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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				

*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. ***But*** you can call me Dave.	S1*:	Hi, my name is XX. ***And*** 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:	***Nice*** to meet you, too, Laura.	S1:	***Glad*** to meet you, too, XX.
L:	I'm a ***freshman*** here. ***What*** about you?	S2:	I'm a ***new student*** here. ***How*** about you?
D:	Me, too. I'll have my first class ***this afternoon***.	S1:	Me, too. I'll have my first class ***tomorrow morning***.
L:	What class is that?	S2:	What class is that?
D:	English ***course*** with Doctor Smith.	S1:	English ***class*** 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 ***made*** any plans yet. You got ***any good ideas***?	S8:	I haven't ***got*** any plans yet. You got ***anything***?
D:	I want to ***get*** away from the rat race of life on campus for a while. ***How*** about going to the ***National Park*** on ***Saturday***? We could invite Laura, Tony...	S7:	I want to ***be*** away from the rat race of life on campus for a while. ***What*** about going to ***XX Park*** on ***Sunday***? We could invite XX...
N:	Sounds ***great***! And what do you think we will do there? Maybe some ***hiking***, and...	S8:	Sounds ***wonderful***! And what do you think we will do there? Maybe some ***jogging***, and...
D:	Barbecue. We could roast ***hot dogs*** and ***hamburgers*** over a fire!	S7:	Barbecue. We could roast ***meat*** and ***vegetable*** over a fire!
N:	Good idea!	S8:	Good idea!

* D: David N: Nancy S: Student

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

* D: David L: Laura S: Student

Example 2

Original role play	Constructive role play
D*: ***What are your plans for the winter vacation, Nancy***?	S35*: ***XX, any plan for the winter vacation?***
N*: ***I don't know. I guess I'll just try to relax -- it'll be good to forget about school for a couple of weeks***!	S36: ***Mmm.., not yet. Maybe I will let myself get relaxed and enjoy the cold weather here.***
D: ***I agree. That's why Laura and I are heading south for the vacation. How would you like to join us***?	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.

N:	*Sounds like it would be a whole lot better than hanging out here. It would be a nice* escape from the cold weather.	S35:	*Great! Then, join us, XX will be glad to hear that.*
D:	*Then, would you like to join us?*	S36:	*Great, let's go!*
N:	*Mmm, that's a great idea.*		

* D: David N: Nancy S: Student

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 speaking classes.构建型角色扮演活动应该在口语课堂上多使用	**20.8%**	**47.7%**	26.9%	4.6%	0.0%
9. I feel shy and/or hesitant when performing the e-learning	13.8%	**33.8%**	24.6%	23.8%	3.8%

constructive role plays. 角色扮演时我感到害羞、结结巴巴					
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%	**39.2%**	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%	**25.4%**	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%	**42.3%**	**17.7%**

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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Creating a Corpus-Based Daily Life Vocabulary for TEYL

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Abstract

The purpose of this study has been to create a list of children's everyday vocabulary in English which will provide a foundation for daily life vocabulary for Japanese elementary school students and which will complement and augment existing English vocabulary currently taught in Japanese junior and senior high schools. Vocabulary words were taken from the CHILDES spoken corpus and picture dictionaries, and were ranked statistically with an outstanding-ness score based on a log likelihood keyword analysis and a selection probability score based on an adapted form of range. It was found that the identified words are at the appropriate grade level (grades 1 to 3), that the semantic content areas are grade-appropriate and complement the semantic categories of junior and senior high school (JSH) vocabulary, and that this vocabulary supplements JSH vocabulary in text coverage over 18 activities.

Keywords: daily life vocabulary, TEYL, picture dictionary, corpus, CHILDES

Introduction

In Japan, an initiative began in 2002 to teach English to young learners (TEYL) and when a new course of study is fully implemented in 2011, English language activities will become compulsory for fifth and sixth graders. The Ministry of Education, Culture, Sports, Science and Technology (MEXT) wrote the overall objective of English activities "to form the foundation of pupils' communication abilities" (MEXT, 2009) through "conducting conversational activities wherein students can be exposed to daily expressions and terms in English" (Butler & Takeuchi, 2008, p. 69). In anticipation of this reform, MEXT produced a textbook in 2008 called *Eigo No-to* or *English Note* for the fifth and sixth grade curricula. A recent vocabulary analysis of *Eigo No-to* showed that it contained an estimated 386 words, and that 8.1% of these were higher than the U.S. 8th grade level (Chujo & Nishigaki, 2010). While *Eigo No-to* is no doubt a useful resource for teachers, its word selection raises interesting questions about defining 'daily life vocabulary,' the optimal number of words for a curriculum, the most appropriate target for grade level, and how this vocabulary would complement or overlap with the vocabulary currently taught at the junior and senior high school levels. In addition, *Eigo No-to* is not a mandated textbook, and educators are expected to develop their own syllabuses and supplemental materials. With or without this resource, most primary school teachers generally have neither the experience nor the skills necessary for teaching English and they need effective

teaching material that will be successful and motivating so that these early language-learning experiences not only support TEYL but also will become a basis for learning at the secondary level and beyond. This study addresses this need by creating a 1,000-word corpus-based vocabulary of daily life words in English. In this paper, *daily life vocabulary* is defined as the words relevant to the everyday experience of children and young language learners and is used interchangeably with *everyday words* or *everyday vocabulary.*

Literature Review

The Need for Daily Life Vocabulary

Theoretical and empirical research in EFL in Japan suggests that teaching daily life words to elementary-aged children can be highly beneficial for EFL learners (Ito, 2000; Kuno, 1999; Saku & Honda, 2004; Shirahata, 2004) and teaching these kinds of words also meets with the Japanese government's TEYL guidelines (MEXT, 2009) which state that English relevant to children's everyday life should be taught in public elementary schools. Many researchers in Japan have emphasized that this vocabulary is considered to be the core vocabulary of college students and college graduates (Hamano, 1989; Horiuchi, 1976; Inoue, 1985), and the lack of this vocabulary is often felt by teachers and students who go to English-speaking countries for a short stay to experience daily life in native speakers' homes (Inaoka et al., 1988; Tsuruta, 1991). Chujo, Hasegawa, and Takefuta (1994) documented this vocabulary gap in a study comparing the vocabulary coverage of Japanese and American textbooks over eighteen specific language activities. They compiled a 14,694-word list generated from American basal K through 8th grade readers called the *Ginn Reading Program* (Clymer, Venezky, & Indrisano, 1982), and a 3,483-word list generated from the textbooks most widely used in Japanese secondary schools from the 7th through the 12th grades. They found that the American textbook vocabulary covered all activities evenly, but the Japanese textbook vocabulary showed a gap in daily life vocabulary coverage, focusing instead on, for example, student conversations, travel phrases and TOEFL vocabulary. In another study, Hasegawa and Chujo (2004) investigated a series of three Japanese secondary school textbooks used in each of the past three

decades and found that while there have been slight improvements in daily life vocabulary coverage in each ten-year revision of the same textbook series, there was still a lack of daily life words necessary for survival in English. Other researchers have also pointed out that these words in particular are not sufficiently covered in Japanese English textbooks taught in junior and senior high schools (hereafter, JSH) (Inoue, 1985; Mouri, 2004). For example, students rarely learn words such as *drawer, refrigerator, trash,* and *glue* from English textbooks used in JSH (Nishigaki, Chujo, & Oghigian, 2009). Finally, Jin'nai (2003) reported that educators in secondary schools are expecting TEYL to provide the vocabulary currently not taught in Japanese secondary schools.

Daily Life Vocabulary Sources

A century ago when Jespersen, in his *How to Teach a Foreign Language* (1904), stated that the beginner has use for only the most everyday words, "the problem that faced the textbook writer who wished to follow Jespersen's precepts was how to know [exactly] which were 'the most everyday words'" (as cited in Hornby, 1967, p. 41). While it is possible to identify high frequency words in English from general and specialized corpora, to date there have been no known studies done to create this type of children's vocabulary using statistical extraction tools such as log likelihood (Dunning, 1993). It should be noted from the outset that as a general corpus, the British National Corpus (BNC) has been shown to be inappropriate for using unchanged as the basis for syllabus design for EFL or ESL learners in primary or secondary schools because "[t]he BNC is predominantly a corpus of British, adult, formal, informative language, and most English learners in primary and secondary school systems are not British, are children, and need both formal and informal language for both social and informative purposes" (Nation, 2004, pp. 3-4). Ishikawa (2005, p. 44) demonstrated that in the BNC, the rank of words familiar to Japanese schoolchildren such as *notebook, eraser, blackboard, pocket* and *chime* is low and stated that the high frequency words derived from the BNC are weak in identifying young children's familiar everyday vocabulary.

There are currently very few children's corpora available (Danielsson & Mahlberg,

2003, p.4). Because the Japanese TEYL curriculum addresses conversational activities, our focus is on spoken children's corpora, and to date we have identified three: the Polytechnic of Wales Corpus (1978-1984) of children's speech in play sessions and interviews; the Moe, Hopkins, and Rush (1982) corpus of spontaneous conversations with first grade children; and the CHILDES (Child Language Data Exchange System) corpus of conversations with young children (2000). In 2006, Chujo, Utiyama, Nishigaki, Nakamura, and Yamazaki used the *log likelihood* statistic to extract and examine the outstanding vocabulary of these three spoken corpora. This statistical process is known as a *keyword analysis.* Scott (1997, pp. 236-243) defined a *keyword* as a "word which occurs with unusual frequency in a given text" and proposed a method of identifying keywords in text by using the chi-square and log likelihood statistics. Chujo et al. obtained keywords that are used in children's corpora statistically more frequently than in general English by comparing each word's frequency in the children's corpora to its frequency in the BNC general-usage adult spoken list of 9,477 words. They found that the CHILDES corpus contained basic verbs, colorful nouns and adjectives relevant to a young child's everyday world. The PoW corpus contained words limited to the play sessions, games, and interview topics, and the Moe et al. corpus contained words related only to limited subjects. Based on the findings of this 2006 Chujo et al. study, the CHILDES has therefore been identified as an appropriate source for this current study.

In addition to a children's corpus, researchers in Japan agree that picture dictionaries are a vital resource of everyday words (Inoue, 1985; Kittaka, 2000; Matsumura, 2004; Shiina, Chujo, & Takefuta, 1988), and Nishigaki, Chujo, and Iwadate (2005) confirmed that they contain a high level of everyday words. Some picture dictionaries define their specific goals for featuring this vocabulary; for example, *The Basic Oxford Picture Dictionary* (Gramer, 2003) targets "language that is essential for the development of the beginning learner's survival skills" and *The Sesame Street Dictionary* (Hayward, 2004) provides "words that appear frequently in beginning reading books and in a young child's everyday world." Thus, in addition to the CHILDES corpus, we have targeted and included data from picture dictionaries as a

source of everyday words.

Research Questions

Previous studies indicate that there is a need to construct a daily life word list relevant to the everyday experience of children and young language learners for TEYL education at the elementary level in Japan, and that there is also a need for filling in the gap of daily life vocabulary not taught in Japanese secondary schools. Although no single corpus exists to provide a comprehensive selection of this type of vocabulary, the CHILDES corpus and picture dictionaries have been identified as appropriate sources of TEYL vocabulary. The purpose of this study is to create a daily life word list from the CHILDES corpus and picture dictionaries and examine it to determine if it is appropriate for TEYL. Specifically:

1. Are the identified words at the appropriate TEYL grade level?

2. What semantic categories are represented, and how are these distributed over various types of daily life activities?

3. How does this daily life word list compare to existing JSH vocabulary, i.e., does it improve text coverage of everyday words as a supplement to JSH textbooks?

Method

Source Lists

CHILDES. From the CHILDES (Child Language Data Exchange System) spoken data, ten sets of American English native speaker children's speech data ranging from age 2 to age 10-11 (grade 5) were chosen and downloaded[1]. The 129,326 different words in this 1.29 million-word corpus were lemmatized to extract all base forms using the CLAWS7 tag set (1996), that is, inflectional forms such as *cat-cats* and *go-goes-went-gone-going* were listed under the base word forms of *cat* and *go*. All proper nouns and numerals were identified by their POS (part of speech) tag and deleted manually because statistical measures mechanically identify these words as technical words (Scott, 1999). Next, to create a pedagogically applicable list, all unusual or infrequent words (i.e., those occurring only once) were excluded. This process yielded a 4,161-word list.

   In accordance with the Chujo et al. 2006 study discussed earlier using the log

likelihood statistic, the 4,161-word CHILDES list was compared with the BNC general-usage adult spoken list of 9,477 words to statistically identify which words are *outstandingly* used in children's speech, compared to that of adults. A score for '*outstanding-ness'* was assigned to indicate the level of use by children compared to that of adults. This procedure provided an outstanding-ness score for each of the 4,161 CHILDES words, and we ranked those words in ascending order according to the 'outstanding-ness' score.

Picture Dictionaries. Twenty picture dictionaries for both native speaking children and ESL/EFL learners published by major overseas publishers in the U.S., England, Australia, Singapore and Hong Kong, and ten picture dictionaries published in Japan were collected. They are listed in Appendix A. The selection criteria for these picture dictionaries were as follows: (a) they contain more than 500 entries; (b) authors state that they provide everyday words; (c) authors state that they have pedagogic value; and (d) they are available.

The words contained in each of the thirty picture dictionaries were manually typed or scanned optically and then reformatted into thirty individual lists. In addition, each list was identified as having been published in Japan and or overseas, thus there were ten lists for ten Japan-based dictionaries and twenty lists for twenty non-Japan-based dictionaries. Next, each word list was lemmatized, and proper nouns and numerals were excluded from each list manually. The number of different words in the twenty dictionaries published abroad totaled 4,691 (Picture Dictionary List 1) and that of ten Japan-based dictionaries was 3,897 (Picture Dictionary List 2), yielding a combined total of 5,259 words (Picture Dictionary List 3).

In picture dictionaries, each individual word is presented with a picture, usually without a context or sentence. An analysis of picture dictionary data therefore would not (and did not) produce a normal frequency list as would be obtained from an analysis of text data. Because of this, the criteria of 'frequency of occurrence' often used in studies was not applicable. In addition, there are no stated criteria for each author's inclusion or ranking for each entry word. Since it is likely these were decided intuitively based on expertise (no explicit rationale was given for any dictionary), we

used 'range' to express a numerical consensus. For example, words that appeared in all twenty overseas picture dictionaries were referred to as 'range 20.' If the size of all the picture dictionaries were the same, we could say the words having a wider range are more important than those with a smaller range. However, there was a difference in size between the picture dictionaries. For example, *Word by Word* (Molinsky & Bliss, 1995) contains 2,554 different words and *Ladybird Picture Dictionary* (Taylor, 2004) contains only 608 different words. In this case, it is reasonable to assume that a word found in a smaller picture dictionary is more important than one found in a larger picture dictionary.

   In order to generalize the idea of the 'range,' we proposed an adapted form of range called 'selection probability,' which enables the importance of a word to be weighted in favor of a word that is found in a smaller sized picture dictionary (see Chujo et al., 2005). For that purpose, we assigned a probability to each word[2]. This resulted in a selection probability score for each word on each of the three lists (Picture Dictionary Lists 1, 2 and 3[3]) and each list was ranked in ascending order according to the probability score.

Creating a Ranked Daily Life TEYL Vocabulary Master List

We next integrated the four lists (the CHILDES list and the three picture dictionary lists) into one "Daily Life TEYL Vocabulary List" with each word showing one ranked score. To do this, we used the following procedure:

1. It was important to handle the picture dictionaries published outside Japan and in Japan separately when we calculated the selection probability. In the exploratory phase of our research, we examined the selection probability scores of the picture dictionary lists and found that the words from picture dictionaries published within and outside of Japan were based on different cultural views. For example, Japan-based picture dictionaries included words such as *curry, persimmon, leapfrog* and *squid* as everyday vocabulary which would be useful in a Japanese context, but not necessarily outside of Japan, i.e., for students or teachers living abroad, or for a wider Asian EFL audience. Therefore, we used the selection probability scores of the picture dictionaries published in the U.S., England, Australia, Singapore, and Hong Kong, so

that these daily life words would rank higher than the Japan-based daily life words. Thus, while Japan-specific words such as *persimmon* and *leapfrog* would be included in the master list, these would be ranked much lower than words encountered in situations abroad such as *asleep* or *dollar*. Therefore, we have two basic statistics assigned to each word in one master list ("Daily Life TEYL Vocabulary List"): the selection probability score for the picture dictionaries and the CHILDES log likelihood *'outstanding-ness'* scores.

2. Next, we calculated an average of the rankings of the selection probability scores for the picture dictionaries and the rankings of the CHILDES log likelihood *'outstanding-ness'* scores, and then ranked the words in ascending order. This list is available on the web at http: //www5d.biglobe.ne.jp/~chujo/.

Evaluating the Word Lists

In order to determine the pedagogical appropriateness for TEYL, the words on the Daily Life TEYL Vocabulary List (hereafter 'TEYL List') were evaluated with regard to grade level, semantic content and distribution, and JSH text coverage. These procedures are discussed below.

1. Determining the grade level of the TEYL vocabulary. In order to understand at what U.S. grade level these words would be understood by native English speaking (American NS) children, the list of 5,259 TEYL words was compared to *The Living Word Vocabulary* (Dale & O'Rourke, 1981) and the *Basic Elementary Reading Vocabularies* (Harris & Jacobson, 1972). *The Living Word Vocabulary* includes more than 44,000 items and each presents a percentage score for those words or terms familiar to students in grade levels 4, 6, 8, 10, 12, 13, and 16. (Note that grades 13 through 16 denote four years at the college or university level.) The *Basic Elementary Reading Vocabularies*, with 7,613 different words appearing in a selection of textbooks widely used in 1970 in grades one through six of the elementary school, was used for determining the (U.S.) grade levels of reading vocabulary for the first, second, and third grade levels. Using these control lists, we calculated the average grade level for ten different list sizes from the top-500 to the top-5,000 TEYL words. Although we acknowledge that these sources are dated, we were able to determine

grade levels for all the words appearing on our list, since generally these basic words have not changed over time, for example, *pencil, chair, book,* and *toy*. In addition, there is no contemporary comparable resource that we are aware of[4].

2. Determining the semantic categories of the TEYL vocabulary. Tom McArthur's *Longman Lexicon of Contemporary English* (1981) classifies over 15,000 entries under a set of fourteen semantic fields such as *life and living things*, and *people and the family*. In this study, we used these 15,000 entries in the fourteen semantic fields to make it possible to cluster words in a word list into groups of different semantic fields[5]. Some polysemous words, for example *nail,* belong to two semantic fields: *the body*; and *substances, materials, objects, and equipment*. Therefore the total number of semantic fields is larger than the number of words.

To confirm that the TEYL list includes grade-appropriate concepts such as animals, food, school, nature, and the home environment, we compared the distribution of the semantic fields of the first 500 words from the TEYL list to the fourteen semantic fields of words in the JSH textbook vocabulary. Although most of the first 500 TEYL words do not appear in the JSH textbook vocabulary, there was overlap. In order to examine distribution, first those words that appear both in the TEYL list and the JSH vocabulary were deleted from the first 500 TEYL list. In order to maintain 500 words, this TEYL list was supplemented with words from the second 500 TEYL list so that there were a total of 500 TEYL words, and this modified "Top 500 TEYL (Ver. 2) list" was then compared to the fourteen categories.

3. Determining the JSH text coverage of the TEYL vocabulary. Finally, to understand how the TEYL vocabulary compares to existing JSH vocabulary, text coverage was calculated. A JSH vocabulary list, containing 3,950 different base words, was compiled from the 41,112-word top selling series of textbooks, the *New Horizon 1, 2, 3* series (Tokyo Shoseki, 2002) and the *Unicorn I, II & Reading* series (Bun'eido, 2003) currently used in Japanese secondary education. We wanted to see how well this JSH vocabulary covered various activities, and how this compared to the coverage provided by the TEYL vocabulary. For this purpose, five 1,500-word text samples of eighteen language activities were used from a previous study (see Chujo et

al., 1994)[6]. These activities include nine text categories used in spoken language such as daily conversation, survival conversation, movies, medical conversation with nurses and doctors, economic news, business talk, a radio program, and TOEFL listening sections; and nine text categories used in written language such as a cooking article, an everyday word dictionary[7], a woman's magazine, science news, a business letter, a computer manual, a science book, a novel, and a *Time* magazine. The sources are listed in Appendix B.

Text coverage was calculated by counting the number of the words known in the text, multiplying this number by 100 and then dividing by the total number of words in the text. Using the formula p = (the number of words covered in the activity text by the TEYL list words)/ (total number of words in the activity text) x 100, we calculated the targeted vocabulary coverage percentage learners might reasonably be expected to obtain along with the acquisition of the JSH level vocabulary and TEYL vocabulary.

Results and Discussion

Research Question 1: Evaluating Grade Level

The results of a comparison of the TEYL words with *The Living Word Vocabulary* (Dale & O'Rourke, 1981) and the *Basic Elementary Reading Vocabularies* (Harris & Jacobson, 1972) are shown in Table 1. In addition to the average grade level, we calculated the standard deviation (SD) of each of the top-500 to the top-5,000 TEYL words to measure how far any number (grade level score) is from the middle. For example, a SD of 2.0 allows that the grade level may range from the average grade level ±2.0.

Table 1

Vocabulary Size and Average Grade Level

Vocabulary size	Average grade level	SD
500	2.4	1.2
1,000	2.9	1.6
1,500	3.6	2.4
2,000	4.2	3.1
2,500	4.9	3.8
3,000	5.3	4.1
3,500	5.6	4.3
4,000	5.9	4.6
4,500	6.2	4.7
5,000	6.0	4.6

We can see a clear tendency for a steady increase in grade level with the change of vocabulary size, and an increase in the SD, which means the grade levels are less stable among each vocabulary strata as the vocabulary size increases toward 5,000 words. We can see that the first 500 words and the first 1,000 words are generally understood by third grade students, with a SD of 1.2 and 1.6, respectively. The levels increase systematically: The 2,000 word strata are generally known by fourth grade students, the 4,000 word strata by fifth graders and the 5,000 word strata by sixth grade students. We also see that a larger vocabulary has a larger SD compared to a smaller vocabulary. Thus we can expect to obtain a more reliable grade level when the vocabulary size is smaller.

It is notable that the average grade level of the first 500 and 1,000 words remains stable at 2.4 and 2.9 respectively, and that they have a smaller SD (less than 2.0) compared to the larger vocabulary strata. This procedure allowed us to identify an optimal number of words for a smaller working word list. Japanese educators

(Takefuta & Suikou, 2005; Ono, 2005) advocate allotting 500 words or 500 to 1,000 words to TEYL in primary education based on the estimation that the required size an adult EFL learner's vocabulary for practical communication activities is 7,000 to 8,000 words (Takefuta & Suikou, 2005, p. 60). Therefore, we limited the TEYL list to 1,000 words. In terms of practical application, we can say that these first 500 words and/or the first 1,000 words might be the most appropriate and useful vocabulary size for selecting daily life words for beginner level TEYL students and that they are within the elementary school range, that is, grades 1 through 3. Therefore as a more pedagogically useful vocabulary list, we have 500 or 1,000 grade-appropriate TEYL words from the original list of 5,259 words.

We can confirm that the log likelihood and selection probability statistics we used to rank the words were reasonable with regard to grade appropriateness. And from Appendix C, we can clearly see that appropriate words for the lower grades are listed in the first 500 words.

Research Question 2: Evaluating Semantic Content and Distribution

By comparing the TEYL word list to the *Longman Lexicon of Contemporary English* (McArthur, 1981) we were able to determine that it included words in each of the fourteen semantic categories. Figure 1 represents the distribution of semantic fields for 500 TEYL words (Ver. 2) and the JSH vocabulary. The percentage of TEYL words classified into each semantic field is shown with black bars, and the percentage of JSH words is show with gray bars.

We can see the top semantic fields of the TEYL words are: (a) *life and living things*; (b) *substance*, *materials*, *objects*, *and equipment*; (c) *buildings*, *houses*, *the home*, *clothes*, *belongings*, *and personal care*; (d) *entertainment*, *sports*, *and games*; (e) *movement*, *location*, *travel*, and *transport*; and (f) *food*, *drink*, and *farming*. We can say that the TEYL words (for example, *shoe, cat, car,* and *chair*) generally relate to concrete concepts belonging to semantic fields appropriate to the developmental level of the students.
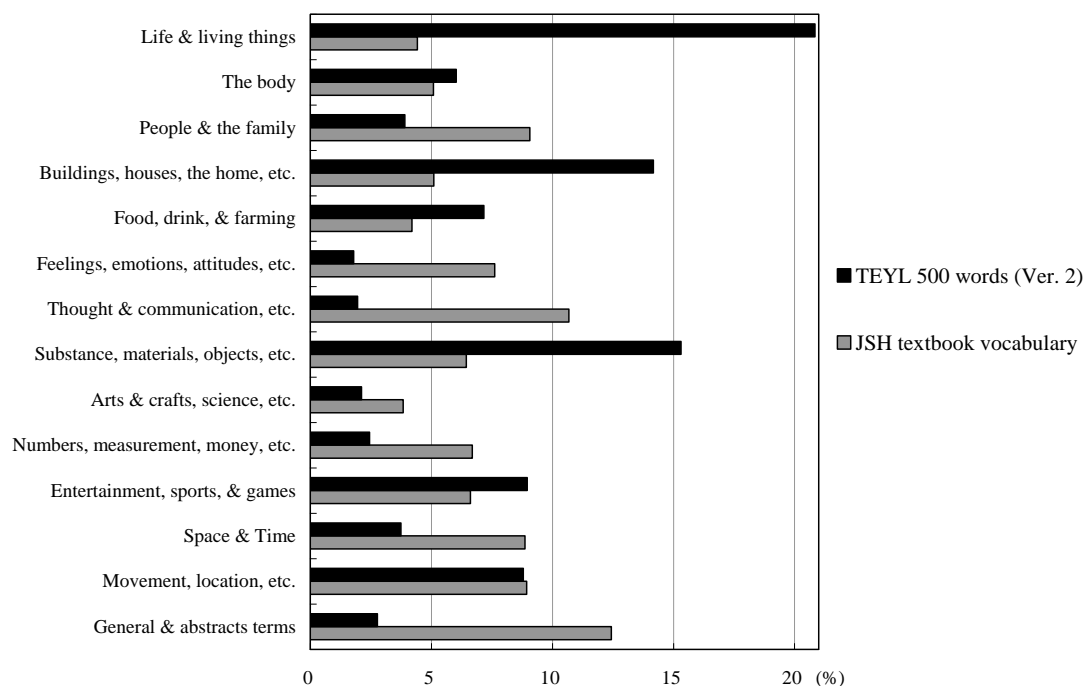
Figure 1. A comparison of percentages of the 500 TEYL words and JSH textbook vocabulary by semantic field.

On the other hand, the top semantic fields of the JSH textbook vocabulary are: (a) *general and abstracts terms*; (b) *thought and communication, language, and grammar*; (c) *people and the family*; (d) *space and time*; (e) *movement, location, travel, and transport*; and (f) *feelings, emotions, attitudes, and sensations*. JSH students "are able to think beyond the immediate context in more abstract terms" (Pinter, 2006, p. 7), and this is reflected in the semantic categories. Overall, from this observation we can see the TEYL words can provide elementary level students with grade appropriate concepts relevant to a child's everyday world.

Research Question 3: Evaluating Text Coverage

Finally, to understand how the TEYL vocabulary compares to existing JSH vocabulary, text coverage was calculated and the results are shown in Figure 2. The percentage of text coverage for the JSH textbook vocabulary over each activity is shown by gray bars; and the JSH textbook vocabulary supplemented by the modified 500 TEYL words (Ver. 2) is shown by black bars. Looking at the graph, we can see the ineffectiveness of the JSH textbook vocabulary, mainly because of its limited scope. Since the JSH texts are for grades 7 through 12, it's appropriate that the

coverage is rather low for adult language activities such as medical conversations with doctors, or reading science news and *Time* magazine. However, the most notable point is that there is a lack of important daily life words in the JSH texts. We can see that the addition of the 500 TEYL words resulted in the improvement of text coverage for 'Everyday words' from 53.3% to 70%. The TEYL is an important supplement, although there would be benefit from further improvements.
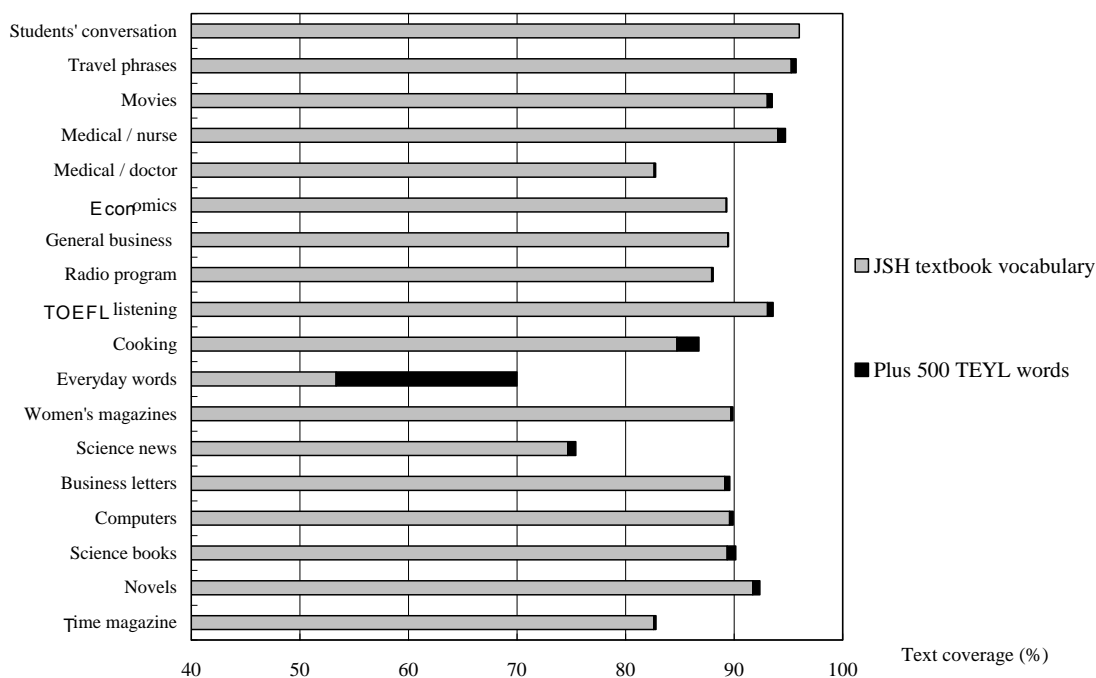
Figure 2. Text coverage of Japanese textbook vocabulary with/without 500 TEYL words over 18 activities texts.

Conclusion

From a review of the literature, we understand that there is a need to construct a word list for TEYL education at the primary level in Japan, and that there are no known studies which have done so. Not only is this type of everyday vocabulary essential to young learners as a basis of language knowledge, it is essential for filling in the gap of vocabulary not taught in Japanese junior and senior high schools, and Japanese secondary level educators expect a word list that will address this lack. In addition, this is important vocabulary for Japanese or other Asian students who travel to English-speaking countries.

  In this study, 1,000 words were statistically selected from a children's spoken

corpus and from picture dictionaries and were found to be appropriate with regard to grade level, semantic content and text coverage. Although other TEYL lists might be generated from other sources other than CHILDES and picture dictionaries, we hope this list contributes to the body of work in TEYL language teaching, and that it or lists similar to it will be considered when elementary and JSH textbooks are revised by MEXT over the coming years. Additionally, the methodology used to generate the TEYL list may be of interest to readers outside of Japan. To determine if the TEYL list is useful in other contexts, educators can calculate text coverage calculation by replacing the JSH textbook vocabulary list with the vocabulary from another [Asian] textbook. This list is accessible online at http: //www5d.biglobe.ne.jp/~chujo/eng/index.html. E-learning software programs and gaming devices in four languages (Chinese, Korean, English, Japanese) based on this TEYL list are under development for a broader Asian EFL audience, and an *Ara Karuta* card set (Nishigaki et al., 2009) is currently available.

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Footnotes

1. From the "English-American Corpora" section of CHILDES, ten sub-corpora titled Bliss, Bohannon, Brown, Carterette & Jones, Evans, Garvey, Gathercole, Kuczaj, Tardif, and Van Kleeck, were chosen based on the subjects' age range and data collection situation. For details on these corpora, please consult the 'English-American Corpora' section (http: //childes.psy.cmu.edu/data/) as well as a general introduction to the CHILDES (http: //childes.psy.cmu.edu/).

2. The selection probability of a word extracted from 20 dictionaries is defined as follows. To select a word from a dictionary, we first select a dictionary, di (i=1…20), from the 20 picture dictionaries. Thus, the selection probability of di, $P(di)$, is 1/20. Next, we select word w from di. Suppose that di has $W(di)$ words, the selection probability of w given di, $P(w/di)$, is $1/W(di)$. Thus, the selection probability of di and w, $P(w,di)$, is $P(di)*P(w/di) = (1/20)*(1/W(di))$. Note that $P(w,di)$ is 0 if w is not included in di. We add the selection probability of di and w, $P(w,di)$, for the 20 dictionaries to calculate $P(w) = P(w,d1) + P(w,d2) + ... + P(w,d20)$. The selection probability, $P(w)$, is a generalization of range. Suppose that all the dictionaries are the same size, i.e., $W(d1) = W(d2) =... = W(d20) = K$, where K is a constant. Then, if the range of word w is r, then $P(w) = r * (1/20)* (1/K) = r *$ constant. Thus, $P(w)$ is proportional to r. The selection probability weights words in smaller dictionaries more heavily than words in larger dictionaries. For example, if $W(d1)$ =1000 and $W(d2) =$ 2000, then $P(w,d1) = (1/20)*(1/1000)$ and $P(w,d2) = (1/20)*(1/2000)$. Thus, $P(w,d1) > P(w,d2)$. This is because a word contained in a smaller dictionary is more important than a word contained in a larger dictionary.

3. It was noted that all of the CHILDES words were already included in the Picture Dictionary List 3.

4. The rationale for using *The Living Word Vocabulary* (LWV) is explained by Hiebert (2005, pp. 252-253):

> … the time frame within which it was validated make[s] the LWV a less-than-ideal resource for use with students in the early part of the 21st century. At the present time, however, the LWV is the only comprehensive, existing database on students' familiarity with word meanings…[and furthermore]…"Because of the shortcomings in the LWV system, an additional resource [is necessary] …for decisions of inclusion or exclusion on grade-level lists….

Because the LWV assigned grade level 4 to grade level words from grades 1-4, we used an additional resource to evaluate the grade levels of those words, and allotted each word to grade 1, 2, 3, and 4. Although the newer Zeno et al. (1995) was available, we wanted to use a resource from a similar time frame as the LWV, and therefore chose Harris & Jacobson (1972).

5. Although the UCREL Semantic Analysis System (http://ucrel.lancs.ac.uk/usas/) is effective for analyzing text, we learned that the precision of the semantic tagging for a word list might not be as precise as that for a text (personal communication with P. Rayson, January 2, 2007).

6. In order to ensure the reliability of the results and to confirm the results were

not dependent on the type of text, it was necessary to replicate the previous study (Chujo et al., 1994). Thus we used the same eighteen sets of vocabulary for the 18 language activities used in the 1994 study, even though the materials may be somewhat dated.

7. It should be noted that because a picture dictionary was included in this control list, it was not included as one of the thirty picture dictionaries chosen for the study.

APPENDIX A

Selected Picture Dictionaries

Title	Author	Publisher	Year	Words
The Longman Picture Dictionary American English	Ashworth, J. & Clark, J.	Pearson Education Ltd. , Harlow, Essex	1993	1,066
Word by Word	Molinsky, J. S. & Bliss, B.	Prentice Hall Regents, Englewood Cliffs	1995	2,554
Just Look'n Learn ENGLISH Picture Dictionary	Hochstatter, D.	Passport Books, Lincolnwood, IL	1996	1,274
Scholastic First Dictionary	Levey, S. J.	Scholastic Inc., New York	1998	1,614
The Oxford Picture Dictionary for Kids	Keyes, R. J.	Oxford University Press, New York	1998	761
Smile Picture Dictionary	Barraclough, C.	Macmillan Heinemann, Oxford	1999	748
The Oxford Picture Dictionary for the Content Areas	Kauffman, D. & Apple, G.	Oxford University Press, New York	2000	1,207
Word by Word Primary phonics picture dictionary	Molinsky, J. S. & Bliss, B.	Pearson Education Ltd., White Plains, NY	2000	863
First Word Study Dictionary	Turton, N.	Learners Publishing Pte Ltd., Godown, Singapore	2001	905
My Big Word Book	Priddy, R. et al.	Priddy Bicknell, New York	2002	876
My World A First Picture Encyclopedia	Picthall, C. & Gunzi, C.	Reader's Digest Children's Publishing Inc., Pleasantville, NY	2002	681
Oxford First Dictionary	Goldsmith, E.	Oxford University Press	2002	1,362
Disney My First 1000 words	Feldman, T.	Disney Press, New York	2003	1,193
Disney Picture Dictionary	Feldman, T. & Benjamin, A.	Disney Press, New York	2003	971
First Picture Dictionary	Oliver, A.	Hinkler Books, Dingley, Victoria, Australia	2003	766
Longman Children's Picture Dictionary	Graham, C.	Longman Asia ELT, Quarry Bay, Hong Kong	2003	739

Longman Photo Dictionary of American English	Summers, D. et al.	Longman, Harlow, Essex	2003	2,195
The Basic Oxford Picture Dictionary (2nd ed.)	Gramer, M.	Oxford University Press, New York	2003	1,114
Picture Dictionary	Taylor, G.	Ladybird Books Ltd., London	2004	608
The Sesame Street Dictionary	Hayward, L.	Random House, New York	2004	1,174
WORD BOOK: E-de Mite Oboeru Eitango	Kuno, Y.	Borgnan, Tokyo	1993	1,004
ABCD Book: Hajimete Deau Eigo-no Jiten	Yoneyama, E.	Sekai Bunka Publishing Inc., Tokyo	1995	1,031
English-Japanese Picture Dictionary	Toda, K. & Herring, A. K.	Toda Design Kenkyuushitsu, Tokyo	1999	1,126
Sanseido Word Book 1	Hatori , H., Kuno, Y. & Kaizaki, Y.	Sanseido Publishing Co., Ltd., Tokyo	1999	828
ALC Picture Dictionary: 2000 Words for Kids	Kuno, Y.	ALK Co., Ltd., Tokyo	2000	1,704
Sanseido Word Book 2	Kuno, Y. & Arthur, B.	Sanseido Publishing Co., Ltd., Tokyo	2000	1,142
Kodomo Eigo Jiten	Tsuruta, K.	Kodansha Ltd., Tokyo	2001	813
English for You	Yasuyoshi, I.	Seibido Shuppan Co., Ltd., Tokyo	2001	691
NOVA Illustrated English Dictionary	NOVA	Nova Corporation, Tokyo	2004	2,701
Hajimete Eitango Jiten	Gakken	Gakken Co., Ltd., Tokyo	2004	920

APPENDIX B

Eighteen Language Activities and Their Sources

Spoken Language				
Activities	Sources	Types	Tokens
Students' Conversation	Svartvik, J. & Quirk, R. (1980). *A corpus of English conversation*, Lund: C. W. K. Gleerup, 804-811.	292	1555
Travel Phrases	Church, N. & Moss, A. (1983). *How to survive in the U.S.A.: English for travelers and newcomers*. Cambridge: Cambridge University Press, 125-132.	358	1586
Movies	Tucker, Broadcast News, My Fair Lady, The Unbearable Lightness of Being, Mother Teresa.	429	1570
Medical / Nurse	David, A. & Crosfield, T. (1976). *English for nurses*, Burnt Mill, Harlow: Longman 5, 10-11, 93-94, 97, 106-107, 111-112, 114-116.	326	1557
Medical / Doctor	Cassidy, L. & Wagatsuma, T. (1982). *English conversation for physicians*, Tokyo: Medical View Co., LTD., 66-74, 79.	521	1520
Economics	ABC News and Gloview Co., Ltd. (1982). *Abc special Dan Cordtz's Econocast*.Tokyo: ABC News and Gloview Co., Ltd., 80, 82, 84, 88, 90, 92, 94.	437	1519
General Business	Howe, B. (1988). *Visitron: The language of meeting and negotiations*. Burnt Mill, Harlow: Longman, 52-54, 62-64, 72-73.	403	1531
Radio program	Goken. (1987). *FEN news file volume 7*, Tokyo: Goken, 8-60.	409	1529
TOEFL Listening	Sharpe, P. J. (1989). *Barron's how to prepare for the TOEFL*, Sixth Edition. New York: Barron's Educational Series, Inc., 559-563.	484	1534
Written Language				
Cooking	*Ladies' Home Journal*, *104*(5), 1988, 66, 120, 128, 142-145.	566	1527
Everyday Words	Parnwell, E. C. (1988). *The new Oxford picture dictionary*. New York: Oxford University Press, 2-50.	1091	1500
Women's Magazines	*Savvy*, 1988, March, 22-23, 26.	475	1525
Science News	*Science News*, *136*(26), December 23 & 30, 1989, 416-422.	538	1512
Business Letters	*Webster's guide to business correspondence*, Springfield:	477	1509

	Merriam-Webster Inc., 1988, 265- 289.		
Computers	Naiman, Arthur (1988-89). *The Macintosh bible*, Second Edition. Berkeley, California: Goldstein & Blair, 31-37.	678	1497
Science Books	Hawking, S. (1988). *A brief history of time: from the big bang to black hole.* New York: Bantam Books, 1-6.	446	1509
Novels	Christie, A. (1968). *N or M?* New York: Dell Publishing Co., Inc. , 5-10.	361	1536
Time	*Time*, No.14, April 2, 1990, 11-12.	494	1506

APPENDIX C

The 1,000 Daily Life TEYL Vocabulary (in Order of Rank)
Note that number beside each word indicates the grade level according to Dale &
O'Rourke (1981) and Harris & Jacobson (1972). Any words not appearing in either
resource are denoted by '*'

word	#	word	#	word	#	word	#	word	#	word	#	word	#
baby	1	tree	1	brown	1	bath	3	rubber	3	neck	2	sled	2
pencil	3	write	2	catch	1	broom	3	mirror	3	friend	1	whistle	2
fish	1	crayon	4	chicken	2	pull	2	kiss	3	alphabet	4	flute	4
milk	2	mouse	2	clock	2	jacket	3	around	1	show	1	apartment	2
chair	2	green	4	do	1	motorcycle	4	chin	3	spaghetti	4	chalk	4
dog	4	cup	2	down	4	wet	1	piece	2	wait	2	camp	3
finger	2	fall	1	beach	3	bone	2	man	1	pet	1	bake	2
mouth	2	hammer	2	refrigerator	3	make	1	bubble	3	grandmother	2	tricycle	4
toy	1	bread	3	floor	2	peach	4	rhinoceros	6	noise	2	bracelet	4
car	1	banana	3	glue	4	tire	2	hide	2	soap	4	bucket	4
nose	2	dress	1	wheel	2	kitchen	2	name	2	shadow	3	castle	3
ball	4	can	1	pink	2	shovel	2	oven	2	right	1	grapefruit	4
cheese	4	soup	2	little	1	wash	2	pepper	4	helicopter	3	mix	3
orange	3	read	1	draw	3	food	1	ribbon	3	circus	2	needle	3
hot	2	telephone	2	throw	1	bat	4	octopus	4	toast	4	leopard	4
shoe	1	bee	1	sugar	3	thumb	2	star	2	sunglass	6	wind	2
book	1	cream	2	drum	3	puppet	4	strawberry	4	lobster	4	uncle	2
apple	2	kite	2	open	2	chocolate	4	bicycle	3	panda	4	toothbrush	4
hat	1	birthday	1	rope	2	train	1	on	1	drawer	3	dig	4
paper	2	sing	1	zebra	4	turn	2	bite	3	dollar	2	kid	4
table	2	rabbit	1	look	1	owl	2	cousin	3	purse	4	gray	2
eat	1	girl	1	moon	3	worm	4	off	1	noodle	4	goldfish	4
head	1	sock	4	up	1	tomato	4	bottle	2	outside	2	pizza	4
snake	4	house	1	store	1	swing	3	no	1	bow	3	mail	2
eye	2	balloon	1	camel	4	baseball	3	giant	3	fix	2	wake	2
lion	2	puppy	2	I	1	yogurt	10	belt	3	snail	4	eagle	3
hand	1	bear	1	arm	2	flag	3	sink	4	aunt	2	beetle	4
hair	1	big	4	blanket	3	honey	2	pumpkin	3	tent	2	polar	8
cat	1	knife	3	butter	2	hippopotamus	4	penguin	4	mom	4	nail	3
juice	4	fork	3	fire	1	lettuce	4	wear	2	shark	4	earring	4
bird	1	swim	2	break	2	fruit	2	chick	4	knock	1	teacher	2
truck	1	brother	2	tie	2	hungry	2	out	1	recorder	4	screwdriver	4
bed	1	go	1	light	1	feather	2	slide	2	cave	3	closet	4
tooth	2	drink	2	pen	2	stove	3	bathroom	4	violin	4	pour	3
elephant	2	horse	1	fly	1	pajama	4	room	2	stick	2	stand	2
ride	1	cook	2	tall	2	knee	3	dragon	2	kick	3	skate	2
jump	1	whale	3	nut	4	bathtub	4	gorilla	4	mailbox	4	trash	4
boat	1	sit	1	door	2	tongue	3	home	1	beard	3	watermelon	4
flower	2	push	2	cry	1	alligator	4	horn	2	eyebrow	4	want	1
doll	2	lunch	2	cut	1	black	1	roll	2	like	1	dump	4
frog	3	sheep	2	bean	3	suitcase	4	spider	3	crocodile	4	pin	3
water	1	giraffe	3	brush	3	hop	1	goose	2	sad	2	flamingo	6
red	1	plate	3	clown	3	bridge	2	pocket	1	wood	2	notebook	6
ice	1	carrot	3	bowl	2	rug	3	street	1	donkey	3	father	1
blue	4	mother	1	over	1	ant	4	basketball	4	guitar	4	heavy	2
butterfly	3	tractor	2	towel	4	basket	2	elbow	4	cherry	2	rocket	1
monkey	2	leg	1	circle	3	clean	2	salad	4	mushroom	4	face	2
boot	2	comb	3	rain	1	clothes	4	pear	4	bell	2	penny	1
animal	1	puzzle	3	goat	1	dish	2	fun	4	medicine	3	king	2
color	1	kangaroo	4	zoo	1	mask	4	mountain	2	bike	1	pineapple	4
sandwich	3	pillow	3	hole	2	seal	4	dinner	2	desk	3	cage	1
tiger	2	cookie	2	string	2	seed	2	wing	2	hug	3	bulldozer	4
boy	1	box	1	barn	1	meat	3	scare	2	hurt	2	raccoon	2
shirt	2	tail	2	dance	2	ladder	1	piano	3	help	4	kind	1
cake	1	school	1	candle	2	pea	4	next	1	napkin	4	thirsty	4
egg	2	grape	4	button	2	walk	1	coffee	3	letter	1	mustache	4
watch	2	block	2	fast	1	close	2	monster	4	hold	1	hill	1
airplane	1	snow	2	sweater	4	picnic	1	last	1	lamb	2	farmer	2
yellow	1	pant	6	corn	2	put	1	caterpillar	4	song	2	jelly	4
a	1	cereal	4	glove	2	sky	3	hit	2	happy	1	busy	2
cow	1	glass	2	squirrel	2	drop	1	flashlight	2	pick	2	shape	2
spoon	4	rock	2	bag	1	shell	3	drive	2	sneaker	4	turkey	3
duck	1	sister	1	candy	3	farm	1	snowman	2	peanut	1	garage	2
scissor	4	dirty	2	white	1	popcorn	4	saucer	4	garbage	4	sick	3
play	1	purple	3	coat	1	you	1	hard	1	magic	2	here	1
toe	3	cold	4	climb	2	dad	2	grasshopper	4	parrot	3	plane	4
see	1	picture	1	hamburger	4	blow	2	pie	2	sandbox	4	laugh	1
sleep	1	kitten	1	mitten	4	dry	4	slipper	4	cheek	3	touch	3
foot	1	turtle	1	people	2	top	2	good	1	xylophone	6		
paint	1	pig	1	sand	2	grass	1	take	1	eraser	4		
ear	2	breakfast	2	sun	1	pan	1	window	1	rooster	3		
game	1	umbrella	4			movie	4	deer	2				

Word	#	Word	#	Word	#	Word	#	Word	#	Word	#	Word	#
step	1	plant	2	ocean	3	tight	3	lock	3	chase	2	chess	4
sharp	3	wolf	2	cloud	3	shelf	3	museum	3	painting	4	straw	3
sailboat	4	cone	3	screw	4	ink	4	miss	1	crash	3	alone	2
playground	4	cube	6	tummy	4	ready	1	rattle	4	chop	3	log	3
pot	3	arrow	3	forget	2	sea	2	sword	4	paste	4	bunny	2
spell	4	yo-yo	4	lamp	3	yard	2	smile	2	quilt	4	suntan	4
jewelry	4	sweep	3	reindeer	4	raincoat	4	skip	4	gum	4	he	1
how	1	air	2	back	1	reach	2	shoot	3	stethoscope	10	barber	4
tell	1	dentist	4	elevator	2	toaster	4	feed	2	baker	4	ballet	4
fence	2	wrist	4	camera	3	seashell	4	doughnut	4	x-ray	4	tugboat	4
cactus	4	stair	3	wheat	4	peel	4	thread	3	diaper	4	east	3
seesaw	4	ceiling	3	statue	3	teapot	4	apron	3	bacon	4	north	3
taste	3	wipe	3	pretend	3	whisper	2	orangutan	13	zip	4	south	3
fold	3	loud	2	dirt	3	lightning	3	fingernail	4	gymnastic	6	pliers	4
pail	2	sidewalk	2	dark	1	hurry	1	empty	2	hockey	4	tow	6
backpack	*	park	2	icicle	4	starfish	4	crescent	8	sharpener	4	track	2
wheelbarrow	4	lip	4	hay	3	dune	8	flipper	4	fountain	3	squeeze	4
ship	2	pony	1	bump	2	sew	3	cotton	4	curl	3	quart	4
koala	1	grow	2	ketchup	4	snack	2	ape	4	warm	2	crack	3
bug	3	wastebasket	4	summer	2	desert	4	scarecrow	2	bakery	4	windmill	4
rake	4	surprise	1	costume	4	dessert	4	thermometer	4	dustpan	4	officer	4
jar	2	stir	4	scarf	4	robot	4	mixer	4	compass	4	curly	4
real	2	stop	1	crawl	2	subway	6	today	2	melon	4	taco	*
wagon	1	fur	3	waterfall	4	taxi	4	asleep	3	parade	2	yesterday	3
leaf	4	tower	2	bring	1	milkshake	4	raspberry	4	hang	2	jigsaw	4
lizard	4	river	2	trunk	2	wrap	3	supermarket	2	ranch	2	secret	3
toothpaste	4	spaceship	4	ski	4	cucumber	6	beautiful	2	bend	3	backyard	3
rainbow	4	helmet	4	it	1	bark	1	rattlesnake	4	hawk	4	stool	3
celery	4	ax	4	shake	2	roller	4	burn	4	stem	3	tortoise	4
tennis	4	pole	3	paw	2	upside	3	shampoo	4	armchair	4	toolbox	*
fat	1	iron	2	roof	2	witch	4	insect	3	web	4	mash	4
chimney	3	bus	1	grandfather	2	powder	4	belong	2	scream	3	dandelion	4
quiet	2	melt	3	treasure	3	clam	6	skeleton	4	butcher	4	mop	4
dime	3	tool	3	another	1	bull	4	poor	2	cape	3	cushion	4
carpenter	4	cracker	4	hike	4	yell	2	unicorn	12	dot	2	roast	3
careful	2	envelope	4	fry	3	where	1	vegetable	3	diamond	3	soon	1
clap	3	jungle	3	bounce	2	beaver	4	blouse	4	shave	4	knight	4
ladybug	4	pop	2	cool	3	telescope	3	undershirt	4	driver	3	ping-pong	4
knot	4	cap	3	sneeze	3	puddle	4	waffle	4	hear	1	tulip	4
necklace	4	pipe	3	couch	4	bench	3	fireman	4	sleeve	4	piggy	4
what	1	spill	3	nest	2	tunnel	3	hook	3	drill	3	almost	2
rectangle	6	lemon	4	mud	3	scratch	3	astronaut	4	snowflake	4	volcano	4
finish	2	acrobat	4	chimpanzee	4	checker	4	cartoon	4	marshmallow	4	sausage	4
come	1	rat	4	key	3	story	1	under	1	waiter	4	tiny	2
canoe	4	jet	3	soda	4	coin	3	stay	1	jellyfish	4	win	2
race	1	heel	3	bib	4	skunk	3	aquarium	4	grain	3	wizard	4
triangle	4	grandma	4	hen	1	sofa	4	daddy	4	swan	3	wallet	4
doctor	2	pretty	2	silly	2	minute	2	yawn	4	trumpet	4	hippo	4
supper	2	some	1	wrench	4	blueberry	2	daisy	4	who	1	hydrant	6
count	2	wall	2	need	2	sponge	4	inside	2	bookcase	4	soy	12
long	1	soccer	10	fit	2	crib	4	laundry	4	fan	4	mayonnaise	6
zipper	4	pancake	4	grandpa	4	mermaid	4	sunflower	4	panties	4	strong	2
this	1	princess	3	talk	1	zero	4	railroad	4	wild	3	rest	2
lake	2	hamster	4	ghost	4	please	1	lap	4	globe	4	lazy	2
shower	4	dragonfly	4	fight	1	tear	2	trick	2	moose	4	pasta	12
jeep	4	away	1	build	1	trombone	4	calendar	4	beak	4	elf	4
tape	2	surfboard	4	why	1	vacuum	8	submarine	4	eyelash	4	bandage	4
nap	3	buffalo	3	smell	2	seaweed	4	paintbrush	4	pirate	4	bang	2
cowboy	2	pebble	4	bathe	4	underpants	4	cent	3	happen	2	cliff	3
band	3	find	1	classroom	4	parachute	4	tickle	4	escalator	4	whisker	3
guess	1	marble	4	favorite	3	plum	4	somersault	4	skateboard	4	frown	3
funny	4	muffin	4	spinach	4	snowball	4	carrier	6	photograph	4	avocado	8
wave	2	angry	2	sweatshirt	4	dozen	4	footprint	4	ham	4	tag	3
stripe	4	cough	4	magnet	4	microphone	4	lick	2	porch	4	dairy	4
mosquito	4	bead	3	crab	4	now	1	bush	3	microscope	4	chew	3
soft	2	onion	4	queen	3	get	1	porcupine	3	dive	3	ugly	2
not	1	acorn	4	clay	4	walrus	6	too	1	let	1	drip	4
ostrich	4	potato	3	syrup	6	stomach	3	dresser	6	part	2	stroller	4
dream	2	bathrobe	4	scorpion	8	dolphin	10	forehead	4	toad	4		
pilot	3	pool	2	grocery	3	cub	4	woodpecker	4	sandal	4		
gas	3	nickel	3	party	1	neat	3	volleyball	4	raisin	4		
merry-go-round	4	fin	4	dancer	4	flour	3	trailer	4				
								hose	3				