English final examinations and the speaking pretests. After the pretest, 39 participants were excluded from the data collection because their two  $z$  scores fell in different proficiency levels. In addition, there was one student who missed one of the two speaking tests, and the data from this student was also excluded from the analysis. All in all, 260 students were randomly assigned into an experimental group of 130 students and a control group of 130 students.

### Research methods

Table 1 below shows the instruments used in the present study: speaking pretests and post-tests, student role play recording analysis, student questionnaires, and student interviews.

**Table 1: Summary of research questions and instruments**

Research Questions	Instruments
1. Does constructive role play have any positive effects on improving speaking performances of students with different levels of proficiency?	Pretest and post-test Student role play recording analysis
2. What are second-year non-English major students' opinions on the e-learning constructive role plays in their college English speaking classes?	Student questionnaires Student interviews

In the 18-week research study, all 260 students were required to learn 8 units of the *New Horizon College English* (Zheng, 2003) textbook for 2 hours each week – 1 hour for the tutorial class and 1 hour for the computer lab class. In the one-hour tutorial class, all the participants in the experimental group and the control group studied the same textbook. After the tutorial class, students began the one-hour computer lab class to perform role plays. All of the students' conversations were recorded automatically by the e-learning system.

The researcher implemented constructive role plays for the experimental group in the one-hour computer lab class. The constructive computer lab class provides the platform for students to practice speaking by interacting with their classmates actively. It is an interactive instrument for text presentation and learner

interaction. Students effectively construct new conversations based on what they have learnt from the tutorial class and from their previous studies. Instructions from the researcher were delivered to scaffold and to make sure students understood what they were going to do in the computer lab session. The researcher provided role play instructions before students began to act out the role play. Then, students were randomly assigned into groups of 2 and put into a chatroom on the NHCE e-learning site. After that, students began to act out 3 different role plays by actually interacting with their partners in the chatrooms using microphones and earphones for 30 minutes. Assistance and answers to students' questions were provided by the researcher while students were in the process of performing the role plays and the researcher offered feedback to students after they finished the role plays. All of the instructions, assistance, answers, and feedback served as scaffoldings which allowed students to pose questions and engage in interaction instead of sitting in front of the computer, reading the role scripts out, and recording the conversations.

The control group worked with the existing behavioristic role plays on NHCE e-learning in the one-hour computer lab class. Students began the 3 role plays by reading the role scripts out in front of individual computer for 30 minutes. The traditional computer lab class is simply a channel for manuscript presentation for the pre-described set of speaking materials. It provides the platform for students to practice speaking without interaction among themselves. Students came to class, sat in front the computer and kept reading the same speaking materials out from the screen. Students passively practiced speaking at a low cognitive level without scaffolding provided by the teacher.

After the 18-week instruction, students in the experimental group and the control group were required to take the speaking post-test to determine the effects of the role play activities on their speaking performance. The post-test mean scores in the experimental group were compared to the scores of the control group. The data obtained from the pretest and the post-test scores were used for further quantitative analysis. Students in the experimental group were required to do the questionnaires and interviews, and the data attained from these instruments were used for the

qualitative analysis.

## Results

After the 18-week experiment on implementing e-learning constructive role plays, from the data analysis, the results of the study can be summarized in terms of: 1) students' speaking performance; 2) students' language productivity; and 3) students' attitudes towards the implementation of e-learning constructive role plays.

### 1. Speaking performance

All of the 260 participants were post-tested. As shown in Table 2, from the paired samples t-test analysis, the mean scores of the post-test of the two groups (experimental/control) are 10.481 and 8.957 respectively.

**Table 2: Comparison between the two tests scores between the experimental group and the control group**

Group	Scores	Mean	SD	N	df	t	Sig.
EG*	Pretest	8.912	.8223	130	129	-18.113**	.000
	Post-test	10.481	1.4895				
CG*	Pretest	8.935	.8454	130	129	-.199	.842
	Post-test	8.957	.7745				

\*EG: Experimental Group; CG: Control Group

\*\* t value of experimental group is significant at the 0.05 level (2-tailed)

In the experimental group, there is a statistically significant difference between the two speaking tests scores, significant at  $p = 0.000$ . However, in the control group, there is no statistically significant difference between the two speaking tests scores because the p value is higher than 0.05 ( $p = 0.842 > 0.05$ ). The mean scores of the pretest and the post-test are nearly the same (8.935/8.957).

In addition, in terms of different language proficiency levels, in the experimental group, from the paired samples t-test analysis, as shown in Table 3, the post-test mean scores for each level (high/medium/low), are 12.786/10.546/8.447 respectively higher than the pretest mean scores (10.536/8.918/7.684).

**Table 3: Comparison between the two tests scores among high, medium and low proficiency levels in the experimental group**

Proficiency level	Scores	Mean	n	df	t	Sig.
High	Pretest	10.536	14	13	-12.022*	.000
	Post-test	12.786				
Medium	Pretest	8.918	97	96	-16.331*	.000
	Post-test	10.546				
Low	Pretest	7.684	19	18	-5.091*	.000



Post-test	8.447
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\*t values are significant at the 0.05 level (2-tailed)

From the data shown in Table 3, it is noticeable that students in the experimental group at all language proficiency levels displayed an improvement on their speaking performance. This result validates the answer to the first research question, that the e-learning constructive role plays have a positive effect on improving the speaking performance of students with different levels of language proficiency.

## 2. Language productivity

In terms of language productivity, two types of language modification, word substitution and sentence variation, can be found from the language analysis of students' recordings in the experimental group, as shown in Table 4.

**Table 4: Summary of students' role play recordings analysis**

Types of language modification	Average percentages*
Words substitution	72.3%
Sentences variation	87.0%

\* Note: The total number of students is 130.

72.3% of the students in the experimental group produced different words from the original conversations to perform the constructive role plays. However, students in the control group did not produce much because they read the original role play scripts out. The examples were shown as follows:

### Example 1

Original role play	Constructive role play
D*: Hi, my name is David. <b>But</b> you can call me Dave.	S1*: Hi, my name is XX. <b>And</b> you can call me XX.
L*: It's nice to meet you, Dave. My name is Laura.	S2: Nice to meet you, XX. My name is XX.
D: <b>Nice</b> to meet you, too, Laura.	S1: <b>Glad</b> to meet you, too, XX.
L: I'm a <b>freshman</b> here. <b>What</b> about you?	S2: I'm a <b>new student</b> here. <b>How</b> about you?
D: Me, too. I'll have my first class <b>this afternoon</b> .	S1: Me, too. I'll have my first class <b>tomorrow morning</b> .
L: What class is that?	S2: What class is that?
D: English <b>course</b> with Doctor Smith.	S1: English <b>class</b> with XX.
L: Oh, really? We're going to be in the same class!	S2: Oh, really? We're going to be in the same class!
D: Oh, that's great!	S1: Oh, that's great!

\* D: David L: Laura S: Student

### Example 2

Original role play	Constructive role play
D*: Nancy, what are you planning to do this weekend?	S7*: XX, what are you planning to do this weekend?
N*: I haven't <b>made</b> any plans yet. You got <b>any good ideas</b> ?	S8: I haven't <b>got</b> any plans yet. You got <b>anything</b> ?
D: I want to <b>get</b> away from the rat race of life on campus for a while. <b>How</b> about going to the <b>National Park</b> on <b>Saturday</b> ? We could invite Laura, Tony...	S7: I want to <b>be</b> away from the rat race of life on campus for a while. <b>What</b> about going to <b>XX Park</b> on <b>Sunday</b> ? We could invite XX...
N: Sounds <b>great</b> ! And what do you think we will do there? Maybe some <b>hiking</b> , and...	S8: Sounds <b>wonderful</b> ! And what do you think we will do there? Maybe some <b>jogging</b> , and...
	S7: Barbecue. We could roast <b>meat</b> and <b>vegetable</b>

D: Barbecue. We could roast <u>hot dogs</u> and <u>hamburgers</u> over a fire! N: Good idea! * D: David N: Nancy S: Student	over a fire! S8: Good idea!
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From the analysis of the recordings, students in the experimental group uttered words by substituting synonyms for the original ones, for example:

S1: “*Glad to meet you.*”  
 (Original: Nice to meet you.)  
 S2: “*new student*”  
 (Original: freshman)  
 S8: “*I haven’t got ...*”  
 (Original: I haven’t made ...)

Besides substituting synonyms for the original ones, students also replaced words by changing them into other proper nouns, for example:

S7: “*... going to XX Park on Sunday?*”  
 (Original: ... going to National Park on Saturday?)  
 “*We could roast meat and vegetable ...*”  
 (Original: We could roast hot dogs and hamburgers ...)  
 S8: “*... maybe some jogging, and...*”  
 (Original: ... maybe some hiking, and ...)

Furthermore, 87.0% of 130 students in the experimental group produced different sentences in terms of length and structure to carry out constructive role plays, as in the following examples.

**Example 1**

Original role play	Constructive role play
D*: Hi, my name is David. <u>But you can call me Dave.</u>	S11*: Hi, my name is XX. <u>May I know your name, please?</u>
L*: <u>It's nice to meet you, Dave. My name is Laura.</u>	S12: <u>Sure, my name is XX, nice to meet you.</u>
D: Nice to meet you, too, Laura.	S11: Nice to meet you, too, XX.
L: I'm a freshman here. <u>What about you?</u>	S12: I'm a freshman here. <u>And you?</u>
D: Me, too. <u>I'll have my first class this afternoon.</u>	S11: Me, too. <u>This afternoon is the first time for me to have class.</u>
L: <u>What class is that?</u>	S12: <u>May I know what's it?</u>
D: <u>English course with Doctor Smith.</u>	S11: <u>It's English class.</u>
L: Oh, really? <u>We're going to be in the same class!</u>	S12: Oh, really? <u>I will begin my English class this afternoon, too!</u>
D: <u>Oh, that's great!</u>	S11: <u>Really? Then we are in the same class!</u>

\* D: David L: Laura S: Student

**Example 2**

Original role play	Constructive role play
D*: <u>What are your plans for the winter vacation, Nancy?</u>	S35*: <u>XX, any plan for the winter vacation?</u>
N*: <u>I don't know. I guess I'll just try to relax -- it'll</u>	S36: <u>Mmm..., not yet. Maybe I will let myself get relaxed and enjoy the cold weather here.</u>

- be good to forget about school for a couple of weeks!*
- D: *I agree. That's why Laura and I are heading south for the vacation. How would you like to join us?*
- N: *Sounds like it would be a whole lot better than hanging out here. It would be a nice* escape from the cold weather.
- D: *Then, would you like to join us?*
- N: *Mmm, that's a great idea.*
- \* D: David N: Nancy S: Student
- S35: *Really? XX and I are going south for the holiday, would you mind joining us?*
- S36: *Amazing! To the south? It is going to be more fun than staying here. And I can* escape from the cold weather.
- S35: *Great! Then, join us, XX will be glad to hear that.*
- S36: *Great, let's go!*

Moreover, data analysis from students' recordings showed that students varied sentence structure while retaining similar meanings to the original, for example:

S12: "Sure, my name is XX, nice to meet you."

(Original: It's nice to meet you XX, my name is XX.)

S11: "... this afternoon is the first time for me to have class."

(Original: ...I will have my first class this afternoon.)

S35: "XX, any plan for the winter vacation?"

(Original: what are your plans for the winter vacation, XX?)

S36: "Amazing! To the south? It is going to be more fun than staying here ..."

(Original: Sounds like it would be a whole lot better than hanging out here ...)

### 3. Students' attitudes

All of 130 students in the experimental group were required to answer the questionnaires after they finished their 18-week study. The results are presented in Table 5 below:

**Table 5: Responses from Students' Questionnaires on the Likert-scale (N=130)**

Items	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
1. The instruction before performing e-learning constructive role plays is necessary. 构建型角色扮演活动的说明部分是必要的	32.3%	61.5%	3.8%	2.3%	0.0%
2. The e-learning constructive role plays are interesting. 构建型角色扮演活动是有趣的	43.1%	40.8%	14.6%	1.5%	0.0%
3. The e-learning constructive role plays make learning to speak English enjoyable. 构建型角色扮演活动使得口语课堂生动有趣	49.2%	40.8%	8.5%	1.5%	0.0%
4. The e-learning constructive role plays offer me useful information on how I can speak idiomatic English. 构建型角色扮演活动给我提供了关于英语口语习语的有用信息	22.3%	53.1%	20.0%	4.6%	0.0%
5. The e-learning constructive role plays help me generate similar conversations easily. 构建型角色扮演活动有助于我容易地构建出其他类似对话	15.4%	56.9%	33.8%	3.8%	0.0%
6. The e-learning constructive role plays help me improve my speaking performance. 构建型角色扮演活动有助于我的口语技能的提高	28.5%	54.6%	12.3%	4.6%	0.0%
7. The e-learning constructive role plays motivate me to practice more. 构建型角色扮演活动激励我更多的参与口语训练	22.3%	48.5%	25.4%	3.8%	0.0%
8. The e-learning constructive role plays should be utilized more in	20.8%	47.7%	26.9%	4.6%	0.0%

speaking classes. 构建型角色扮演活动应该在口语课堂上多使用					
9. I feel shy and/or hesitant when performing the e-learning constructive role plays. 角色扮演时我感到害羞、结结巴巴	13.8%	<b>33.8%</b>	24.6%	23.8%	3.8%
10. I feel nervous when I act the role out with my partner. 在和同伴表演对话的时候我感到紧张	10.0%	<b>39.2%</b>	21.5%	23.1%	6.2%
11. I find that time is not enough for me to act the role out in class. 我觉得每堂课上老师规定的角色扮演时间不够用	7.7%	<b>25.4%</b>	46.2%	16.9%	3.8%
12. I prefer reading out the role script to acting the role out with a partner. 我更喜欢读出角色的台词而不喜欢和同伴进行角色表演	0.0%	16.9%	23.1%	<b>42.3%</b>	<b>17.7%</b>

Data from the questionnaires suggested that firstly, the majority of the students preferred working on e-learning constructive role plays in speaking classes. From item 1, the percentage of students who agreed that the instructions were necessary for them to get better understanding on how to carry out constructive role plays is 93.8%, with a significant difference among the agreement, indecisiveness and disagreement. From item 2, item 3, and item 4, 83.9% of the students agreed that e-learning constructive role plays were interesting and 90% of the students reported the process of learning to speak English was more interactive and enjoyable. 75.4% of the students expressed agreement that e-learning constructive role plays provided them with useful information on how they should speak English.

Secondly, from item 5 and item 6, 72.3% of the students agreed that e-learning constructive role plays assisted them to generate similar conversations easily. Moreover, 83.1% of the students agreed that e-learning constructive role plays helped them improving their speaking. From item 7, the percentage of students who were of the same opinion that e-learning constructive role plays could motivate them to practice more is 70.8%. Additionally, in item 8, 68.5% of the students reported that e-learning constructive role plays should be utilized more in speaking classes. Thirdly, however, from students' feedback, there were 47.6% of the students who confirmed that they felt shy and/or hesitant when performing e-learning constructive role plays in item 9. And from item 10, the percentage of students who agreed that they felt nervous when acting the role out with their partners is 49.2%. Furthermore, 33.1% of the students acquiesced that they did not have enough time to finish the constructive role plays in item 11. Nevertheless, from item 12, 60% of the students disagreed that they preferred reading role scripts out, specifically preferring to act the role out actively rather than reading the role scripts out repeatedly. From the results, in general, students expressed positive opinions towards the utilization of e-learning

constructive role plays in speaking classes because on average, 79.73% of the students confirmed their agreement on item 1 to item 8.

It is noticeable that from item 9 to item 11, 43.3% of the students assented that they felt nervous, shy, and/or hesitant when performing e-learning constructive role plays. This suggests that instructions before performing role plays, as one part of scaffolding, are necessary because clear instructions on how to conduct e-learning constructive role plays can provide students opportunities to think creatively before they really begin the activity, and those instructions provided by the teacher may reduce students' nervousness and hesitance when performing the role plays. Students can be actively involved in the whole learning process by thinking about what they should learn rather than passively accept what the teacher teaches, which reflecting the shift from teacher-centered instruction to learner-centered learning. Without clear instructions on how to perform role plays, the activity can not effectively help students improving their speaking.

Nevertheless, in line with the data analysis, another aspect, which should be considered carefully, is the time for working on role plays, because in item 11, 33.1% of the students felt that they did not have enough time to finish the role play. According to Northcott (2002), the length of time spent in a role play may also influence its success or failure because students may find the role play exhausting and they may lose interest in performing if the role play is too short or too long. So, from Northcott's recommendation, teachers should get students involved in role plays for between 5 and 10 minutes. According to the period of one-hour computer lab class as introduced in the research method in the present study, the researcher limited the time for performing each role play to 10 minutes, so that there were 30 minutes for students to work on 3 different role plays. Moreover, there were another 30 minutes for students to get involved in proposing questions, interacting with the teacher and other classmates, and providing feedback towards the implementation of e-learning constructive role plays, which served as one part of scaffolding in the present study. Only in this way could students get enough training on how to effectively carry out e-learning constructive role plays within an appropriate time.

In addition, one third (or 44) of the students in the experimental group were randomly chosen to participate in interviews in order that more informative data could be gathered. In general, interviewees delivered constructive opinions. However 6.8% (or 3) of the interviewees could not decide whether they approved of the implementation of e-learning constructive role plays or not, because they reported that they were not sure whether e-learning constructive role plays could really help them to improve their speaking or not. There were also 4.6% (or 2) of the interviewees who expressed their disagreement with the utilization of e-learning constructive role plays because they reported that they still preferred listening and reading activities. Nevertheless, 88.6% (or 39) of the interviewees agreed that e-learning constructive role plays could improve their speaking and it should be incorporated more in speaking classes. The reasons given are as follows: firstly, 65.9% (or 29) of the interviewees explained that they can actively act the role out instead of passively read the role scripts out in e-learning constructive role plays, for example:

S8: *"I can really speak English out, not just read the same materials out."*

S15: *"I really enjoyed the role play activity because it is quite active and I have the chance to speak something out instead of doing some reading."*

(Translated)

Secondly, 75% (or 33) of the interviewees reported that scaffolding and instruction provided by the teacher on how to conduct e-learning constructive role plays helped them understand better before they began to perform the role plays, for example:

S9: *"I can think of what I should do first, discuss with my teacher and my classmates, then, I can apply useful information from the tutorial classes and the previous studies to perform the role plays."*

S17: *"I can pose questions anytime from the teacher and/or from other classmates whenever there appear some problems, which is important because I can understand better on how to work out constructive role plays."*

(Translated)

S35: *"The guidance from the teacher helps me think creatively on how to perform role plays."*

Moreover, 56.8% (or 25) of the interviewees said that they were actively involved in the whole learning process instead of passively accepting what the teacher taught. They felt they were at the center of the learning and teaching process instead of the teacher. They explained that: “*we can create new dialogues by using different words and sentences instead of repeating the same materials again and again*”.

Thirdly, 79.5% (or 35) of the interviewees said that the e-learning constructive role plays motivated them to speak more, for example:

S27: “*This kind of role play can motivate me to speak more in class, and it can help creating an effective and interactive learning environment.*”

S32: “*I feel interested in performing role plays in class, I like to speak English actively instead of passively memorize English words.*”

Furthermore, 88.6% (or 39) of the interviewees mentioned that the e-learning constructive role plays were more active than the existing behavioristic ones. They reported that: “*we actively act the role out instead of passively finishing reading the same role scripts out repeatedly.*”

However, among those agreements, there were 61.3% (or 27) of the interviewees who emphasized that some problems had occurred, especially technical ones, when they performed constructive e-learning role plays, for example:

S11: “*The unstable Internet connection and the broken computer system may interrupt the processes of performing e-learning constructive role plays.*”

(Translated)

S45: “*Sometimes I have to switch to many computers because of the broken microphones, and this wasted my time in performing role plays.*”

The individual difference is another aspect which may affect the implementation of e-learning constructive role plays. For example, 4.6% (or 2) of the interviewees reported that they did not like role plays, and still preferred reading and listening activities. One of the interviewees stated that: “*I do not like performing role plays. I like to listen to the materials and then read them out, because I can imitate the native speaker's pronunciation. The more I read, the better I will be.*”

## **Discussion**

Research findings can be summarized as follows:

### ***1. Speaking achievement***

Two main reasons may account for students' speaking improvement. First, it could be that no matter what kind of role plays were assigned to students, they all learned 8 units and finished 24 role plays during the 18-week experiment. The duration of this experiment may have been long enough to improve student's speaking. For example, students' mean scores of speaking post-test (Mean=8.957, SD=0.7745) in the control group were slightly higher than that of the pretest (Mean=8.935, SD=0.8454). After the 18-week experiment, students' speaking could be improved, but not that much as expected. However, students' speaking post-test scores (Mean=10.481, SD=1.4895) in the experimental group were much higher than that of the pretest (Mean=8.912, SD=0.8223) with statistical difference, which may lead to the second reason, the utilization of constructive role plays and scaffolding, why students' speaking improved more in the experimental group. First, constructive role play has the active and interactive essence (Ge, Lee & Yamashiro, 2003; Northcott, 2002; Woodhouse, 2007). It can develop a greater understanding and enable students to develop skills to use in real-life situations. Second, utilizing constructive role play in the classroom allows students to test out the knowledge that they already have, and/or to study the new knowledge by interacting with group members and the class, as in the constructivist argument that learning is an active process in which new knowledge is developed on the basis of previous experiences (Simina & Hamel, 2005). Xiao (2003) pointed out that constructive role play encourages students to engage in L2 speaking interactively and creatively, and it encourages the exploration of options through creative use of language.

### ***2. Language productivity***

From the results of the student role play recording analysis, students substituted words and varied sentence structures to perform e-learning constructive role plays. Students understood the context of constructive role plays from the instruction and scaffolding provided by the teacher, and they actively constructed knowledge based on their



previous learning. They did not passively accept what the teacher taught. In the light of the previous discussion on speaking improvement, the language productivity discussion can be summarized as: first, constructive learning theory is a psychological theory of knowledge which argues that humans construct new knowledge from their experiences (Mergel, 1998). Constructivists suggest that learning is an interactive and effective process when a learner is actively engaged in the construction of knowledge rather than passively accepting it. Based on the constructivist view, learning is a personal interpretation of the world, and it is an active process in which information or knowledge is developed on the basis of experiences. Secondly, constructivism focuses on learner-centered study, which involves learners' active participation. According to Briner (1999), learners construct their own knowledge by testing ideas and approaches based on their prior knowledge and experiences, then, they apply the knowledge and experiences to a new situation, and integrate the new knowledge and experiences into their own. It is the learner who interacts with objects and events, and thereby, understands and learns the features of the objects and events. Clouse and Nelson (2000) claimed that in a constructive learning environment, learners can create their own knowledge actively. From the previous discussion, the pedagogical value of role plays has long been acknowledged by a number of scholars (Jones, 1982; Ladousse, 1991; Livingston, 1983; Maley & Duff, 1978; Van Ments, 1983; 1999). In line with the data analysis, students successfully modified new words and sentences to perform constructive role plays.

### ***3. Students' attitudes***

Generally speaking, students expressed positive attitudes towards the implementation of e-learning constructive role plays. In line with the previous discussion, first, according to Simina and Hamel (2005), learning is an active process in which new knowledge is developed on the basis of previous experiences. Constructive role play is a highly flexible learning activity which has a wide scope for variation and imagination. According to Ladousse (1991), constructive role play involves different communicative techniques, develops learners' language fluency, and promotes interaction in the classroom as well as increasing motivation. This is the main reason

why the majority of the students agreed that constructive role plays should be utilized more in speaking classes because they actively participated in learning to speak English.

Second, the scaffolding provided by the teacher helped them understand better before performing constructive role plays and students felt actively involved at the center of the whole learning and teaching process. Students constructed new knowledge based on their previous studies and/or their experiences from the real-life situations instead of passively accepting what the teacher taught.

However, among those agreements, some of the students showed indecisiveness or disagreement towards the implementation of e-learning constructive role plays. Two main categories can be summarized to explain the reasons why those students answered with indecisiveness and disagreement.

First, certain problems occurred when they performed the e-learning constructive role plays. For example, 1) students reported that the time allotted was not enough for them to act the roles out in class; 2) they felt nervous when performing the role plays; and 3) the unstable Internet connection wasted some of the class time for working out the role plays. The broken microphone and computer system made students feel frustrated in changing to different computers and it also wasted class time for acting the role plays out. Those problems may discourage students from working on e-learning constructive role plays. As Dimova (2007) argued, computers can only do what they are programmed because computers are machines. Computers cannot handle such unexpected situations as sudden stops of system operation and poor connection to the Internet. Furthermore, language learners' learning situations are various and changeable. Because of the limitations of computers' artificial intelligence, they are unable to deal with learners' unexpected learning problems and to response to learners' questions immediately as teachers do. Wang (2002) suggested that people still need to put effort into developing and improving computer technology in order to assist second language learners. However, despite those disadvantages, within the constructivistic point of view, knowledge is constructed through interactions with the environment in which personal experiences are

stimulated. Jonassen, Davidson, Collins, Campbell, and Haag (1995) pointed out that constructivism advocates that there are no cause-effect relationships between the world and the learner. Learning depends on the view of the learner. Furthermore, a constructive e-learning has the potential to impact positively on speaking classes.

Second, individual difference is another aspect which may affect the implementation of e-learning constructive role plays. In the light of the previous discussion, constructive learning encourages learners to acquire necessary knowledge and skills in order to find meaningful solutions to the real-life problems. According to Sun and Williams (2005), an effective learning content is not delivered by the advancement of technology. It has to be rooted in reasonable and reliable learning theories and appropriate instructional design. E-learning constructive role plays in the present study require students' basic skills in computers. According to Davies (2005), one of the disadvantages of CALL and e-learning is that it will take students a long time and a lot of energy to learn the basic skills for using computers before they can even begin to use them to study a subject. This may discourage those students who do not like using computers to learn to speak English. Nevertheless, a properly designed CALL and e-learning in the L2 speaking class can benefit both teachers and learners; as Zhang (2005) concluded, CALL and e-learning are becoming increasingly important in both of our personal and professional lives. More and more language learning now is involved with the use of technology, especially in the context of the development of the Internet. According to He (2002), computer assisted language learning should be integrated step by step, and some of the computer activities should be included in the curriculum with well-defined goals. According to Cobb (1994), constructive e-learning environments encourage learners to provide thoughtful reflection and feedback and empower learners to test out their own knowledge, and then to explore new information and construct new knowledge rather than simply repeat what the teacher teaches.

### **Conclusion**

Based on the results and discussion from the speaking pretest scores, post-test scores, student role play recording analysis, student questionnaires, and student interviews, it

can be concluded that e-learning constructive role plays have positive effects on improving the speaking performance of students at various language proficiency levels. Students performed well and they applied the knowledge gained from the tutorial class and from their previous studies to perform the constructive e-learning role plays actively and successfully. Furthermore, most of the students expressed positive opinions towards the implementation of e-learning constructive role plays in speaking classes. Scaffolding and instruction on how to carry out e-learning constructive role plays are essential and necessary because scaffolding helps students understand the tasks better before they start the role plays. Interaction is another indispensable element to promote learner-centered learning. Students are the center of the whole learning and teaching process, and e-learning constructive role plays can motivate students to be actively engaged in the process of learning to speak English. They enthusiastically apply as much knowledge as possible from their previous studies to construct new knowledge. Students actively explore the knowledge instead of passively accepting it. The teacher becomes a study helper instead of a lecture giver. It is helpful in creating an active, interactive and constructive learning environment for students to practice their L2 speaking.

Role play is a useful activity that can be utilized to help students with their L2 learning (Bartley, 2002). Furthermore, constructive role plays make students become more interested and get involved in classroom learning not only in terms of the teaching material, but also in terms of integrating the knowledge learned in action (Brown & Yule, 1995). Computer-assisted language learning and e-learning have become increasingly useful in second/foreign language learning. The application of CALL in speaking classrooms can increase the classroom information capacity, enlarge the language input value, and also provide more opportunities for language practice for learners (James, 1996). And, as a part of CALL, e-learning has the potential to impact positively on speaking classes. Constructive learning theory with an emphasis on the active role of the learner in building understandable information can be applied in constructing interactive knowledge and in developing the learning process. Teachers can improve the quality of students' English practice by

encouraging them to generate a variety of responses, rather than the usual set and prescribed responses to a situation that a role may demand. This means students can be actively involved in the whole learning process by gathering and summarizing speaking knowledge from what they have learnt before and generating new speaking knowledge for their future use. So, from the results and discussions of the present study, the e-learning constructive role plays do have positive effects on improving students' L2 speaking, and, students agreed that the e-learning constructive role plays should be practiced in speaking classes.

### **Pedagogical Implications**

The present study aims at investigating the implementation of constructive role plays via e-learning on Chinese EFL learners' speaking in college English classes. Some pedagogical implications can be concluded as follows.

First, from the results of the study, it can be found that the appropriate integration of CALL and Internet technology is essential to the success of EFL speaking learning and teaching. In addition, it is important to implement a constructivist learning model in college English study, especially for speaking classes, because students can actively participate in the whole learning process instead of passively accepting what the teacher teaches. The findings from this study are directly beneficial to other researchers aiming at developing students' L2 speaking abilities as well as teachers' L2 speaking instructional methods.

Second, the present study contributes to the understanding of CALL, e-learning, and constructivism in the Chinese context, which is necessary because the new Chinese education system emphasizes the shift from studying for examinations to quality education. The present study provides some insights into how constructivism and e-learning could possibly be effectively used to help Chinese students' learn to speak English, which is also in line with the reformation of college English learning and teaching. Future research studies could be conducted to examine how constructivism, CALL, and e-learning can help students construct new knowledge in college English classes in terms of all four language skills.

Third, the present study has explored the effectiveness of the change from teacher-centered instruction to student-centered learning. Based on the previous discussions, currently, students are at the center of the whole process of English learning and teaching, and the teacher's role has changed. According to the constructivist point of view, it is the learner who actively participates in the process of problem-solving and critical thinking regarding a learning activity, which they find relevant and engaging. The emphasis should be placed on the learners rather than the teachers. So future research studies could continue to investigate how a constructive learning environment and e-learning could provide effective learner-centered learning.

However, this study is not generalized to all areas of EFL speaking learning and teaching since the aim of this study is to investigate the process of implementing e-learning constructive role plays and how it can benefit students' learning to improve their L2 speaking.

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