

Running head: USING SOCIOCULTURAL PERSPECTIVES: DYNAMIC
PROCESS

USING SOCIOCULTURAL PERSPECTIVES:
THE DYNAMIC PROCESS OF DESIGNING AND IMPLEMENTING CLASS
ACTIVITIES IN AN ONLINE JAPANESE LANGUAGE COURSE

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE
UNIVERSITY OF HAWAI'I AT MĀNOA IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

IN

EDUCATION

DECEMBER 2012

By

Mayumi Shibakawa

Dissertation Committee:
Doris Christopher, Chairperson
Helen Slaughter
David Ashworth
Peter Leong
Dongping Zheng

Keywords: online second language teaching, Japanese language, synchronous interaction,
sociocultural theory, formative and design experiments

© Copyright 2012
Mayumi Shibakawa

All Rights Reserved

To all of my former students and my family

“Because of YOU, I am what I am now. (*okagesamade, kokomade koraremashta.*)”

with appreciation, respect, and gratitude

Acknowledgements

First, I would like to thank all the committee members who have supported me in completing my dissertation. My chair adviser, Dr. Doris Christopher, always provided me with comments and feedback in a positive way. From the beginning to the end, her consistent positive energy pushed me further to complete this dissertation. Dr. Helen Slaughter taught me not only how to become a professional researcher, but also provided valuable insights into developing caring relationships with students. I owe a debt of gratitude to each member who served on my committee, especially to the one who mentored me the longest, Dr. David Ashworth. His abundant knowledge about Japanese linguistics, his experience in learning foreign languages and his experience teaching Japanese greatly deepened my understanding of second language acquisition. Dr. Peter Leong provided me with insights from the perspective of educational technology, an essential component of my thesis. Dr. Dongping Zheng introduced eye-opening philosophical theories that I would never have otherwise come across in the field of linguistics. Without her suggestions, I could not have reached the fruitful conclusion that I suggest in this dissertation.

Second, I was able to complete the dissertation because of tremendous support from my family in Japan and here in Hawai'i. I appreciate my family support: I thank my father, Hiroshi Shibakawa, my mother, Hisae Shibakawa, and my brother, Takashi Shibakawa. I am so fortunate that I have another family in Hawai'i. I appreciate the support from Robin Fujikawa sensei and Linda Fujikawa sensei not only for this particular work but they also supported me in my life matters. They always listened to my stories regardless of what I said and have always been there to listen. I deeply

appreciate their heart-warming suggestions and guidance in life.

Lastly, I would like to thank all the people whom I have met in graduate school and at work. Especially, I thank my students who have encouraged me and changed my thoughts on education.

Abstract

The study documented the dynamic process of designing and implementing instructional interventions in an online course of Japanese language and culture at a two-year college. The results have impact in three distinct areas: pedagogical, theoretical, and methodological. First, the interventions that encouraged student agency with rich contextualization were designed for students to become able to use Japanese in real life. The results suggested that how students were engaged in the class activities as well as how the design itself influenced their second language (L2) learning. Second, the study challenged the issue that previous empirical research on online L2 learning was primarily conducted based on information-processing theories that could only reveal a part of L2 learning, limited to linguistic acquisition. Using sociocultural approaches, this study demonstrated how the authentic contextualization and students' agency in the interventions augmented their L2 developmental potentials, which was not limited to linguistics but expanded to include pragmatics, sociocultural knowledge and meta-cognitive awareness. Third, the methodology of formative and design experiments suggested the importance of analyzing every factor that might affect students' learning in uncontrolled natural educational settings. This study portrayed the dynamic interactional nature of the elements in the educational environment, such as the teacher, students, and the interventions. Unlike laboratory-based studies that focus upon only limited variables, the study captured that the very process of analysis unfolded reality in a different way, which eventually resulted in bridging the discrepancy between theory and practice.

Table of Contents

	Page
Acknowledgements.....	iv
Abstract.....	vi
List of Tables.....	xi
List of Figures.....	xii
List of Transcription Conventions.....	xiii
Chapter 1: Introduction.....	1
Background to the Study.....	1
Necessity of interventions.....	1
Teacher’s lack of online L2 learning experience.....	3
Issues in Second Language Acquisition (SLA) Research.....	4
Information-processing paradigm and alternative views of SLA.....	4
Empirical research on online L2 learning.....	6
Research Questions.....	7
Significance of the Study.....	7
Chapter 2: Literature Review.....	10
Historical Overview: SLA Theories From Cognitive to Sociocultural.....	10
Cognitive-information processing theories.....	11
Krashen’s input hypothesis.....	11
Long’s interactional hypothesis.....	12
SLA theories from sociocultural approach.....	13
Chaos/complexity theory.....	14
Vygotsky’s sociocultural theory.....	15
Ecological approach.....	17
Empirical research from Vygotsky’s sociocultural theory.....	20
Research on Online L2 Learning.....	22
Distance learning and its theory.....	22
Parallel paradigm shift in online SLA.....	23
Empirical research on online L2 learning.....	25

Pedagogical View on Optimal Learning Environment.....	28
Changes in research on class activities.....	28
Class activities from the ecological approach.....	32
Authentic class activities in educational technology.....	33
Authentic learning environment for SLA.....	36
The Focus of the Study.....	38
Chapter 3: Methodology.....	41
Formative and Design Experiments Approach.....	41
Practicality of FDE.....	42
The role of theory.....	45
Pragmatism.....	46
Why FDE?.....	47
Bounding the Case.....	48
General background.....	48
Background to the interventions.....	50
Interventions.....	51
Role of the Researcher.....	55
Validity and Generalizability.....	56
Data Collection.....	59
Data Analysis.....	63
Constructivist grounded theory for FDE research.....	63
Analysis of varied data.....	65
Summary.....	67
Chapter 4: Results.....	69
The Flow of Activities and Collected Data.....	69
Analysis of Teacher's Perception of Online Instruction.....	73
Teaching philosophy and the goal of the course.....	73
Application of the course content to the real world.....	73
Teacher's understanding of the students at the college.....	75
Online specific issues.....	77

Implementation of each activity.....	78
YouTube video.....	79
Skype intervention.....	80
Real-life experience intervention.....	81
Emphasis transition along with the teacher's perception changes.....	84
Change of teachers' perception of synchronous and asynchronous learning.....	84
Change in the teacher's understanding of students' capability of technology and online interaction.....	86
Emphasis shift reconciling competing themes.....	88
Analysis of Students' Engagement.....	90
YouTube video production.....	90
Skype role-play activities.....	102
Peer-peer interaction.....	102
Native speaker interaction.....	108
Students' engagement and activity design.....	117
Analysis of Students' Perception of Their Engagement.....	119
YouTube activity and Skype intervention.....	119
Real-life experience intervention.....	125
The connection between language learning in class and application to the real world.....	125
Ecological learning in real situations.....	127
Broader scope of learning in a real situation.....	130
Summary.....	131
Chapter 5: Discussion.....	134
L2 Learning From Sociocultural Approaches.....	134
System of perception-action and students' L2 learning.....	134
Projection of self in L2 use.....	137
Language as one of semiotics.....	137
Dynamic Processes of Implementation Illustrated With FDE.....	138
Activity design, students' engagement, and the goal of the course.....	139

The influence of the teacher's beliefs on teaching.....	140
Remaining dilemma regarding the real-life experience intervention.....	141
Eclectic Mix of Different Modes of Technology for Optimal Learning Environment.....	142
Different benefits in different modes of learning environment.....	143
Getting out of online space in a 100% online course.....	144
Implications.....	145
Limitations.....	147
Future Research.....	149
Conclusion.....	150
Appendix A: Guidelines for the Real-life Intervention.....	153
Appendix B: Student Consent Form for Utilizing Students' Production in the Course..	157
Appendix C: Questions in the Student Survey.....	159
Appendix D: Student Consent Form for Student Survey.....	161
Appendix E: Student Consent Form for Audio-recording on Skype.....	163
Appendix F: Questions on the Skype Reflection Paper.....	166
Appendix G: Teacher Consent Form for the Interviews.....	167
Appendix H: Semi-structured Teacher Interview Questions for the Initial Interview....	170
Appendix I: Entire Interaction with the Native Speaker: John's Case.....	171
References.....	174

List of Tables

Table 1. Data Collection Procedure.....	62
Table 2. Teacher's Beliefs Stressed in Each Activity.....	89
Table 3. Transcription 1: Human Video.....	92
Table 4. Transcription 2: Animation Video.....	93
Table 5. Transcription 3: Beginner Level Student's (Betty's) Practice Video.....	95
Table 6. Transcription 4: Advanced Level Student's (Tim's) Practice Video.....	96
Table 7. Transcription 5: Beginner Level Student's (Betty's) Own Self-introduction.....	98
Table 8. Transcription 6: Advanced Level Student's (Tim's) Own Self-introduction.....	99

List of Figures

Figure 1. The Cycle of Perception and Action.....136
Figure 2. Chain of Changes in the Study.....141

List of Transcription Conventions

[word	the start point where overlapping speech occurs
A: word=	no pause between two speaker's utterances
B: =word	
(# of seconds)	pauses in the number of seconds
...	untranscribable utterances

Chapter 1

Introduction

As a language teacher and a researcher of second language (L2)¹ learning, I have been interested in what kind of learning environment would enhance students' L2 learning and more specifically what class activities could provide students with an optimal L2 learning environment. In my belief, teachers should constantly reflect on their own teaching and revise lesson plans and activities in order to create the best learning environment for their students. Teachers need to follow the cycle of designing and implementing lessons and activities, and reflecting and modifying them based on the observation of students' performance to better serve students. The cycle enables us to see the benefits and challenges in our planned lessons and activities. This study documents the entire processes of the cycle in which a Japanese language teacher and the researcher collaboratively designed and implemented interventions. The main goal of the study is to improve the quality of instructional activities for an online Japanese language course, examining how students were engaged in and perceived their learning in different instructional activities, and how the teacher perceived students' engagement in class activities.

Background to the Study

Necessity of interventions. The course that the researcher investigated in the

¹ I do not differentiate foreign language learning and second language learning.

Thus, the term, 'second language (L2)' in this study includes foreign language as well.

study was a 100% online Japanese language course that focused on oral and aural skills in business contexts. Students did not learn how to read and write Japanese characters at all. The detailed contents of the course will be explained in chapter 3. Regardless of the fact that it was oral-focused, there were few interactions between the teacher and students and no interactions among students. The only interaction held in the course was asynchronous through emails and YouTube videos. Synchronous interactions are, however, vital for students to learn L2 as the literature has suggested (e.g. Long, 1996; Swain, 1985). Particularly, previous studies also suggested that the interaction with peers benefitted students in developing their L2 knowledge (e.g. Donato, 1994; Ohta, 2000). The field of educational technology has emphasized the social aspect of online learning environment as well (Garrison, Anderson, & Archer, 2000). Since current technology allows us synchronous interaction without requiring any particular technological skill, it was time for the teacher to reconsider class activities that involved synchronous interactions.

Another problem in the course was the mismatch between the main course activity and the goal of the course. The goal of the course was to become able to apply what was learned in class to real situations. Besides the issue of lack of interactions, the required video activity in the course lacked contextualization. Basically, students were required to create videos in which they spoke memorized dialogues and to upload them to the YouTube site. They had to create videos by themselves with no contextualization as well as no interaction. van Lier (2008b) suggested activity-based learning, stressing the importance of contextualization and students' agency to create class activities so that students become able to use the language in varied contexts. Therefore, the course

activity needed to be modified or replaced with different activities. In this study, the teacher and researcher created two interventions: Skype and real-life experience intervention, both of which were designed to involve synchronous interactions, authentic contextualization, and students' agency.

Teacher's lack of online L2 learning experience. Teachers' teaching philosophy and perceptions of their students make a great impact upon designing and implementing interventions. One of the associated issues with the teacher is that the teacher herself had never taken online courses before. The number of online courses at colleges has been increasing, and especially two-year colleges have led in distance language education (Blake, 2009). The Sloan Consortium reported that those who were taking online courses were mostly undergraduate students and more than half of them were in 2-year associate institutions (as cited in Blake, 2009). At the college where I conducted the study, the number of Japanese courses offered online has been increasing. In fall 2010, four Japanese language courses were offered in a completely online format out of twenty-four courses in total. Two other courses were offered in a hybrid format that involved online instruction as well as face-to-face sessions. In other words, 25 % of Japanese language courses at the college involved computer-mediated instruction. Regardless, most of the teachers who were teaching Japanese language online in the college had never experienced online language learning themselves. Those who had never experienced learning L2 online could barely anticipate how students learned an L2 and thought about their online courses. Therefore, exploring students' perceptions of the online L2 learning experience might help deepen the teachers' understanding of what might foster or prevent students' L2 learning. The careful observation of students' engagement and performance

might lead to a change in the teacher's beliefs for online instruction and online L2 learning. In the study, therefore, I focused not only upon students' engagement but also their perceptions of online L2 learning and the teacher's perception of it.

Issues in Second Language Acquisition (SLA) Research

Information-processing paradigm and alternative view of SLA. Previous SLA research very much favored the traditional information-processing theories that will be explained in detail in chapter 2 (e.g. Krashen, 1985; Swain, 1985). The information-processing theories guide researchers to focus only upon particular phenomena such as negotiation of meaning as a sign of L2 learning, and yet, such a narrowed scope on L2 learning hinders seeing student developmental potentials for L2 learning. Analysis based on sociocultural approaches might uncover students' developmental learning processes beyond the limited scope of information-processing theories.

Historically, the information-processing theories have made a huge impact upon SLA research. Researchers explain the mechanism of L2 learning using metaphors such as "input, intake, output, storage, data processing mechanisms, limited-capacity processors, language data, attention-getting devices, and databases" (Johnson, 2004, p. 84). From the view of information-processing theories, L2 learning has been conceptualized in terms of individual cognitive processes, which is predictable and universal. The mechanism of processing the incoming information is considered as a general phenomenon without any individual variations. Thus, when conversations or interactions are analyzed, they are broken down into linguistic analytical units or tokens, such as clarification requests and confirmation checks, to describe the universal patterns

of SLA. Under the information-processing paradigm, there are several models such as the input hypothesis (Krashen, 1985) and the interactional hypothesis (Long, 1996).

In the mid-1990s, several SLA researchers (e.g. Firth & Wagner, 1997; Lantolf, 1996) criticized the trend of information-processing theories, suggesting that “the nature of reality was social and fundamentally unknowable and that a pursuit of the particular, and not the general, would be a better disciplinary strategy to illuminate complex human problems, such as additional language learning” (Ortega, 2010, p. 216). The biggest issue with the traditional cognitive information-processing theories is that these theories take neither social and contextual factors into consideration nor other semiotic signs besides language. Exclusion of social and contextual factors from analysis does not capture the reality of human communication. Language is only one part of meaning-making resources, and people utilize other resources such as “the body, cultural-historical artifacts, the physical surroundings” (van Lier, 2008a, p. 3). Indeed, the environment or contexts in which learners live influence L2 learning.

In reality, it would be hard to consider L2 learning process without considering the social aspect. Larsen-Freeman (2007) also criticized the information-processing theories and proposed the chaos/complexity theory. That theory explains that language learning and development is seen in the on-going processes of language use. Language learning never occurs sequentially but it always emerges in students’ language use. Accordingly, it is not realistic to view language as an object for students to acquire but rather language should be regarded as a complex adaptive system integrated in contextual features. Thus, the study will apply sociocultural approaches so that researchers can capture how meanings are constructed in the specific context in each moment.

Empirical research on online L2 learning. Another issue in previous studies is the gap between theoretical conceptualization of L2 learning and empirical research on online L2 learning. First, there are no specific theories for online L2 learning, and thus, the research on online L2 learning has been conducted based on the theories that emerged in L2 learning in the off-line contexts (White, 2006). As mentioned, sociocultural approaches in the field of SLA have been developed since the late 1990s. As a result, several researchers introduced the theories, such as chaos/complex theory (Larsen-Freeman, 2002) and ecological approach (van Lier, 2002), to the field of SLA from the viewpoint of social aspects. However, the majority of empirical studies on online L2 learning still remained within the traditional cognitive theoretical frameworks and methods (e.g. Heins, Duensing, Stickler, & Batstone, 2007; Jepson, 2005; Sykes, 2005; Wang, 2006). Accordingly, many studies focused upon the outcome of students' learning rather than the examination of the qualitative process of students' L2 development. Thus, this study will focus on the students' qualitative processes of online L2 learning from the viewpoint of sociocultural approaches.

One of the issues in dealing with empirical data collected in a natural educational setting is how to manage a number of possible variables that might affect students' learning processes. In fact, the researchers' worldview itself often limits variables that he or she is going to investigate. For instance, information-processing theories suggested specific linguistic analytical units that researchers should look into. As a result, the primary factors that affected students' learning might be overlooked due to the narrow scope of the theories. Again, in a real classroom, all the elements that consist of the situation can count as a variable. In order to examine students' learning in uncontrolled

educational settings, it is critical to pay attention to all the possible elements that affect L2 learning. For collecting and analyzing the data, the researcher applied the formative and design experiments (FDE) approach, which will be explained in chapter 3. The FDE approach allows researchers to deal with different types of data with various methods, so that this study can depict the reality of online L2 learning.

Research Questions

In this study, I examined the process of students' L2 learning in a 100 % online language course qualitatively from a sociocultural approach. I specifically examined how students were engaged in each activity, how students perceived their online L2 learning experiences, and how the teacher perceived her online instruction and students' online L2 learning. Main data sources were students' video production, audio-recorded students' performance, survey results and students' reflection paper on their experience, as well as audio-recorded interview data with the teacher and selected students. More information about the data will be in chapter 3. The research questions are:

1. How are students in an online language course engaged in varied instructional activities, namely YouTube video activity, Skype intervention, and a real-life experience intervention, from the standpoint of sociocultural approaches?
2. How do students reflect on and react to their L2 learning in each activity?
3. What is the teacher's perception of her online instruction/intervention and students' engagement in each activity?

Significance of the Study

The significance of the study can be described in four points: application of a sociocultural approach to explore online L2 learning, process-focused qualitative

investigation of students' engagement based on FDE approach, the improvement of class activities in the research site, and bridging the gap between research and practice.

First, not much research on online L2 learning was conducted with a sociocultural approach, and thus applying the theories from a sociocultural perspective to this study will bring insights into online L2 learning. Similarly, focusing upon the process of their learning might uncover different aspects of students' developmental potentials that could not be captured from typical quantitative outcome-focused research. Third, the results from the study might reveal what worked or not and why, which in turn could benefit the researcher and teacher in modifying the interventions and eventually contributing to the course development. Lastly, as a practitioner, I have longed to conduct a study that bridges the gap between theory and practice. It is often the case that a research approach that a researcher utilizes in his or her study limits the variables studied. Consequently, researchers do not pay much attention to other factors that may influence the results. This study, on the other hand, documented a comprehensive process of designing and implementing the interventions and illustrate the interactions among elements that affected students' L2 learning, such as students' engagement, student perception about the interventions and the teacher's understanding of online instruction, without ignoring or controlling any factors that could possibly have affected students' learning. The results from the study aim to qualitatively demonstrate the dynamic process of the cycle of teaching, which will hopefully reflect a true synthesis of learning theories and practice.

In the following chapters, I will review the SLA theories and closely examine the previous studies done in the field of SLA, specifically focusing upon the issues seen in the research on online SLA and the pedagogical view on learning environment in chapter

2. In chapter 3, I will explain the methodology used in the study, called formative and design experiments, and describe information about data and analysis. Chapter 4 will present the results that respond to and discuss each research question. In the last chapter, I will discuss the results, the implications, and conclusion.

Chapter Two

Literature Review

In this chapter, I will review previous research that dealt with various theories of SLA, and the studies concerning online L2 learning in order to see what previous research could explain about students' L2 learning online and what issues have remained unexamined in the field. First, I will discuss how various theories conceptualized cognition and L2 learning differently, namely input hypothesis, interactional hypothesis, chaos/complexity theory, Vygotsky's sociocultural theory, and ecological approach. These theories emerged based on face-to-face L2 learning contexts rather than online environments. Each conceptualization generated different approaches to understand students' L2 learning in language classrooms. Second, I will discuss previous research within online learning contexts, briefly reviewing the history of distance education in general and that in the field of SLA. Third, besides theoretical views, studies of L2 learning with a more pedagogical view will be reviewed. Based on previous studies in the field of second language acquisition (SLA), computer-assisted language learning (CALL), computer-mediated communication (CMC), and educational technology, I will search for the most relevant focus and methodology for this study in this chapter.

Historical Overview: SLA Theories From Cognitive to Sociocultural

Along the history of SLA research, two major paradigms emerged: the cognitive information processing paradigm and the sociocultural paradigm. These different understandings of L2 learning affected how studies were conducted, how class activities were designed, and how the target language was taught. In this section, a few SLA theories from both paradigms will be introduced and examined to deepen understanding

of the theories behind course design and class activities.

Cognitive-information processing theories. Reflecting the history of SLA research, we can observe the strong influence of the information-processing paradigm, such as input hypothesis, output hypothesis, and interactional hypothesis. The focus of these SLA hypotheses or models has been upon understanding individual mental processes, acquisition of linguistic knowledge, and investigation of cognitive variables (Johnson, 2004). Here I will discuss the input hypothesis and interactional hypothesis compared with an alternative approach, the sociocultural approach.

Krashen's input hypothesis. Krashen proposed a comprehensive input hypothesis that made a great impact upon SLA theories in the late 1970s (Ortega, 2010). Although Krashen's input hypothesis has been criticized due to logical flaws, it is one of the earliest versions of information processing models, and turned out to be a trigger for scholars to reconsider the process of SLA (Johnson, 2004). The input hypothesis is a part of his bigger theoretical framework. Simply stated, it explained that if learners are exposed to sufficient comprehensive input, learners will acquire L2 in terms of grammar without any specific instructions. The comprehensive input is explained by the concept of 'i + 1' which refers to the level beyond the current level of competence. The concept of 'i + 1' presumes that people learn L2 in a natural order in universal linguistic development. Thus, if one receives comprehensive input at the level of 'i + 1,' it facilitates L2 learning by the mastery of the 'next' linguistic item or structure. In other words, the underlying assumption of the input hypothesis is that learners learn the language following the linear path of linguistic items. The unit of analysis is grammatical items and linguistic structure, since L2 learning is measured only by students' competence based on grammatical

accuracy.

Long's interactional hypothesis. After Krashen's comprehensive input theory, Long (1985, 1996) expanded the input hypothesis by focusing on meaning negotiation in interactions. He claimed that comprehensive input and output were not enough, and that negotiation for meaning during conversation facilitated L2 learning. Consequently, he emphasized interaction for L2 learning. Long focused on the meanings of words used in contexts as well as grammatical forms when negotiation occurred in conversations, which Krashen did not consider. In his words, Long (1996) stated "especially negotiation work that triggers interactional adjustment by the NS (native speaker) or more competent interlocutor, facilitates acquisition because it connects input, internal learner capacities, particularly selective attention, and output in productive ways" (pp. 151-152). Learners negotiate meaning through rephrasing, repeating, clarifying, and modifying what they said, so that incomprehensible or partly comprehensible input becomes comprehensible. Following the interaction hypothesis, many researchers closely examined how negotiation for meaning unfolded during the interaction (e.g. Nakahama, Tyler, & van Lier, 2001; Pica, 1994). Researchers tried to explore what situations or which tasks could elicit more negotiation for meaning. Although he emphasized both 'focus on form' (meaning) and 'focus on forms' (isolated linguistic form), his argument did not go beyond the cognitive information-processing paradigm, and the unit of analysis was still at the sentential level of linguistics. It is noteworthy that Long's argument did not include the social aspects of environmental contribution (Johnson, 2004). Although Long discussed the development of linguistic knowledge in relation to interactions and 'environment,' his focus remained with semantic meaning that was determined by forms

and meanings at sentential level. Basically, he used the term ‘environment’ to refer to interlocutors’ input such as recasts (corrective feedback) and negative feedback.

Swain (1985) also added another layer to Krashen’s input hypothesis, which was called pushed output. Swain tackled a blind spot that other researchers had not considered. She pointed out that learners needed not only comprehensive input which had been treated as an evidence of learning, but also grammatical competence and sociocultural competence for second/foreign language acquisition because the latter helped learners determine specific grammatical forms (e.g. *vous/tu* in French). Examining learners’ output, Swain demonstrated that what students said (output) made them realize and pay attention to the relevant forms used in the context. Thus, students’ output process is as important as their input.

In the 1980s, much research on interaction suggested that creating a learning environment where the interaction with plentiful input and negotiation for meaning took place was essential in language classrooms (Ortega, 2010). Under this paradigm, however, even though Long’s interactional hypothesis and Swain’s pushed output concept emphasized interactions as optimal environment for L2 learning, L2 learning was still considered as an individual cognitive phenomenon, and not viewed as a social phenomenon.

SLA theories from sociocultural approach. As of the mid-1990s, several SLA researchers began to reconceptualize the phenomenon of language learning from a sociocultural perspective, such as social-constructivist, socioculturalism, and post-structuralism. Previously, SLA researchers understood language learning as cognitive information processing facilitated by interactions and the cognitive process

occurred within individual brains. Firth and Wagner (1997) proposed “Language is not only a cognitive phenomenon, the product of the individual’s brain; it is also fundamentally a social phenomenon, acquired and used interactively, in a variety of contexts for myriad practical purposes” (p. 296). Researchers started to explain the same L2 learning phenomenon not as psychological individual constructs but social constructs. Thus, social environments are inseparable from the learning processes (Ortega, 2010).

I will review three theories: chaos/complexity theory, Vygotsky’s sociocultural theory, and the ecological approach. Chaos/complexity theory and Vygotsky’s sociocultural theory were introduced as different ways of exploring SLA in Kramsch’s book (2002). Authors in the book applied a new metaphor, learner-as-apprentice or learner-as-participant, as opposed to the dominant metaphor in SLA, learner-as-computer or learner-as-information processor. The former metaphor comes from the newer perspectives such as sociocultural theory and language socialization while the latter one comes from traditional linguistic approaches and the cognitive psychological perspective. The ecological approach also applies the new metaphor. These theories broadened the scope of SLA research to the social level, and had scholars reconsider the assumptions of the traditional cognitive information-processing paradigm on L2 learning.

Chaos/complexity theory. With chaos/complexity theory (CCT), Larsen-Freeman (2002) criticized that mainstream SLA based on information processing paradigm had ignored language use which constantly changes in communicative practice, by focusing so much upon the static linguistic system as a unit of analysis. She stated, “every use of language changes the language resources of the learner/user, and the changed resources are then potentially available for the next speech event” (Larsen-Freeman, 2007, p. 783).

Thus, the CCT views language as a complex adaptive system, as opposed to a fixed linguistic system that is linearly learned. Rather, the CCT assumes that the learner's linguistic system is constantly emerging through negotiation and renovation. In other words, unlike Krashen's claim, language is a real-time activity rather than prescribed rules, and language learning is a dynamic process that we cannot predict.

Larsen-Freeman (2007) also emphasized the social aspect of communicative practice, stating "language using patterns are not only characterized by linguistic features, but gesture, unique prosodies, and by affective, cognitive, and episodic associations, experienced as they are embedded in a sociohistorical context" (p. 784). Learning a language involves not only learning grammatical rules and structures but also becoming a member of a certain community (Larsen-Freeman, 2002). Thus, CCT expands the scope of L2 learning from individual learning of the linguistic system to social activity.

Vygotsky's sociocultural theory. Among various sociocultural approaches, Vygotsky's sociocultural theory that was applied to the SLA field from the 1980s has made the greatest impact on the SLA field (Ortega, 2010). It explains that the source of development is in the environment, not in the individuals. Mental functions concerning development appear first on the social plane and then on the individual psychological plane (Johnson, 2004). In other words, at the stage of the social plane, actions are directed and regulated by others through speech. In the individual psychological plane, other-regulated actions are internalized to self-regulated actions so that people will become able to regulate their own mental and physical activity (Lantolf, 2000). The process from other-regulated actions to self-regulated actions is called internalization. During the processes, language plays an important role as "a mean of organizing mental

activities” (Johnson, 2004, p. 111). Language functions as a mediator that makes connections between one and the self (intrapersonal) as well as one and others (interpersonal). The notion of internalization reflects the mediated process of higher mental activity interacting with external social activity. Unlike information-processing theories, therefore, the sociocultural theory reconceptualized cognition not as individual but social.

The major concepts of Vygotsky’s learning theory, notion of the Zone of Proximal Development (ZPD) and scaffolding, are based on social interaction. Many SLA researchers and educators utilized the notion of ZPD in order to investigate the developmental dynamic changes in language learning (e.g. Aljaafrech & Lantolf, 1994; Donato, 1994; Ohta, 2000; Swain, 2000). Such empirical studies will be reviewed later in this chapter. Vygotsky (1978) defined the ZPD as “... the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (p. 86). The notion of ZPD is a prerequisite for scaffolding learning (van Lier, 2004). Generally speaking, scaffolding means assistance in accordance with learners’ developmental stages. To take apprenticeship as an example, learners become capable to do things through teachers’ guidance or interactions with more capable learners. The ZPD and scaffolding are based on a prospective view or prolepsis to understand learning processes (Ortega, 2010; van Lier, 2004). This prospective account of development is quite different from the traditional view of learning with which learning is examined retrospectively. The ZPD presumes the developmental potential that the learner who can accomplish a task with assistance will

be able to accomplish the same task without any help in the future.

Vygotsky's sociocultural theory assumes that individuals are socioculturally embedded and it emphasizes the dialogical nature of mental functions. With the concept of ZPD and scaffolding, L2 learning is captured not as an information transmitting process but a self-regulating process with others' assistance.

Ecological approach. As explained earlier, the ecological perspective is philosophically different from Vygotsky's sociocultural theory but is similar to it in terms of the description of cognition and learning. An ecological perspective applies a situated cognition approach to learning. In other words, cognition is not considered within each individual brain but is situated in the environment (Young, 2004). The ecological approach explains that learning is "development of increasingly effective ways of dealing with the world and its meanings" (van Lier, 2000, p. 246). Furthermore, learning is considered as complex dynamics rather than the static states of the learner at a particular time (Young, Barab, & Garrett, 2000).

van Lier (2002) introduced ecological linguistics which emphasized dynamic interaction between language users and environment. Affordances and emergence are basic constructs in ecological linguistics. Ecological linguistics considers language as relational action not as linguistic codes or items stored in the brain. The notion of affordance reflects the relational nature of the ecology of the learning environment. Affordance is defined as "what the environment offers the animal, what it provides or furnishes, either for good or ill" in Gibson's term (as cited in van Lier, 2002, p. 91). Young (2004) defined affordances as the properties of environment that elicited human actions. Language learning begins with perceiving affordances and acting upon them

while engaging in language-related activities (van Lier, 2008b). There must be rich learning resources in the environment, though perceiving affordances does not mean a passive action but rather an actively seeking-out of information-for-action and action-for-information in the environment. Actions guide the perception of affordances and the affordances guide further actions. Thus, actions, perceptions, and interpretations occur simultaneously while people interact with each other. The environment offers rich learning resources and through perceiving affordances further actions are determined. Constant human action upon the environment and perception is the basis of learning. With the concept of emergence, language is considered as only a part of communication. Language functions with other signs such as gestures, gaze, and the parts of the physical surroundings. The whole set of human action is considered as semiotic action (van Lier, 2002). When people interact and communicate with each other, they utilize all the semiotic actions in order to interpret meaning. In the semiotic actions, language emerges to specify what each linguistic form and expression means in that situation.

van Lier (2008b) stated that language learning started with learning to perceive affordances while engaging in language-related activity. Thus, the unit of analysis should be action or activity, rather than linguistic input and output (van Lier, 2002). Accordingly, the whole action, not only language spoken but also non-verbal signs, and contexts have to be taken into consideration in order to understand human communication. In comparison with the traditional cognitive information-processing theories, ecological linguistics explains that language emerges from semiotic activity, rather than that language is transmitted from one person to another. Language should be interpreted within semiotic activity or sign-making/sign-using practices. Therefore, language

learning cannot be understood within a single cognitive process, but rather in relational process between the learner and environment.

Linell (2009) discussed dialogism which is a very similar concept to the ecological approach. Dialogism assumes persons are social beings and are interdependent with each other. Accordingly, when they talk, the meaning of words is interpreted based not only upon an abstract linguistic system but also upon sociocultural resources, such as norms, concepts, and identities. Sociocultural resources can be situational as well as historical or traditional, namely ‘situational-transcending’ resources. According to Linell (2009), dialogues reflect not only current situational properties but also speakers’ past experiences and habits in social practices and so forth. In addition, communicative practices are socially constructive, contributing to the creation of knowledge and belief system. Identity and social relations between people are established through communicative practices as well. Swain (2006) suggested the importance of languaging (language use) that serves to transform thoughts. In her terms, languaging is a “coming-to-know-while-speaking’ phenomenon” (Swain, 2006, p. 97). In other words, languaging is a means of development through reshaping experiences and thoughts. Examples from her study illustrated how L2 learners came to construct understanding of grammatical structure and cultural expressions through languaging. When language is used, language functions as a means for learning not only the linguistics of a target language but also meta-cognitive knowledge and sociocultural knowledge. In this sense, therefore, language conveys not only meaning but also actions that refer to “a dynamic, never-ending process of using language to make meaning” (Swain, p. 96).

The biggest issue with the traditional cognitive view of SLA is that these theories

do not capture the reality of human communication. When L2 learners talk to someone, they utilize all the resources that they have, which encompass not only linguistic but also sociocultural as well as sociohistorical knowledge (Linell, 2009). In addition, the environment or contexts in which they live influence L2 learning. As explained, the ecological approach, sociocultural theory, and CCT guide us to reconceptualize SLA.

Empirical research from Vygotsky's sociocultural theory. The concept of ZPD and scaffolding is often utilized to investigate student developmental dynamic processes in educational settings. There are a number of studies regarding scaffolding and ZPD although empirical studies based on a sociocultural approach are many fewer than those with traditional information processing theories. In this section below, studies that utilized Vygotsky's sociocultural theory will be reviewed.

Since Vygotsky's original proposal of ZPD assumes a different ability between expert and novice, scaffolding was often studied based on teacher-student or native-nonnative dyads (Aljaafrech & Lantolf, 1994; Nassaji & Swain, 2000). For instance, Aljaafrech and Lantolf (1994) examined learner-tutor interactions focusing upon the relationship between error correction and language learning. Investigating the moment-to-moment interaction, the article portrayed a process of learners' development from other-regulation to self-regulation. Microgeneric analysis revealed that even though students' test scores on proficiency tests were the same, their developmental level may have differed. Each student might accordingly require qualitatively different help in order to develop his or her inner cognition. Swain (2000) conducted a quasi-experimental study comparing the student with ZPD corrective feedback that was developed by Aljaafrech and Lantolf (1994), with another student without ZPD feedback. Close examination of

dialogically negotiated feedback suggested the important role of instructors' delivery of feedback. As in these studies, nonnative speakers are usually treated as novice while native speakers who serve as a teacher or tutor are viewed as expert in language teaching.

Donato (1994), however, expanded the notion of scaffolding previously constructed between student-teacher or native-nonnative speakers to peer interactions. He criticized that because of the L2 input and output emphasis in the field of SLA in the mid-1990s, pair or group work in L2 classrooms was considered as an opportunity to simply exchange linguistic tokens to develop their L2 knowledge. However, reconceptualizing learners' role in L2 classroom interaction from Vygotsky's notion of ZPD, group work can be considered as the process of collective acquisition of L2 knowledge. Ohta (2000) followed up Donato's work (1994), focusing on the peer-to-peer collaborative process during the classroom task. She examined the interactional cues provided by a peer student when he or she assisted another student. She provided evidences that the relationship of novice-expert could be reversed depending upon different tasks. In other words, one student gave assistance for peers in one task, and the same student could get assistance in another task. Ohta's interactional data also demonstrated that students could provide developmentally sensitive assistance to peers.

Examining the interactions held in class from Vygotsky's sociocultural theory enables us to see how the processes of L2 development unfolded. Expanding the underlying concept of scaffolding between novice-expert (e.g. student-teacher and child-caregiver), the notion of ZPD and scaffolding was found useful to investigate frequently occurring classroom interactions, particularly peer-to-peer interactions.

Research on Online L2 Learning

Distance learning and its theory. Distance learning has been rapidly growing in recent years (Tallent-Runnels et al., 2006). At the beginning, distance education was developed from the vantage point of social equity (White, 2006). The discussion of social equity in relation to online classes does not appear in current literature; nonetheless, current distance education provides much greater access to nearly all citizens with or without physical disabilities. The benefit of online instruction is not only time efficiency and flexibility but also cost efficiency (Murday, Ushida, & Chenoweth, 2008). Since offering online courses costs schools less than offering regular courses, online instruction has been developed as an alternative mode of teaching as well as providing supplemental instructional tools. In the academic year 2000-2001, 90% of public 2-year and 89% of public 4-year institutions offered distance education courses. Accordingly, enrollment in online classes has been increasing by 33% per year (as cited in Tallent-Runnels et al., 2006). Such trends towards the proliferation of online courses are prevalent within foreign language programs (White, 2006).

Anderson (2008) suggested that at the moment, specific theories for online learning and teaching do not exist. For the time being, theory builders and practitioners have contributed to the development of theories by presenting models of online learning that constitute theories. Models suggested by researchers deepen our understanding of online environments as well as students' learning in the online contexts and accordingly improve our professional practices. In so doing, theories of online learning will emerge. Since there are no theories of online learning, researchers and practitioners in the field seem to have borrowed theories and frameworks from the learning theories of

face-to-face classroom environments and applied them to the online learning environment, which have created new insights unique to online learning.

Parallel paradigm shift in online SLA. In the field of education, group learning has been studied since at least the 1960s (Stahl, Koschemann, & Suthers, 2006); however, it was based upon the cognitive psychology where “cognition was seen a product of individual information processors” (Stahl et al., p. 7) at that time. Accordingly, “the context of social interaction was seen a background of individual activity” (Stahl et al., p. 7). Later, the learning sciences started to consider learning as group processes through interactional meaning making. The evolution of computer supported collaborative learning (CSCL) arose in the later 1980s responding to this movement. The CSCL considers learning not only as individual but also as a group process of constructing, negotiating and sharing meanings (Stahl et al.). CSCL has been studied in a multi-disciplinary field including cognitive science, learning sciences, and educational technology (Resta & Laffriere, 2007). CSCL explores “how technology can facilitate the creating of knowledge and expertise through peer interaction and group learning processes” (Resta & Laffriere, p. 67). Consequently, new educational methods based on a social constructivist perspective became necessary. Interestingly, a parallel perspective shift was found in the field of SLA, as previously mentioned. In the late 1990s, as social understanding of L2 learning phenomena became prevalent, SLA researchers began to pay more attention to interactive and collaborative learning.

A similar paradigm shift occurred in the field of computer-assisted language learning (CALL). The field of CALL has been growing since the 1960s. Levy (1997) defined CALL as “the search for and study of application of the computer in language

and learning” (p. 1). CALL was recognized in the early 1960s although research was limited only within computer science departments at universities (Warschauer, 1997). By the early 1980s, a number of schools had started researching in the field. According to Warschauer (2004), there are three stages to discuss the history of CALL based on the changes in technology, the paradigm of teaching and learning, and principal objectives of language learning: structural CALL (1960s-1970s), communicative CALL (1980s-early1990s), and integrative CALL (1990s-present). These changes are tied to the theoretical trends in the field of SLA as well as technological development. Structural CALL is based on a behaviorist’s view on learning. During the 1960s and 1970s, many linguists applied grammar translation methods and audiolingual methods in teaching language (Ommagio, 2001). Similarly, CALL during that period of time offered drill and practice programs on the computer (Warschauer, 2004). In the 1980s, cognitive-interactionists such as Krashen and Long started to consider that language learning takes place in an internal mental system through interaction. While SLA researchers studied input as well as output by focusing on negotiation for meaning in face-to-face research settings, CALL viewed input as an essential factor to develop students’ mental linguistic system (Warschauer & Healey, 1998). Communicative CALL moved away from drill practices to providing variety of input, such as paced reading and text reconstruction, so that students had more choice, control, and interaction with texts as well as with peers. From the 1990s, as SLA researchers expanded the scope of language learning to include socio-cognitive perspectives, CALL also moved to the next stage, called integrative CALL, which emphasized L2 language use in authentic contexts. With the integrative CALL, learners are integrated in authentic environments created by

technology through task-based, project-based, and content-based approaches (Warschauer, 1998).

Computer-mediated communication (CMC) is defined as “the process by which people create, exchange, and perceive information using networked telecommunications systems that facilitate encoding, transmitting, and decoding messages” (Romiszowski & Mason, 2004, p. 398). For the integrative CALL, the development of CMC is necessary because CMC helps language educators to create environments where students can interact with teachers and students via computers. There are two forms of CMC: asynchronous CMC (ACMC) and synchronous CMC (SCMC) (Abrams, 2006). The examples of asynchronous CMC are email exchange, WebCT discussion board, and Blackboard. In ACMC, one sends a message to one or more recipients and waits for them to reply back to the sender. On the contrary, SCMC refers to immediate interaction through online chats, video-conferencing and so forth. ACMC was developed first followed by SCMC. From the early 1990s, the use of SCMC has increased and been studied in the SLA field (Throne, 2007).

Empirical research on online L2 learning. I will discuss the current trends and issues observed in the recent studies on online L2 learning. Since online learning environment has been rapidly improved due to the improvement of technological infrastructure in the 1990s, studies on synchronous online learning environment emerged by the mid 1990s (Thorne, 2007). Previous studies reviewed in this section mainly dealt with online L2 teaching with SCMC, rather than ACMC. The reason is because most of the ACMC is based on text exchange. Although textual CMC is still used in online language education, it has been criticized in language education due to the lack of oral

production and aural comprehension (Throne).

Many researchers applied theories derived from face-to-face L2 learning contexts to investigate SLA in the SCMC environment because a central theoretical framework has not been established for the investigation of SCMC (White, 2006). Many studies compared different instructional environments such as face-to-face settings, audio-conferencing, video-conferencing, and written text chats (Thorne, 2007). Since a number of studies adopted the cognitive interactionists' view, learners' interactions were quantified by coding in terms of negotiated interactions. Here are examples. Heins, Duensing, Stickler, and Batstone (2007) examined the learners' input and output, and students' use of L1 and L2 comparing synchronous audio environment with face-to-face settings. This study relied on the input and output hypothesis and quantified the amount of teacher's talk and students' talk. It concluded that face-to-face learning environment would offer more opportunities for students to talk while teacher-guided type of talk occurred more frequently in online interactions than face-to-face. Jepson (2005) compared type of repair moves, such as negotiation for meaning and negative feedback, between non-natives speakers in online written chats with those in online voice chats. This study was based on Long's interactional hypothesis assuming that repair moves raised learner's awareness of target language forms as well as meanings. Thus, repair moves in conversation were regarded as facilitating their L2 learning in the study. He found that repair moves were observed more in voice chats than in text chats and that pronunciation repair moves occurred the most in voice chats. These studies suggested that the medium changed communication dynamics because online meaning negotiation did not correspond in all respects with face-to-face negotiation (Kern, Ware, &

Warschauer, 2004). These studies also suggested important insights into interpersonal interlanguage development (Abram, 2006). However, the cognitive interactionists' view seems limited to seeing only students' productions and instructional outcomes. It lacks the view on the social nature of L2 learning based on qualitative developmental L2 learning processes.

There are still a few articles that focused upon the social aspect of online L2 learning. One of the examples is Lee's study (2008) on text-based chats. This study explored how corrective feedback was negotiated through expert-to-novice collaborative scaffolding. The underlying assumption was based on the sociocultural perspective that "moment-by-moment feedback is negotiated through a joint social activity in which the experts provided moment-by-moment scaffolded help to engage learners in various types of error correction" (Lee, p. 54). She mainly investigated how learners assisted each other in reconstructing linguistic forms, following the steps of a five-level collaborative scaffolding process adapted from Aljaafreh & Lantolf (1994). Based on the general consensus among SLA researchers that focus-on-form (focus on meanings) through corrective feedback contributes to language acquisition, she analyzed moment-by-moment scaffolding in focus-on-form procedure through microgenetic analysis. Such detailed qualitative analysis illustrated how collaborative feedback was negotiated and influenced the development of novices' L2 knowledge. The results demonstrated the developmental process of collaborative scaffolding whereby students became able to use target forms by themselves after relevant corrective scaffolding. It also suggested that providing corrective feedback in a timely manner was a challenge.

Due to the development of technology, how students learn in online contexts has

changed. Previous research suggested that researchers need to explore how students learn in an online environment rather than how new technology contributes to students' learning. Previously, research has not paid much attention to the process of students' learning, but the effectiveness of instruction that was often investigated in a quantitative manner. Researching the process might provide suggestions for teachers to offer relevant classroom activities and to give students developmentally appropriate assistances. Another critical issue is that online L2 learning has not been examined from the social aspect yet. Online language learning needs to be investigated beyond individual cognition, using the sociocultural approach. Abrams (2006) claimed that a Vygotskian sociocultural framework would provide important insights to the social nature of online language learning processes, emphasizing social interaction mediated by computers.

Pedagogical View on Optimal Learning Environment

White (2006) considered the pedagogical perspective on distance language learning as a missing piece in the literature. It is essential for researchers to further investigate not only technology use and its effectiveness in educational programs but also the curriculum and teaching and student learning in the online program. In this section, therefore, previous research focused upon pedagogical views on online SLA will be reviewed.

Changes in research on class activities. Teachers are required to understand the role of classroom activities and tasks because the activities will shape the learner's development (Hall & Verplaetse, 2000). How can language teachers design meaningful classroom activities that foster optimal student learning? Much research on classroom activities was done based on the cognitive-interactionists' view (e.g. Doughty & Pica,

1986; Varonis & Gass, 1985). Studies back then informed us that information gap tasks were likely to give a lot of opportunities for negotiation for meaning. In information gap tasks, a student has to find out missing information that other peers can provide through interaction. Such a task requires students to understand and be understood in a target language through negotiating meanings. Therefore, working on information gap tasks can facilitate their L2 acquisition, providing input, repair, modifications, clarification and so forth.

In the 1990s, SLA researchers continued to investigate classroom activities focusing upon negotiation for meaning (e.g. Pica, 1994; Mackey, Gass, & McDonough, 2000). They suggested that negotiation for meaning often occurred when a listener had a problem with understanding what the speaker said and tried to solve the communication trouble (Foster & Ohta, 2005). Interestingly, Nakahama, Tyler, and van Lier (2001) illustrated different results from the previous studies done in the 1980s and 1990s, by comparing an information gap task with a free conversation task. According to the previous research, the more frequent occurrence of negotiation for meaning, the more challenging or meaningful students would feel about the task. However, regardless of the fact that negotiation for meaning appeared more frequently in the information gap activity than in the conversation activity, students' interviews suggested that the conversation task was more challenging for them. Furthermore, the free conversation task provided more opportunities to produce complex sentences than the information gap task. Nakahama et al. (2001) also pointed out the qualitative differences of negotiation sequences in each task. In the conversation task, negotiation for meaning required students to negotiate meaning to achieve coherence in the entire conversation, while

negotiation for meaning in the information gap task only needed them to achieve local cohesion, such as finding a word that was missing.

Foster and Ohta (2005) pointed out that the more recent SLA research shifted the focus from negotiation for meaning in group activities to recasting in whole class settings. Such studies examined teacher-student interactions where the teacher mainly controlled turns in conversations. In teacher-led interactions, teachers often make students pay attention to forms rather than meanings. Since peer interaction is a common practice in language classrooms, Foster and Ohta's study returned to focus upon interaction between students working together on a classroom task. They focused upon negotiation for meaning to investigate how students interact with each other in an interview task because it is still prevalent thinking that negotiation for meaning facilitates second language acquisition among SLA researchers. They also examined longer stretches of interactions even where negotiation for meaning did not occur. They analyzed dialogues in interactions qualitatively as well as quantitatively.

As a result, Foster and Ohta (2005) raised four issues concerning previous views on negotiation for meaning that were considered to occur in order to solve communication problems. First, communication breakdown is usually considered as face threatening to interlocutors. Interaction itself is a social activity, and thus, people may try to avoid interrupting to make clarifications. Such face-threatening movement may invite negative affect such as frustration and embarrassment. Learners in the study engaged in the interview task as a social event rather than just exchanging words. Accordingly, they showed cooperative attitudes paying attention to linguistic form, the content of a story, and ZPD without communication breakdown.

Second, negotiation for meaning often occurs due to the problems with lexis rather than morphosyntax. In other words, wrong morphemes such as tense and case do not necessarily affect communication failure. Consequently, solving communication breakdown might not facilitate learning linguistic forms. Third, identifying negotiation for meaning may not follow clear-cut classifications. For instance, a repetition with raising intonation can be a signal of understanding and interest in the story rather than a lack of understanding and desire for modification. Fourth, negotiation for meaning is used as a measure to judge the quality of tasks but “quantifying instances of negotiation for meaning may not provide an accurate depiction of the value” (Foster & Ohta, 2005, p. 407) of the tasks. In fact, the quantitative analysis of negotiation for meaning in the study showed that the number of instances of negotiation for meaning was infrequent in conversations. However, qualitative analysis based on the sociocultural approach suggested that even though negotiation for meaning was absent, there were other movements that prompted language acquisition. Thus, the negotiation of meaning for solving communication breakdowns is only one movement of a larger variety of conversational moves which can facilitate L2 acquisition.

Therefore, qualitative examination of student interaction as a social event can inform what types of L2 learning occurs and how it emerges. Ohta (2000) demonstrated that students could effectively provide assistance to each other even in a translation exercise. Her example illustrated that the productivity of learner interaction could not be predicted based on the task design alone. As Nakahama et al. (2001), Foster and Ohta (2005), and Ohta (2000) suggested, teachers should consider not only task designs per se but also the relationship between task designs and how students work on the task.

Furthermore, qualitative analysis based on the sociocultural approach enabled researchers to find different types of student learning opportunities in addition to negotiation for meaning (Foster & Ohta, 2005; Ohta, 2000). In order to maximize students' learning, therefore, teachers are required to document students' developmental processes qualitatively, and observe what students are doing in interactions where scaffolding and other conversational movements occur besides negotiation for meaning.

Class activities from the ecological approach. The ecological approach suggested three important points to design optimal language learning environment (van Lier, 2004). First, the ecological perspective promotes activity-driven pedagogy because doing things or acting upon the environment generates learning (Young et al., 2000). Learning by doing is considered as a social process where meaning is negotiated, goals emerge, and success is understood within the context (Young et al.). Thus, student agency in instructional activities is emphasized to provide students with the opportunities to experience meaningful learning, finding the affordance, making use of it, and creating a meaning in context while using a target language. Second, in order to provide an affordance-rich learning environment, the authenticity of the context is crucial. Language should be taught within the context in which language is used because language is always dialogical and meaning is created in the context (Linell, 2009). van Lier (2004) recommended conducting a critical language awareness project in which students would examine language in the context through field work, internet resources, movies, and so forth. Teachers have to create such a rich environment that provides affordances so that learners can pick them up and take an action. Third, teachers should keep in mind that language learning involves developmental processes that are not static or linear but

complex and dynamic. Furthermore, van Lier (2004) pointed out teachers' appropriate guidance would make an impact on students' L2 development. While some learners can utilize affordances directly without any assistance, some need teachers' or more capable others' guidance to pay attention to potential affordances in the environment.

Therefore, students' actions and agency, contextualization and authenticity of class activities, and teacher's relevant assistance based on the understanding of non-linear complex L2 learning processes are the key factors to create an optimal learning environment. These insights based on the ecological approach as well as the sociocultural theory will be utilized in designing the interventions implemented in this study.

Authentic class activities in educational technology. As mentioned, authenticity and contextualization has been emphasized in the field of SLA from the sociocultural and ecological approaches. In the field of educational technology, authentic learning has been also discussed in a much more practical level. The reason why authentic learning has been paid attention to in educational technology is because of the perspective shift from a behaviorist to a constructivist framework in the instructional technology community (Herrington & Oliver, 2000). Accordingly, real-life learning or authentic learning has become more emphasized as opposed to formal school learning of facts. Constructivist views criticize decontextualized abstract knowledge and promote that knowledge and context should not be separated. Constructivist learning theories focus upon students' active construction of meaning that is grounded in their experience (Woo, Herrington, Agostinho, & Reeves, 2007). In order to facilitate students' meaning making processes, interactions and collaboration with others through authentic activities are promoted. Herrington and Oliver (2000) explained the importance of authentic activities based on

one of the constructivist learning theories, Lave & Wenger's situated learning framework. It explains that students will learn through observing and participating in social and cultural practices in a community. Situated learning supports the idea of authentic activities because an authentic context enables learners to participate in social and cultural practices.

What are authentic activities then? Reeves, Herrington, and Oliver (2002) suggested 10 characteristics of authentic activities:

1. Authentic activities have real-world relevance.
2. Authentic activities are ill-defined.
3. Authentic activities comprise complex tasks to be investigated by students over a sustained period of time.
4. Authentic activities provide the opportunity for students to examine the task from different perspectives, using a variety of resources.
5. Authentic activities provide the opportunity to collaborate.
6. Authentic activities provide the opportunity to reflect.
7. Authentic activities provide interdisciplinary perspectives.
8. Authentic activities can be integrated and applied across different subject areas and lead beyond domain-specific outcomes.
9. Authentic activities create polished products valuable in their own right.
10. Authentic activities allow competing solutions and diversity of outcomes.

(p. 564)

Reeves et al. (2002) suggested that authentic activities could be offered in a variety of modes, such as on-campus courses and work-based learning. Based on the abundance of

online resources, online courses also provide authentic learning environments. Woo, Herrington, Agostinho, and Reeves (2007) stated, “web-based learning environment, if used effectively, allows, enables, and promotes constructivist learning using authentic activities” (p. 37). They suggested empirical examples showing that technology would help create authentic activity through “transforming information into various forms such as audio and video and engaging in collaborative experiences” (Woo et al., p. 38).

While some researchers emphasized the importance of authentic learning environment, Herrington, Reeves, and Oliver, and Woo (2004) pointed out that the benefit of authentic activities are realized only with the carefully designed learning environment. They examined previous literature and found that authentic learning occurred in the dynamic interactions among the environment, the task, and the learner. In order to obtain optimal benefits from authentic activities, the environment and learners need to be immersed. Such immersive and embodied learning environments can afford learners meaningful and constructive learning experiences. Then, how authentic should the class activities be? Herrington, Reeves, and Oliver (2007) specifically investigated how real a learning environment needed to be. The study suggested that neither reality itself nor simulated reality was a premium factor for effective learning. In the study, students learned various content based on the scenario that was not from the real world. The hypothetical or unreal scenario contributed to elicit students’ imagination, creativity, and enthusiasm that facilitated students’ engagement. They claimed that engagement in the task was more important than resource-intensive virtual reality or highly realistic stimulation. Students’ engagement in the task led meaning making activities and hence it brought about meaningful learning experience. Herrington et al. (2007) concluded that

“the task itself is the key element of immersion and engagement in higher order learning” (p. 94), and that “it is the learning environment and task that create the conditions for immersion, not the technologies themselves” (p.95).

Again, SLA researchers need to tap into the constructivist view and social perspective in order to better understand L2 learning, revealing qualitative developmental processes. Otherwise, we would only see a part of the picture of L2 learning through the narrowly focused traditional cognitive information-processing view. Another critical lesson from the literature is that the issue is not about how authentic the class activities and materials are, but how well the activity is designed in terms of contextualization, students’ agency, and collaboration that makes their learning meaningful.

Authentic learning environment for SLA. In the field of SLA, authentic tasks have not been discussed very much, although authentic input or authentic materials have been researched. As Lee’s study (2007) suggested, authentic input was considered beneficial for students’ meaningful learning. In the field of SLA, authenticity of teaching materials has been discussed extensively, in relation to text modification and L2 comprehension (Gilmore, 2007). Text modification is a critical issue to create L2 textbooks. The contents of L2 textbooks are likely to be determined by proficiency levels. Thus, textbook dialogue incrementally changes from simplified to more complex depending upon proficiency levels. The argument on text modification is strongly tied to the cognitive information-processing view on L2 learning. Within the paradigm, language acquisition is explained in a linear process where learners can acquire the next level grammar once the previous one is acquired. Hence, at the beginners’ level, dialogues and texts are more controlled and simplified in terms of vocabulary and structures. Again, the

linearly tailored teaching materials reflect the underlying assumption that L2 learning is a fixed linear process and there are universal patterns of L2 learning process that occur in order. Accordingly, much research focused upon how texts should be simplified or elaborated for effective L2 learning. However, studies that compared the effects of linearly organized materials with those of authentic materials suggested mixed results (Gilmore, 2007). Some studies favored the use of authentic or elaborated texts while others did not show positive results. Gilmore (2007) suggested the need for more empirical evidence before claiming the merits and demerits of authentic or simplified texts.

The issue with authentic materials in L2 learning is that “authentic material is likely to expose learners to a wider variety of grammatical and lexical features but with less frequency than contrived input specifically designed to highlight particular target language” (Gilmore, 2007, p. 111). With traditional information-processing theories, such rich input through authentic materials is not regarded as beneficial for learners because the theories predict that learners can only learn relevant grammatical items for one’s specific proficiency level as Krashen explained. However, if one considers L2 learning from a constructivist view, learning as “a process of actively selecting out the data necessary for personal development from the overwhelming range of stimuli” (Gilmore, p. 110), the benefit of authentic material would be rich for L2 development. Vygotsky’s sociocultural theory as well as the ecological approach would support the use of authentic materials because it provides a challenge that is beyond one’s capability, which leads to learners’ development or widens his ZPD. Although careful planning and selecting relevant authentic materials based on learners’ competence level is necessary, the

authentic materials might elicit potential development arrays for L2 learning. Moreover, sociocultural and ecological perspectives might uncover the process of L2 development in a different way from traditional SLA theories.

Focus of the Study

Previous SLA literature suggested that information-processing theories and the sociocultural approach considered cognition and the role of interactions differently, although both agreed that interactions with others helped develop linguistic knowledge. Information-processing theory narrows the scope of L2 learning to only learning the linguistic system through negotiation of meaning in interactions. In other words, interactions benefit students to gain various linguistic input and output. On the other hand, sociocultural approaches emphasize that interactions need to be viewed as semiotic activities in which meanings are constantly generated not only with linguistic resources but also with body language and situational-transcending resources (Linell, 2009; van Lier, 2004).

Furthermore, with a sociocultural approach, learning is a social phenomenon rather than solely individual mental processing. Thus, it also emphasizes the qualitative examination of students' developmental changes because L2 learning is not linear, and developmental potential differs depending upon individuals. Qualitative understanding of varied L2 learning processes would offer teachers and researchers insights into optimal L2 learning environments. As in Ohta's example (2000), sociocultural approaches are useful to demonstrate how students' L2 development unfolded during the course of interaction. However, researchers have not utilized the sociocultural perspective to examine online L2 learning very much, although the interaction between student-tutor or

student (nonnative)-native has been examined to see the effect of online learning (e.g. Lee, Turner, Huang, & Kessler, 2007; Lee, 2007). In addition to that, qualitative investigations of SCMC are still few regardless of the fact that SCMC has become commonly used recently in L2 education.

The theoretical difference in the conceptualization of L2 learning has influenced the empirical research on pedagogy. When SLA researchers investigated class tasks or activities, they focused upon the instances of negotiation for meaning comparing different task designs, based on information-processing theories (Pica, 1994). As of the late 1990s, however, some researchers demonstrated with the sociocultural approach that they would never know what and how students learned a target language during the activities unless researchers investigated what learners actually did within classroom activities (e.g. Foster & Ohta, 2005). Ohta (2000) stated:

Analysis of learner activity during task implementation are essential to understand the relationship between task design and how tasks are instantiated by particular learners. The productivity of learner interaction cannot necessarily be determined by looking at task design, but tasks themselves may be transformed as each learner applies him or herself in instantiation of a unique activity. (p. 76)

This quote explains one of the critical lessons learned from previous research. The ecological approach also stressed students' actions or doing when they use a target language, because it captures how exactly student learning unfolds in conversations (van Lier, 2004). Thus, researchers need to pay attention not only to the design of the activities but also to how students engage in the activities.

Concerning class activities, the sociocultural and ecological views stress students'

actions or agency and contextualization. Although authentic learning environment is also important, it is critical to pay attention to students' engagement in addition to the authenticity of class activities. To the best of my knowledge, however, there are few studies that focused upon students' online L2 learning processes in authentic activities from sociocultural approaches. In this study, therefore, I implemented interventions in an online course that were contextualized with a certain degree of authenticity and that promoted students' agency. Then I qualitatively investigated the students' engagement in different types of activities. The details of the interventions are explained in Chapter 3. I mainly utilized Vygotsky's sociocultural theory and van Lier's ecological approach for analysis so that the study could uncover students' complex and dynamic learning processes in a qualitative manner.

Chapter Three

Methodology

This chapter provides readers with detailed information about methodology, called Formative and Design Experiments (FDE) (Reinking & Bradley, 2008), analytical methods that are relevant to the FDE, data collection procedure, and data analysis. I will also discuss the validity and generalizability of this study and the role of the researcher.

Formative and Design Experiments Approach

Educational research has been criticized because there is often a weak connection between research and practice (van den Akker, Gravemeijer, McKenney, & NieveenIn, 2006). In actuality, theories are important for improving practice. I believe that teachers should understand theories of L2 learning, as well as what works in their practice, in order to offer the most optimal and helpful learning environments for students. Therefore, the formative and design experiments approach (FDE) has been used in this research because FDE contributes to putting theories and practice together.

One of issues in educational research based on laboratory experiments is that these experiments do not reflect the complexity of actual instructional practices or the learning context. That has created an issue for teachers in practice who cannot directly utilize theories in the classroom. Collins, Joseph, and Bielaczyc (2004) discussed the issue of laboratory studies compared with design experiments. He pointed out that there were many variables that researchers could not control in classrooms. The problem is that educational research often focuses upon a single variable to examine the success of learning. The main concern of FDE is not to control variables, but to study how different variables are working out together. Reinking and Bradley (2008) defined FDE as follows:

A more systematic, intense, and data-driven way of doing what they do everyday: setting pedagogical goals, making instructional moves to accomplish those goals, determining what works or does not work in helping or hindering the achievement of those goals, making appropriate adjustments, and assessing and reflecting on what has been accomplished. (p. 3)

In the following sections, I will explain the main characteristics of FDE to provide reasons why I chose FDE as the methodology for this study, following these themes: practicality, the role of theory, and pragmatic perspective (van den Akker, Gravemeijer, McKenney, & NieveenIn, 2006; Reinking & Bradley, 2008).

Practicality of FDE. The FDE began to be seen in the literature of educational research in the early 1990s. Some researchers who tried to portray what was happening in actual educational settings precisely were not satisfied with laboratory experimental research using a post-positivist's view because of the artificial treatment and controlled settings (e.g. Brown, 1992; Collins, 1992). The FDE research is conducted in authentic educational settings, examining instructional interventions or designs that are actually used in class. The FDE can consequently provide concrete and usable suggestions to practitioners (Reinking & Bradley, 2008). The utility of the results of FDE research is a strong advantage and it is the most unique and appealing feature of FDE. The FDE research examines how the intervention works or not and why in order to design better interventions and to develop theories of learning (The Design-Based Research Collaborative, 2003). Since the results will show what is and is not working and why in a particular setting, researchers can adapt the interventions and tailor them better in the setting. Therefore, with FDE, researchers can provide practical and useful

recommendations for teachers as well as a theoretical contribution, while other methodologies rarely contribute to utilization of the result in practice. There is, however, a challenge to deal with naturalistic settings that cannot be controlled as researchers do for laboratory experimental studies. Brab & Squire (2004) warned that researchers needed to characterize the role of contexts carefully, otherwise, the results won't generate sound theories and will lack generalization power. The contexts are a critical element to present how the contexts, students, and teachers are affecting each other. Collins, Joseph, and Bielaczyc (2004) suggested that a rich description of natural learning environment should be provided, referring to the ethnographic research procedure.

The unit of analysis of FDE is the process of engagement between teacher and students in a given learning environment (Kelly, 2004). When researchers explain characteristics of FDE, they often use a metaphor of ecology and engineering. The metaphor of ecology for FDE seems parallel to the metaphor used for ecological perspective that I explained in Chapter 2. It emphasizes that "designed contexts are conceptualized as interacting systems rather than as either a collection of activities or a list of separate factors that influence learning" (Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003). The conceptualization of intervention is quite different from that in traditional experimental research whose object of study is the isolated effect of the intervention. With FDE, interventions are not treated as an independent variable or cause, but as "a means of accomplishing an explicit pedagogical goal and transforming the environment" (Reinking & Bradley, 2008, p. 65). Moreover, interventions are considered as a socially constructed object (Reinking & Bradley). In the FDE, "learning, cognition, knowing and context are irreducibly co-constructed and cannot be treated as isolated

entities or processes” (Brab & Squire, 2004, p. 1). Therefore, researchers must focus upon how the entities that are involved in the intervention interact with each other along the process. FDE focuses not upon effectiveness or outcomes but the integrated process of all the elements in the learning environment.

Newman’s study (1990) is a good example that stressed the process-focused feature of FDE. He illustrated how the intervention of computer-supported collaborative work influenced students’ learning as well as how the change in the environment influenced students’ interactions and the collaboration among teachers of the classes. He emphasized understanding of educational process by detailed description of how technology helped their collaborative learning. The unit of analysis was not the technology but learning environment (e.g. classroom, school) that technology offered. Applying the design experiments, the study could show the process of changes in instructional interventions, changes in teacher’s role, and the way that the educational environment was changed. The formative and emerging nature of the FDE contributed to the understanding of the educational process by clarifying how technology helped students and teachers to achieve their educational goals.

Besides the workability and its process-focused characteristic, FDE assumes continuous refinement based on the analysis of what is and is not working and why (Collins et al., 2004), which traditional experimental studies do not pay attention to. As researchers proceed in a study, they modify instructional designs so that they can offer a more relevant intervention in a certain context for certain students. Cobb et al. (2003) explained that researchers were required to view the intervention prospectively and reflectively in FDE research. The initial intervention was implemented with hypothesized

learning processes, and was tested. Then, a more specified or elaborated intervention was created based on the results. Thus the research procedure features the cycles of invention and revision. McLaughlin and Oliver's study (1998) showed the procedure of refining the intervention. The study examined how teacher's and students' talk in telemetric classrooms contributed to foster higher order thinking from Vygotsky's sociocultural perspective. In their study, there were three phases. At the end of each phase, discussions and analysis on what happened were conducted, which reshaped the intervention in the following phase. The change in intervention led to the change in ratio of students' and teacher's talk as well as in quality of students' talk. It also influenced the use of technology for scaffolding. With the broader focus upon learning environment, the study could portray what changes occurred and how and why they happened. The reflective feature of FDE might be especially helpful for teachers in practice because they were given opportunities to reflect upon their own pedagogy as well as students' outcome performance at each step, which I believe is a primary advantage of FDE for practitioners.

The role of theory. In FDE research, theory functions in two different ways. First, a design of interventions reflects theories previously established. In other words, researchers should integrate the principles from theories into instructional interventions to maximize the benefits that the theories predict, and see if the results support the predictions (Walker, 2006). Second, FDE ought to develop theory, which benefits improvement of the field (Reinking & Bradley, 2008). diSessa and Cobb (2004) explained that the theory which emerged in FDE was so called 'ontological innovation.' 'Ontology' here is associated with the interpretations that researchers make of classroom

events. The theory “must do real work in generating, selecting and validating design alternatives at the level which they are consequential for learning” (diSessa & Cobb, p. 76). Ontological innovation reflects domain-specific theory-building processes in FDE along with the cycles of design and analysis. The theory development in FDE is not at a general or universal level but a particular or local level, validating a new conceptualization of a particular phenomenon, and suggesting new instructional goals through the reconceptualization. Thus, ontological innovation can be explained as an organic theory that is affected by on-going processes of research. Consequently, the ontological innovation can delineate an emerging theory from local data. Although the role of theory also reflects the locality of educational settings as well as the process-focus nature, researchers need to “draw connections to theoretical assertions and claims that transcend the local context” (Brab & Squire, 2004, p. 8).

Pragmatism. Pragmatism is a suitable philosophical basis for FDE research because the methodology of pragmatism is rooted in practical consideration rather than “deeper philosophical musings about what entails truth” (Reinking & Bradley, 2008, p. 35). Pragmatism resulted from the paradigm debate between qualitative and quantitative research as a specific justification for combining quantitative and qualitative methods (Patton, 2008). Pragmatism allows researchers to move between different approaches (qualitative and quantitative) within a project (Morgan, 2007). Dewey is one of the educators who proposed a pragmatists’ view focusing on inquiry of experience (Maxcy, 2002). Dewey conducted action research under the pragmatic approach with a team at the University of Chicago.

FDE allows ontological and methodological flexibility because it emphasizes the

workability of interventions. As mentioned, pragmatism focuses upon what works rather than what reality is, which can count as a strength of FDE. Because of the flexible stance, researchers can scrutinize different types of data that contribute to understanding a learning phenomenon. Naturally a mixed methods approach is frequently used for FDE research (Reinking & Bradley, 2008). Brown's study in 1992 was a good example of such flexible data collection and analysis. She proposed design experiments to soften the tension between laboratory studies and the reality of classroom. Based on her own experience of researching lab-learning and classroom-learning, she collected and utilized different types of data in order to describe and understand the learning phenomenon well. Accordingly, she applied different approaches to analyze the data, mixing qualitative and quantitative analysis. This way of researching became the basis of the FDE.

Triangulation of data is also commonly conducted in order to describe the complexity of interactive phenomena in the FDE research. Since FDE focuses on emerging interactive learning processes rather than testing hypotheses or confirming preexisting theories, it is only natural for researchers to adapt their plan to the evolving changes, to utilize different theories, and to mix methods in one study. However, such flexibility can be considered as vague conceptualization (Kelly, 2004). In fact, FDE has been criticized since it does not suggest specific guidelines of how to conduct FDE and what standards should be used. Therefore, researchers need to borrow a methodological framework from other disciplines (Kelly).

Why FDE? With regard to the ecological and engineering feature, FDE was suitable for this study because the ecological view on L2 learning is one of the central themes in this study and the engineering metaphor guided my inquiry. Thus, utilizing the

FDE, I documented the process of developmental L2 learning in Chapter 4. I planned to implement two interventions to provide students with more opportunities to apply what they learned in a 100 % online course to real life. These interventions were modified through discussions with the teacher. FDE allows interventions to be changed as part of the research process. Interventions typically are not supposed to be modified or changed in an experimental research project, because the change may prevent the detection of what influenced students' development. However, the FDE process encourages researchers to refine the intervention and to see what kind of effects the learning environment offers students and teachers, documenting how learning environment, students, and teachers interact throughout the research. Accordingly, the results show not how effective the intervention was but how students, teacher and learning environment interacted. The dynamic and interactive qualitative learning phenomenon has not yet been examined very often in the field of SLA. I hope that my study contributes to the field by revealing the dynamic L2 learning processes using the FDE. As a result, this study will also make theoretical contributions to the theories of L2 learning, while at the same time revealing pedagogical theories that emerged in the process of the implementation of interventions.

Bounding the Case

General background. The research investigated an online course offered at a two-year college in the fall semester, 2010. The course was offered in a completely online format in fall while the course was offered in a face-to-face setting in spring. The course had been offered in a 100 % online form three times in the past, and thus when the research was conducted, it was the fourth time the course was offered online. The online

course materials were offered through a course website on Lulima which was an online educational system used at the college for online instruction as well as via You Tube Group².

Although this course was offered under the Japanese language program, the content was quite different from regular language courses such as Japanese 101 and 102. The course was a beginning level Japanese course focusing on developing oral communication skills in business scenes. Hence, there was no instruction on how to write Japanese characters, and all the instructions were done in English and Japanese was written using the English alphabet. It was specifically tailored for those who were working or planned to work in the tourism industry in Hawai'i. Thus, the course emphasized cultural knowledge that was essential for formal interaction with business associates and visitors from Japan in addition to linguistic knowledge necessary in the field. The purpose of this course was to be able to interact with Japanese native speakers, visitors, and business and work associates within specific contexts. Furthermore, the course was a required course in the Associate in Science Degree in Hotel/Restaurant Operations and Travel and Tourism at the college.

With regard to students who officially registered for the course, there were about 20 students enrolled in the course at the beginning, and 10 students completed the course. Because of the content of the course, students' background was diverse concerning age, academic major, and occupation. Most importantly, their proficiency levels varied as well.

² The teacher created a group for the course on YouTube Group. In this way, students' privacy was kept because their products posted to the group were not viewed from outsiders.

Four students were at a quite advanced level, and they took the course to learn specifically how to talk in a business context using honorifics. One student had advanced or upper-intermediate proficiency. Two students were at an intermediate level. Three students were at a beginner's level. Among the beginners, two students had never learned Japanese before they took the course.

Background to the interventions. As mentioned, the course had been offered three times in previous semesters before the research began. During the three-year period, there were no major changes in the content or the delivery of instruction. The course format was based on traditional delivery, which was categorized as communicative CALL in Warschauer's sense (2004), which was explained in Chapter 2. Basically, the course content consisted of two main components: Japanese language and its culture. All the materials of the course were stored in the course website on Lulima, but they also used the YouTube site for oral assignments and exams. As for language learning in this course, students needed to watch videos that showed dialogues of each chapter. For each chapter, students were required to practice the dialogue and create video clips to demonstrate their oral performance. As an assignment, they needed to post the video clips on the YouTube Group. For learning culture, students were required to read a short essay on Japanese culture and to post their response to discussion questions that the teacher raised, which was also an assignment. The teacher usually posted her comments and feedback on Lulima for cultural discussion as well as YouTube for oral performance. Basically the teacher communicated with students mainly through texts and videos. Both were based on asynchronous interaction, and none of the interaction between the teacher and students was synchronous. In addition, interactions among students were not

observed. As previous literature showed (Donato, 1994; Ohta, 2000), peer interaction might help students to develop linguistic knowledge. Furthermore, contextualization and authenticity were lacking in the course materials. From the ecological perspective, students could learn more if the environment provided authentic contexts and resources. Based on these two points, I suggested two interventions to the teacher: the first intervention involved synchronous telecollaboration via Skype, and the second one required students to participate in a real conversation where they could use Japanese language with fluent Japanese speakers.

Before getting into details about interventions, I will explain the course contents in detail, which will help the reader to understand the meaning of interventions. The course consisted of nine units but the first unit was mostly for technical preparations although students learned how to introduce themselves in Japanese. From the second unit, students began to learn how to use Japanese language in specific contexts. From unit 2 through 4, students learned how to interact with Japanese customers at a hotel. Unit 5 focused on asking and answering directions. Unit 6 was about how to deal with customers at a store. From unit 7 to 9, they learned useful Japanese for working at a restaurant. They learned how to receive and make a reservation at a restaurant over the phone, how to lead customers to their seats, and how to take and make orders in Japanese. The contents of the course were quite useful not only for students who majored in Business and Tourism Industry but also for students in Hawaii because most of the situations were quite common in daily life.

Interventions. The two interventions created in the study were intended to offer students different learning environments that might enhance students' learning

opportunities based on the previous literature: namely Skype intervention and real-life experience intervention. As the FDE methodology suggests, the intervention should be created to accomplish the goal of the course: to be able to apply what students learned in the course to real-life situations.

As for Skype intervention, the intervention was implemented in unit 7 to practice how to make and take restaurant reservations over the phone. It was designed based on the sociocultural and ecological approach. Specifically, activity-based learning for L2 learning (van Lier, 2008a) was utilized in designing the Skype activity. van Lier (2008a) suggested important characteristics for an ecological L2 teaching: contextualized/situated, activity-based, and students' agency. YouTube video activity lacked contextualization and students' agency whereas with Skype, we designed an activity that held all these characteristics. First, the Skype activity was designed to be conducted in a contextualized setting. Skype voice chat enabled the creation of a situation that was similar to telephone interactions. Unlike the YouTube video activity, the Skype activity allowed students to interact with a peer student and a native Japanese speaker synchronously. Second, since the activity was ill-defined in that students did not have ready-made scripts, students would have agency to solve the problems that came up during the course of the activity, although scenarios were created that specified the situations to a certain degree.

The Skype activity involved synchronous interaction with fellow students and a native speaker through Skype. Considering the fact that the restaurant reservation was mostly done over the phone, only the audio feature of Skype was used for this activity. The activity consisted of three phases. In the first phase, all the students joined a class session on Skype. The purpose of the first session was to familiarize students with Skype

interaction and to provide them with brainstorming regarding language usage at a restaurant as well as language instruction about making and taking a restaurant reservation over the phone. For the first session, the teacher split students into two groups because small groups allow each student to obtain more opportunities to speak. The second phase required students to participate in the role-play activities with a fellow student on Skype. The purpose of the second phase was to become able to conduct the role-play using specific scenarios and to practice taking reservations with Japanese guests. In the final phase, students interacted with a native speaker on Skype, working on the same role-play activities. The goal of the third phase was to experience a simulated phone reservation with a native speaker. All the Skype sessions did not involve a video feature due to the purpose of the role-play activity as well as the number of people. Therefore, audio-recorded interactions from the Skype sessions were used as a primary source of data.

During the peer role-play activity in the second phase, one student assumed the role of a restaurant employee who took a reservation and the other assumed the role of a guest who made a reservation over the phone. Students took turns so that they could practice both roles. The second phase was planned for students to familiarize themselves with the new expressions introduced for restaurant reservation and to practice them in order to prepare to interact with a native Japanese speaker. They were given scenarios where students had to follow the hypothetical story to play their roles. Here is one example scenario:

Scenario for a Guest Role

Guest: Your last name is *Endo*. You are going to a Japanese restaurant called

Kagetsu for your friend's birthday. You are going there with six other people. You call in to the restaurant to reserve seats at 6:00 pm on Sunday Nov. 14th. Since all of your friends are coming by car, you need to ask if there is parking on the site. Also make a request to have a special cake made for him.

Scenario for an Employee Role

Employee: You are working at a Japanese restaurant called *Kagetsu*. (NOTE: The restaurant has parking on the site. This restaurant is famous for serving a big birthday cake. You are often asked to make cakes for guests.) You pick up the phone. Listen to him/her and take the reservation. Be sure to answer the guest's questions. After you have confirmed the date and time, say that you're looking forward to them coming to your restaurant.

Students had the scenario and vocabulary list to conduct the role-play activity. In the third phase, students played only the role of restaurant employee while the native speaker played the guest role. In so doing, the students could experience the quasi conversation of a restaurant reservation. After completing all the phases, students were provided with the opportunity to reflect upon what they learned during the activity by writing reflection papers. The explanation about the reflection papers appears in the later section in this chapter to explore students' perception of their learning.

The second intervention was called real-life experience intervention. This intervention was implemented after the Skype intervention was completed and was a final project for the course. As the name suggested, students were required to speak to a fluent Japanese speaker outside of school. It would be ideal that students could talk to Japanese

speakers in a business context because the course was tailored to a specific language use in formal and professional interactions as explained. However, some students had been already working in the Japanese-speaking environment, while others had not. Thus, the researcher and teacher decided to suggest options of different situations where students could try speaking Japanese for them to choose for the project (See the details in Appendix A). After students did the fieldwork, they were required to write a paper following questions suggested by the teacher. The questions required students to observe the interlocutor's reaction, to reflect their own attempts in terms of success level, and to discuss what they learned from the real-life experience project.

Role of the Researcher

The researcher's position may greatly influence analysis as well as interpretation of the data (Patton, 2002). I consider myself as a pragmatist who focuses more on the value in practice than debate on philosophical questions about reality and knowledge. As a language teacher who deals with students in reality, it is reasonable for me as a practitioner to take both theories and practice into consideration when I design classroom activities. This pragmatic stance goes well with the FDE methodology as explained in the above section.

It is critical for me to understand what part of the researchers' belief might affect the results and conclusions of this study and how my presence as a researcher might affect students' performance as well as the teacher's beliefs and thoughts reflected in the teacher interviews. First of all, I worked with the teacher closely together creating the new instructional interventions. I served as a teaching assistant in the course, observing students' performance, keeping track of students' assignment submission, and

occasionally giving comments on their work. Although I emphasized that I was not grading students, they might consider me as one of the teachers in the course. My presence and what I did for students in class could affect students' response on the surveys as well as their performance.

Second, I was one of the faculty members of the Japanese language program at the college. I have been teaching face-to-face Japanese language courses at the college. Although I had never taught online language courses at the time when the study was conducted, I had a good sense about what sort of students attended the college demographically and academically. I had also known the teacher of the online course for more than two years at that point. The trust established between the teacher and I enabled me to investigate the teacher's thoughts and beliefs at the deep level. At the same time, my familiarity with the school environment and the teacher as well as my teaching experience in face-to-face settings might invite bias and that might negatively affect the results of this study. To avoid potential bias and reactivity, I followed the strategies that Maxwell (2005) suggested, which is explained in the following section, called validity and generalizability.

Validity and Generalizability

Concerning the validity issue in qualitative research, there is not a consensus on the definition among qualitative researchers (Dellinger & Leech, 2007). I followed Maxwell's definition and guidelines to test the validity of my study (Maxwell, 2005). Maxwell (2005) defined validity as "the correctness or credibility of a description, conclusion, explanation, interpretation, or other sort of account" (p. 106). Maxwell explained that threats to validity in qualitative studies were broadly categorized into two

types: researcher's bias and reactivity. Researcher's bias comes from researchers' own beliefs, theories, and perspectives that cannot be eliminated in qualitative research. The other threat is reactivity which is the "influence of the researchers on the setting or individuals studied" (Maxwell, p. 108). Maxwell suggested not to try eliminating the bias and reactivity but to use it productively. In order to utilize them, researchers first need to understand how the researcher's belief and perspective influence processes and interpretations of the results and how their presence affects the participants' behavior.

Following the strategies that Maxwell (2005) suggested, I tried to avoid negative influences of these threats. In Chapter 4, I will provide rich data that include detailed description of the research site, procedures, and results, so that I as well as readers can see that the study was valid. In this study, the interventions that I created reflected my perspectives. Thus, I will provide extensive descriptions of the implementation and the processes of the interventions in the following sections. In addition, I asked for respondent validation that Maxwell (2005) explained as "systematically soliciting feedback about your data and conclusions from the people you are studying" (p. 111) to avoid misinterpretation of students' comments on surveys and the teacher's opinion in interviews. In this study, I confirmed whether my interpretation was correct or not with the students and teacher. With regard to students' perception of each activity, I conducted one-on-one interviews with selected students to make sure whether my interpretation of their reflection paper was correct or not. Concerning my interpretation of teacher's philosophy, I conducted a follow-up interview after I analyzed the data. I also investigated not only how successful the interventions were but also how unsuccessful the interventions were for some students, by examining negative cases. Investigation of

negative cases enables us to avoid ignoring the data and to assess whether the conclusion is sustainable or needs to be modified. Lastly, I triangulated varied data that I collected. The technique of triangulation was used especially to analyze the data from the YouTube video activity and Skype intervention. I triangulated the recorded data, students' reflection paper, and the interview from selected students in order to increase the validity of the study.

Regarding generalization, it is often discussed as a weakness in FDE research, although I would not consider it as a weakness. Kelly (2004) listed the weaknesses of generalization of FDE. The FDE lacks sufficient numbers of participants to generalize the results. Since the experimental control is lacking in FDE, generalization of behavior would also become difficult. With regard to the contexts, unique contextual features in each setting are a central element in FDE; the unique context would prevent generalization. However, these criteria for generalization are used for quantitative research that tests hypotheses. As Kelly (2004) pointed out, FDE did not test hypothesis but generated hypotheses and frameworks dealing with one case. Thus, generalization of FDE should not be discussed as though it were a criterion for quantitative research. FDE studies do not deal with a large number of participants but a small group of people. At this point, FDE can be classified as a case study. Concerning case studies, Stake (1995) also admitted the poor basis for generalization. Simultaneously, he emphasized that the purpose of case studies is not generalization but particularization. Researchers need to see both the forest with generalized phenomena or tendency and the trees, particular cases, focusing upon understanding what the case is and what it does. Reinking and Bradley (2008) reframed the generalization issues for FDE with a more practical and useful

perspective, questioning “generalization for whom and for what purposes?” (p. 39). They suggested two types of generalizations that focused more upon useful generalization for teachers: analytic generalization and case-to-case transfer. Analytic generalization enables the development of theories that can be extended to other cases (Onwuegbuzie & Leech, 2010). In other words, the result of a study would contribute to a general theory of the phenomenon. Case-to-case generalization occurs when educators adopt programs and ideas into their own practice, finding value for practice (Reinking & Bradley, 2008). The discussion of the generalization issue of FDE made me reconfirm the purpose of FDE and its unique approach to learning science.

Data Collection

The researcher collected different types of data throughout the semester in order to describe the educational context in detail. These were collected chronologically as follows: students’ survey data, YouTube videos, audio-recorded students’ interactions on Skype, students’ reflection paper for Skype and for the real-life experience intervention, and the data from interviews with selected students. The data from interviews with the teacher were collected periodically five times during the semester and one interview was after the semester. All the data were used to answer the research questions. The YouTube video clips and audio-recorded interactions on Skype were analyzed to reveal the students’ engagement in each activity, while the survey, reflection paper, and students’ interview data were used primarily for analysis of students’ perception of their learning in each activity. In order to illustrate teacher’s beliefs and reflection of students’ learning in each instructional activity, the interview data with the teacher were used. At the end, the data were triangulated to thereby increase the validity of the research. In the following section,

the researcher will explain when and how each form of data was collected.

With regard to the YouTube videos, since it was one of the assignments for students in each chapter, students posted them on the YouTube site for others to watch. Thus, the researcher simply utilized the videos that students posted on the YouTube as data (See Appendix B for the consent form).

As for the survey, the online survey software, called SurveyMonkey was utilized. I conducted one survey four weeks after the semester started. It focused upon students' demographic information, background of their technological skills and learning experience of Japanese language, and their opinions about current instructional activities such as YouTube videos and cultural discussion forum (See Appendix C for the questions in the survey). The purpose of the survey was to grasp students' background and orientations to learning Japanese as well as their satisfaction with the course materials offered thus far. The consent form was disseminated right before students started the survey (See Appendix D for the consent form). The survey website was designed in such a way that unless students agreed with the statement of consent, they could not move to the first page of the survey.

The data from Skype interactions was audio-recorded for about three weeks with the software called Audacity. The first phase was excluded from the analysis in the study because there were no opportunities for students to interact each other spontaneously using Japanese language. Either the instructor or the researcher was present in all of the Skype sessions for recording as well as supervising students. In order to capture the engagement and process of students' learning, the audio-recorded data from the second and third phases was transcribed after sessions. Each role-play interaction lasted for two

to five minutes depending upon how fast they completed the role-play. The consent on audio recording was collected via email before the day when the activity was conducted (See Appendix E for the consent form). For the arrangement of synchronous Skype sessions, a web tool called Doodle was used so that all the students could join the sessions. Doodle enabled us to see when would be the best time for students to have a synchronous class by online poll. After students completed the Doodle poll, I made an appointment with all the students at least ten days prior to the day. For the second phase, I matched up a student who was less proficient and student who was advanced as a pair so that scaffolding and collaborative dialogues could easily occur. However, since it was a 100 % online course, I was not able to pair some students based on their proficiency level due to their schedules. I used the conference call function on Skype and audio-recorded their conversations. The conference call enabled us to connect more than two people simultaneously.

After all the Skype sessions, students had to submit a short Skype reflection paper (See Appendix B for the consent form). Questions were provided for students to answer in the paper. In order to understand how differently students felt participating in the Skype intervention compared with the YouTube activity, some questions asked students to compare the activity on YouTube with Skype (See Appendix F for questions on the Skype reflection paper). This reflection paper was used for analysis of students' perception of their learning on YouTube as well as Skype.

Concerning the real-life experience intervention, instead of recording, students' reflection paper was used to uncover their perception of their learning in the Japanese-speaking environment. The detailed instructions about this intervention were

explained above.

Regarding the interviews with the teacher, I conducted six interviews officially, though since the teacher and I were colleagues, we often shared ideas and thoughts informally during the study period (See Appendix G for the consent form). The first interview was held right after the semester started and it was a semi-structured interview. (See Appendix H for the initial interview questions). Four other interviews were conducted periodically before and after the implementation, and the last interview was held after the semester. These interviews were open-interviews in that I did neither lead the interviews nor structure them so that the teacher could share her opinions and thoughts rather freely. Table 1 below shows the procedure of data collection.

Table 1.

Data Collection Procedure

Dates	Data Collection
Aug 23	First day of instruction
Aug 23 (till early Oct)	YouTube activity
Aug 30	Initial interview with the teacher
Sep 10 (2 weeks)	Student survey
Sep 14	2nd Interview with the teacher
Mid Oct (2 weeks)	*Midterm project
Oct 18 & 25	3rd, 4th & 5th Interview with the teacher
Nov 1	

Nov 7 (till the end of Nov)	Skype intervention Students' reflection paper Interview with the teacher after Skype sessions
Nov 29 – Dec 15	Second intervention Students' paper
Dec 6 – 8	*Final examination on Skype
After Dec 15	Interviews with students 6th Interview with the teacher

The course activity with * was not analyzed in the study.

Data Analysis

Constructivist grounded theory for FDE research. The FDE research does not favor particular analytical methods but methods that link processes of enactment to outcomes (Design-Based Research Collective, 2003). The purpose of the FDE is to develop theory as well as provide practical recommendations to accomplish educational goals. Grounded theory methods would support these FDE characteristics. Grounded theory methods are defined as “systematic, yet flexible guidelines for collecting and analyzing qualitative data to construct theories ‘grounded’ in the data themselves” (Charmaz, 2006, p. 2). Grounded theory methods are useful if one wants to “develop or modify a theory, explain a process, and develop a general abstraction of the interaction and action of people” (Creswell, 2008, p. 448). Because FDE emphasizes the philosophy of pragmatism and constructivist view, I believe that Charmaz’s constructivist grounded

theory (2006) would be the best one for FDE.

I could see the ontological and methodological synthesis between FDE and grounded theory methods. One of the purposes of grounded theory is to generate and “develop theories from research grounded in data rather than deducing testable hypotheses from existing theories” (Charmaz, 2006, p. 4), which is similar to the purpose of FDE. Moreover, a constructivist view assumes “emergent, multiple realities; indeterminacy; facts and values as inextricably linked; truth as provisional; and social life as processual” (Charmaz, pp. 126-7). Therefore, constructive grounded theory can help researchers pursue emergent analytic goals and foci along the fluid process of meaning construction in analysis.

In the analysis of constructive grounded theory, researchers are required to theorize how they interpret and what they find in the data. The theorizing process is open-ended and it allows researchers to analyze from pragmatist view (Charmaz, 2006). Grounded theory methods do not necessarily stick to a specific philosophical stance and a single method. Researchers need to conceptualize and reconceptualize social actions or interactions throughout the analytical processes with comparative methods and the researcher’s engagement (Charmaz). The procedure of data collection and analysis involves the researcher’s interactions with the data, which contributes to new insight and theory constructions. This implies the fluid nature of research processes. As seen in the process of FDE studies, grounded theory methods also allow researchers to interpret the data from various perspectives with different methods as they proceed. Therefore, “the grounded theory method itself is open-ended and relies on emergent processes, and the researchers’ emerging constructs of concepts shape both process and product” (Charmaz,

p. 178). Such an interactive process of grounded theory methods would best fit in with the FDE approach.

Analysis of varied data. As explained above, various data were analyzed in this study to increase validity of the results, triangulating them. Different analyses were applied depending upon the types of data. All the data that I collected except for the students' survey were transcribed and coded qualitatively based upon grounded theory methods that allowed researchers to develop theories instead of borrowing pre-existing theories (Charmaz, 2006). As mentioned, with grounded theory, the theorizing process as well as coding process is open-ended, which allows researchers to create codes defining what they see in the data. Researchers need to repeat the coding process over and over again, so that they can reach deeper understandings of the data.

Concerning student survey data, a number of survey questions were open-ended, and yet, the comments from students were shorter than I expected. Their responses resulted in two to three sentences. Thus I did not go through the coding process but examined each response qualitatively to investigate students' opinions about their experiences of online L2 learning.

With regard to the YouTube videos, unlike other data, the videos showed not only speech but also motions. According to Baldry and Thibault (2006), bodily movement is also a meaning-making resource. Thus, the researcher transcribed both utterances and body movements that precisely revealed how students were engaged in the activity. As a result, the investigation of both students' utterances and body movements led me to find the unique patterns between what was said and how they moved.

Regarding the audio-recorded Skype interactions, although researchers should not

rely on pre-existing codes completely, they can refer to the previous concepts in the coding process. I considered negotiation for meanings and other negotiation moves, such as co-construction and self-/other-correction that Foster and Ohta (2005) suggested, as potentially critical codes for L2 development. Thus, the codes related to negotiation moves were used in coding the Skype interactions. However, I did not apply the theories previously established with these codes for the analysis because the theories behind these codes were predominantly based on information-processing perspectives. Thus, I paid attention to negotiated interactions, such as clarification requests, confirmation checks, and co-construction, which were considered as a sign of L2 acquisition in previous research (Foster & Ohta). At the same time, I also focused upon pragmatic relevance in relation to linguistic accuracy and the values that students brought during the course of their interactions with one another. Interactions were coded word-by-word as well as line-by-line first to examine what was happening during the interactions. Then, I focused upon the significant codes from the interactions between peers and those with a native speaker to look into unique patterns of each interaction. I also investigated the relationships among codes to conceptualize how the substantive codes and patterns were related to each other in order to develop theoretical codes. To code the data in the study, I used a type of software, called Transana.

Concerning the data from the interviews with the teacher and students, I transcribed and coded for themes (Creswell, 2008). For analysis, I did not utilize the pre-conceptualized codes from past studies. I followed the processes of coding that Charmaz (2006) suggested. I started with initial coding such as line-by-line naming codes to grasp what the data was about. Then, focused coding was conducted to decide analytic

directions, selecting codes, categorizing them, and establishing themes. At the end, I conducted theoretical coding by drawing connections among themes that I found in focused coding. In this way, I could interact with the data repeatedly. In so doing, hidden themes emerged from the data, which eventually led to understanding relationships among the themes of students' perceptions of their L2 learning and teacher's teaching philosophy and perception of online L2 instruction.

Summary

The FDE methodology was chosen for the analysis because of three reasons. First, the FDE bridges the gap between research and practice. It enables the examination of how the intervention works or not and why, which guides the design of better interventions as well as the development of learning theories (The Design-Based Research Collaborative, 2003). Second, the process-focused nature of the FDE matches the purpose of the study. Based on the literature review in Chapter 2, what seems to be lacking in the previous research on L2 online instructions is qualitative examination of students' learning processes from sociocultural approaches. As I stressed in the discussion of sociocultural and ecological perspectives in Chapter 2, the qualitative process-focused research on online L2 learning lacks in the field of SLA. Third, the FDE allows capturing the entire process of implementation: repetitive reflective actions of implementation, observation, modification and reimplementation. Eventually the detailed documentation of such implementation processes would help other practitioners to implement similar interventions. Moreover, since interventions, students, and teachers are influencing each other during the course of implementation, documenting the dynamic interaction by focusing on how these factors are affecting each other in the learning

environment would be helpful for practitioners to reflect on their own teaching and to understand their students. I also hope that the FDE approach could provide theoretical contributions to the field of online L2 learning based on the sociocultural and ecological approaches as well as give practitioners pedagogical and practical insights into online L2 teaching. For the analysis, I applied grounded theory methods because of its flexibility. The open-ended coding and theorizing process enabled the discovery of the complex and dynamic nature of L2 learning. In so doing, students' learning processes were qualitatively examined, specifically the learning process in the course activities designed to focus upon authentic contextualization and students' agency. The results are presented in the following chapter.

Chapter Four

Results

In this chapter, the researcher will demonstrate what was found from the collected data in three major components: teacher's perception of students' engagement in assigned activities, students' engagement, and students' perception of their own engagement. I will first explain the procedure of implementation of the interventions, and then discuss the results.

The Flow of Activities and Collected Data

In order to investigate the teacher's perception of online instruction and students' engagement, I interviewed the teacher six times as mentioned. The interviews were held periodically mainly to discuss how to design and implement the interventions and what the teacher thought about students' engagement in the interventions.

In order to explore students' learning throughout the course, I collected the various types of data: students' YouTube video production, audio-recorded Skype interactions, students' reflection paper, students' survey, and audio-recorded interview with students. There are two major focuses in the research regarding the students in the study: students' engagement and their perception of each activity. For each focus, I utilized different data sources. Among the data, YouTube videos and audio-recorded Skype sessions were used as primary data for analyzing students' engagement. The survey data, reflection paper, and interview data were used as supporting data for the analysis of students' engagement, and were also primarily used for analyzing students' perception of each activity. Before going into analysis, I will explain the various data in detail chronologically: YouTube individual video productions, survey data, Skype

audio-recorded sessions, students' reflection paper and interviews on the final project of real-life experience.

The YouTube videos activity was used for course assignments to assess students' speech as well as to communicate with them. At the beginning, the teacher did not want to make any change in the YouTube video activity. Throughout the conversation between the teacher and I, however, she made a decision on making a change on the YouTube activity later in the middle of the semester, which is explained below. She decided to keep the standard YouTube video activity from the beginning of the course for 6 weeks until midterm. For the activity, for each unit in the book, students were required to create a video in which they pronounced new phrases and expressions in Japanese and uploaded it to YouTube. The teacher also created a video on feedback about pronunciation and grammatical tips after she watched students' videos. According to the teacher, the YouTube activity had been a major tool to asynchronously interact with students in addition to e-mails.

As student survey was conducted in the fourth week in order to investigate their reflection about course materials, students' background in terms of language education and technology usage. The survey data was used for the analysis of students' perception of their own learning in the course at that point when the survey was conducted.

Six weeks later in the semester, the teacher decided to add a new project that was a revised YouTube video activity as a midterm. However, the results from this project were excluded from analysis; the reasons are explained next. The format of the activity was the same as a regular YouTube activity. It required students to work with a partner and create a YouTube video clip together. The teacher wished students to meet in person

and create the video together, so that students could obtain the opportunities of interaction. For the project, students had to define the context and settings, collaboratively write a script which they subsequently performed, and create a video clip. This project turned out unsuccessful. The major problem was scheduling between students. The activity did not work as the teacher planned mainly because students could not schedule a face-to-face meeting with their classmates. Most of the students in this course had a job besides taking other courses at the college. Only two pairs could complete the project with a classmate. Others decided to work on the project with their friend who was not enrolled in the course, or even completed the project by themselves playing two roles and editing the video to have the conversation flow. To make things worse, it was the time when students had to deal with other midterm projects required in different other courses, which probably made their scheduling even harder. Moreover, although the midterm project might have elicited students' collaboration, students still relied on their memorization without interacting with each other spontaneously. The only difference between the midterm project and regular YouTube video production was whether it was pair work or individual. Thus, the regular YouTube assignment and the midterm YouTube assignment were quite similar in that the interaction was not spontaneous but pre-scripted. Therefore, the midterm project was excluded from the analysis in this study. As another midterm project, students needed to complete a self-assessment. That consisted of open-ended questions about their midterm YouTube video production and evaluation of their current ability and goals. The results of the self-assessment were used to understand students' perception of activities.

After the midterm, Skype activities were implemented as an intervention

explained in Chapter 3. Fortunately, scheduling Skype sessions was not too complicated with Doodle. There were three phases: whole class session, peer-peer session, and student-native speaker session. The peer-peer session and student-native speaker session were analyzed in detail in this chapter. Only the audio feature was activated for all the Skype sessions because of the purpose of the role-play activity as well as the number of people who were in the sessions³. Thus, audio-recorded data was used as a primary source to analyze students' engagement.

The project of real-life experience was the final project in the course as well as the second intervention. For this project, each student chose the site for the project where they talked to a fluent Japanese speaker in Japanese. Some conducted their project at their work place whereas some conducted the project at a restaurant. Since students were required to conduct the project in real situations, recording students' interaction with random people was not realistic. Therefore, students' reflection papers and the data from the interview that the researcher conducted with selected students, were used to understand students' perception of learning L2 in real life situations.

In the remainder of the chapter, I will examine the change in teacher's perception of online instructions, students' engagement in YouTube videos and Skype activities followed by the analysis of students' perception of their L2 learning during the two interventions as well as that in the YouTube video activity.

³ When the Skype intervention was implemented, we were able to use the video chat feature only between two people. Thus, we utilized only audio feature even for the whole class session.

Analysis of Teacher's Perception of Online Instruction

Throughout the semester, the teacher and I constantly had meetings to reflect and discuss about students' engagement and interventions. I recorded our conversations as much as I could, although the conversations sometimes occurred in a hallway at the college when we bumped into each other. Thus, our interaction was not limited to the planned interviews. The interviews that were planned officially were conducted six times. Based on the data that I could record, I will present how each activity satisfied what the teacher aimed for as well as what was left as a challenge regarding the teacher's philosophy, the goal of the course, and the design of the activities.

Teaching philosophy and the goal of the course. The discourse of the teacher during our conversations reflected her teaching philosophy, even though the topics of the conversations were not exactly about her teaching philosophy or the course goal. The teacher's beliefs in teaching are critical factors for a teacher to plan and determine course goals and activities. Furthermore, when implementing the activities, the activities are supposed to guide students to accomplish the goals. There were a few recurring themes that the teacher emphasized based on her experience of teaching online and in a regular face-to-face setting at the college: application of the learned content, online learning at their own pace, protecting students from overload and technological problems, and providing a controlled environment where students could learn comfortably. These themes seem to be deeply related to her dilemmas in implementing interventions.

Application of the course content to the real world. The main goal of this course was clearly stated in the syllabus: students would be able to apply what was learned in the course to the real world through interaction with Japanese native speakers, visitors,

business and work associates. This goal came from the teacher's beliefs in teacher's role. She believed that teachers always needed to remember a bigger picture beyond teaching the language in the classroom, and students' learning should not be limited only within the classroom. Thus, teachers should teach the subject in the way that students could use what they learned in the real world.

So our role is not only teaching the language. It's about building this person who is ready to interact, be ready for change, be ready for this job marketing is gonna be tough. ... It (teaching) is preparing human development for people who are ready to survive and thrive in the next twenty-first century so it's not so much that we are language teachers or Japanese teachers but we should be encouraging students who can use what they learned in this world so that they can survive and thrive. [the teacher Yama]

Since the subject is Japanese language, the teacher often emphasized the importance of students' exposure to real language usage in addition to narrower language use in classroom.

It's gotta be, I guess, partly learning vocabulary etcetera, of course, but then it's beyond that. Here you can, by the end of this class, you can go out to Waikiki and use it and see what happens with it, right? ... Our students' mind is set on that (passing quizzes and tests), but then we want them to go beyond that to say, hey it's not in the classroom. This isn't just a fake thing. This is what you are going to be in. [Yama]

She wished students' language learning in the course to become a meaningful part of their life, rather than just passing the course and earning credits for their graduation. The

last sentences in the quote above suggested that when students went into the real situations where they actually needed to use the language, they would notice the difference between limited language use in a classroom and diverse language use outside. Therefore, she tried to encourage students to be familiar with real language use as well as classroom language use. However, the activities that had been implemented in the course previously did not support the goal of the course.

Teacher's understanding of the students at the college. As mentioned, the teacher has been working at the college for twenty-five years. Based on her experience, she has known well how most of the students' lives progressed during the fall semester. She emphasized that she wanted to protect students from overload, otherwise, many students might not be able to complete the course work. She was always concerned about the issue of dropout rate at the college, especially in online courses. Thus, her talk often extended to the discussion on how to prevent students from falling back behind or dropping out of the course.

When she created the course four years ago, she decided to put all the important components before Halloween⁴ because students' lives got busier after Halloween due to the midterms and quizzes from other courses and seasonal events such as Halloween and Thanksgiving. She specifically mentioned that the course contents of unit 7, 8, and 9 that appeared later in the semester were not as important as the contents in the earlier chapters. She planned to reduce the course content and to assign light weighted assignments in the later chapters. Thus, when we discussed the real-life experience intervention, she showed

⁴ Halloween is a type of American festivals which occurs on October 31. It is not a holiday but there are various events held on that day.

her hesitation concerning students' overload, stating, "final exam time is a major crunch time." She hesitated having students conduct the fieldwork project (real-life experience project) because she thought students must be too busy to conduct the project due to the finals for other courses at the end of the semester. She continued as below:

You know how it is once Halloween comes and Thanksgiving comes. Most important thing is before midterm. That is not how it should be but the reality is Japanese is not a main course. So that's my teaching experience with all of the kids from Hawaii realistically speaking *honto ni daijinakotowa* (the most important things are) midterm *no mae* (before the midterm). October *no mae* (before October). [Yama]

Her concerns about students' workload and stress level reflected the materials that she chose in the later chapters as well. For instance, she put one cultural video about *shodo* (calligraphy) as a stress remover around the midterm. She said "that one (cultural video on calligraphy) is more like a stress releaser because it's midterm time. I put in there to help them to learn techniques to focus and kind of a meditation, stress remover."

Another theme that came up during the interview was preparing the controlled learning environment for students' comfortable learning experiences. In her view, it is critical to control the learning environment so that students would not get off the topic or get lost during the activities. She emphasized the importance of a controlled environment, saying "In a controlled environment, ... I did not just bomb (bombard) you (to) go out talking to people out on the street yeah?" This means that she did not want to harm students with the risk that they would get in trouble talking to random Japanese people on the street. In the last interview, she expressed her uncomfortable feeling that she could

not control or check students' learning while they were working on a real-life experience project. This theme is fundamentally associated with one of her teaching philosophies regarding protection and security of students' learning. Teachers should provide learning environments where students can comfortably learn without an excessive amount of work or overwhelming chaotic situations that students cannot handle at their level of language proficiency and ability.

Online specific issues. Her sense of protection and security led to her hesitation in changing a learning tool in the course after using it for four years. She preferred using only the YouTube video so that once students got used to it, they would not have any problems with the technological part of the course. Therefore, she hesitated to implement the Skype intervention at first because it required students to use a different learning tool, Skype, in the middle of the semester. She thought that using a new learning tool might prevent students' smooth learning. In her words, "you don't want something like technology to be a minus, to detract." As far as technical issues were concerned, the teacher admitted her unfamiliarity with current technology. She often mentioned her unfamiliarity with technology across the interviews, and did not realize how much students were able to handle the technological part of the course until she saw the results from implementation of the Skype intervention. I will discuss her fear about technology in a later section.

Another crucial belief that the teacher had regarding online instruction was that students in online courses should be able to learn the content at their own pace. Therefore, she designated the deadline for each assignment submission but did not set the date for blocking students' submissions. In other words, students could submit what they did at

any time even after the due dates. In the middle of the semester, I noticed that many students started ignoring the deadline, and saw that only a few students submitted their assignment in time, and yet, the teacher did not take any actions upon the issue. She commented, “Actually it's my fault because I've done it from before. I am not too strict about deadlines.” She clearly stated the reason why she did not force students to submit assignments in a timely manner.

Because I feel that is the reason why it is an online course. It should be available when they want to learn. Why shut them out? There are lots of discussions against that, but there is enough. Except for the final exam, there is time limit, you know. ... In a way, I have lots of deadlines in this class. That's so that students can plan, but then if they want to continue learning. Even though they do not get full points, why shut them out? Because if that's the purpose of finding to be able to speak the language, it takes time. You can keep practicing it's a buildup process they can learn time-management from other things. [Yama]

She believed that flexibility was the highest advantage for students to take online courses, and she did not wish to ruin the benefit. She brought up the point several times across interviews at different times, and emphasized the reason why the course has been offered in the form of 100% online instruction.

Implementation of each activity. In implementing each activity, I had a meeting with the teacher to ask her opinions, and thoughts about each activity from her point of view. Reflecting on how students were engaged and sharing her thoughts on each activity, the challenge of reconciling conflicting elements of her teaching philosophy and the goal of the course emerged. In the following sections, it is demonstrated how the teacher

perceived each activity in relation to her teaching philosophy. Based on that, I will discuss the shift of the teacher's emphasis of her belief in the following section.

YouTube video. Considering her strong belief of online instruction that flexibility must be kept for students to be able to learn at any time, YouTube video assignments fit in with her philosophy. That was the reason why she kept the assignment for four years without changing. When she talked about the advantages of YouTube video activity, she started off with flexibility, mentioning, "The pro of the YouTube again is the most I think is flexibility. You can do it at any time." YouTube video could also foster asynchronous interactions among students as well as between the teacher and students, although interaction among students hardly occurred during the course. The interaction resulted in watching others' videos without responding back to the video, and thus the interaction remained one-way. She described this merit comparing it with the paired Skype activity.

The pro of the YouTube is that in a way everyone can watch it together because we created it, our own group. The Skype was more one to one, right? It was between that pair, and so one of the reasons why we used the YouTube for JPNS 150 was so that when someone creates something, everyone can watch it together which brings closer to real classroom situation. [Yama]

She also mentioned other merits of using YouTube from the teacher's point of view.

YouTube video prevented someone else from doing the course work because the teacher could see their faces. If some students were reading the dialogue off in the distance, she could also easily realize it. In this way, students' learning on YouTube was controlled and monitored, which satisfied the teacher's belief of the need for a controlled learning environment. Another advantage was that while creating YouTube video clips, students

could listen to their own speech again and again to make sure that there was no mistake. During the process, they could acquire the skill of self-correction.

Regardless of these advantages, YouTube activity did not provide the opportunity to use the language, which did not support the goal of the course. Even though they worked with a partner to create a video for the midterm project, the script was prepared, and they memorized what they were going to say in the video. Such interaction was completely different from the real interaction where students did not have any prepared scripts, and spontaneously used the language to communicate. Students used rote memory to complete the YouTube assignments with repetitive practices. The teacher herself considered YouTube activity as acting a role and presenting in front of class rather than creatively using the language. Thus, YouTube video activity favored flexibility which the teacher emphasized the most as integral to her online teaching philosophy though it did not contribute to accomplish the course goal of real language use and its application.

Skype intervention. Since Skype required synchronous interaction, it limited the flexibility that the teacher wished to maintain. Before the implementation, the scheduling issue was the teacher's main concern. Upon the completion of the Skype sessions, she could see that scheduling did not create any troubles with planning ahead of time and that the synchronous interaction on Skype offered the environment where students could apply what they learned in class using the language. This merit overrode the narrowed flexibility with Skype in the teacher's opinion. She said, "In a Skype type of thing, you have to be interacting in real situation and real time, right? So that's what real language use. I thought it's closer to real language use."

Skype provided a well-balanced learning environment considering her beliefs, although the flexibility was violated. First of all, the synchronous interaction with a native speaker offered the opportunities to use the language, which matched the course goal, and this was the biggest difference from YouTube video production. Second, since either the teacher or a teaching assistant were present in each Skype session, students' learning environment was monitored. In other words, students did not have to deal with the new situation by themselves alone but there was always someone who supervised the situation. The teacher said:

One of the good results from this experiment was the interaction with the native speaker was real, but there was a TA as a helper then. It's a controlled situation. (If there were no one supervising the situation, it would have been) different.

They might have been just chatting with each other or something like that. It is a different tension with the TA there. So, I think it was wonderful plus. [Yama]

Especially during the Skype session with a native speaker, if students got lost completely, it was critical for students to have someone who they could rely on and who could guide them to the appropriate path. Since the teacher was concerned about students' safe and comfortable learning environment, the learning environment that Skype provided satisfied what the teacher wanted to offer to students. Regardless of the violation of flexibility, therefore, the Skype activity went along with her philosophy quite well. Moreover, the learning environment on Skype afforded students with opportunities where they could apply and use what they learned in class.

Real-life experience intervention. With the real-life experience project, the teacher mentioned the positive effect of students' learning in that students had an

opportunity to use the language in real situations. She stated:

Well as you said they applied their learning in real situation, right? By going out and observing. From their observation, use what they learned in this class to show what they learned from what they saw. So it's application of the class content in real situation. Hawaii is such a good place to have all of these opportunities.

That's why although I think there were more possibilities to do capstone like this.

At first I was hesitant because I was like what's gonna come out of it, you know.

But then I think I'm pretty positive about it. [Yama]

However, from the beginning to the end, she expressed her mixed feeling in implementing this fieldwork project. First, although it is flexible for students to work on the project, she hesitated to implement it mainly because the project might give students extra work during the final crunch time. As explained, she tried to minimize students' workload toward the end of the semester, and therefore, implementing this project as a final project was not favorable to her. Second, she believed that students needed to learn under a controlled environment where someone could supervise their learning. She commented on this matter as below:

Well, I really want them to have a real person-to-person experience again with real native speakers in a controlled environment because I am there at the tutoring, right? I didn't just bomb you go out talking to people out on the street yeah? So, that way, two things: one is the controlled environment and two I could introduce you to like for examples Jake to Yuki-san, you know, and then in a way it's real but still under the control. [Yama]

In the quote above, 'tutoring' means supplemental sessions that she offered for her

students who were taking her other courses in face-to-face settings. She invited students of the online course to the tutoring sessions where a number of Japanese native speakers also joined as a helper. She showed her strong desire to have students interact face-to-face with native speakers in situations that would be under her control. At the same time, she also implied that it was critical to have someone who could check what and how students were learning the language with Japanese native students.

In relation to the controlled environment, she suggested another concern after the entire process of the study was completed. She showed her frustration that she could not control or check students' learning as shown below:

Cannot control or check. I'm still learning how to assess, this kind of assessment of learning, something is not so concrete, and yet, to be fair to everybody, maybe it's just they do it or they don't. Something simple like that. ... Culture is something very difficult to measure: how much understanding you have of a culture versus language, you can see much more clearly if you are fluent or if you pronounced it right, if you used it, right. [Yama]

For the class project, she preferred to have students in a controlled environment to evaluate students' learning fairly. Right before the quote above, she emphasized the necessity of controlled situations for her to evaluate their learning. Students should learn in a controlled environment where the teacher can monitor students' learning processes. However, the environment where students conducted the real-life experience project differed, which was beyond her control. As mentioned above, the teacher preferred preparing controlled learning situations for students to learn rather than letting them go into the real situations without any support. Therefore, although the real-life experience

project could offer the learning environment that matched the course goal and purpose, it did not go along with her teaching philosophy of the controlled learning environment fully.

Emphasis transition along with the teacher's perception changes. Based on the interviews, some changes occurred in the teacher's perception of online interaction and students' capability on technology. Interestingly, each activity stressed one of the teacher's beliefs more strongly than her other beliefs. Based on the interview with the teacher, I could see which theme was the priority among the competing themes for the teacher, based on how the teacher perceived each activity.

Change of teachers' perception of synchronous and asynchronous learning. As mentioned, the teacher kept the course activity only with YouTube and cultural discussion, and did not change the format of the course for four years. She was comfortable with utilizing the YouTube video, watching students' video productions and providing feedback. The feedback was usually posted to the whole class after she checked all the students' videos and her feedback was mainly about pronunciation correction. Therefore, the interactions between the teacher and students were limited to the asynchronous interaction through YouTube, and interaction among students online did not occur before the implementation of the Skype intervention. In the very first meeting, the researcher asked about the interaction between the teacher and students as well as among students. Her understanding of online interaction seemed limited to asynchronous interaction. Her response was:

Interaction part is where the YouTube comes in, where students are so called interacting. That's why I did not put in attachment to the homework assignment so

that you can see your colleagues' submission. By watching each other's (video) and you can comment, you know. That's the interaction. Our comment that we give is an interaction. ... That's the way, so called interaction of the oral portion is happening. [Yama]

In the later interview, she also mentioned that the YouTube video could create classroom like interaction because they could see all the other students' performance on the video.

Before the Skype implementation, the teacher's comments reflected another interesting understanding of language use. She kept emphasizing that the YouTube video production could show whether students could use the language or not, rather than just memorizing the phrases, although she could not explain the specific criteria to determine which students reached the level at which they could use the language.

You can tell if it is theirs or not. When they do it on YouTube and when they are talking to you using Japanese, you can tell if it's become a part of them or if it's a still memorized phrase yeah? ... I see you can really use it. It is really not just memorized. If it's not enough, I will say okay I see you got it, but now use it in a real way. That's the beauty of YouTube. You can tell and students can tell. They can see them. [Yama]

This unique understanding of students' language use on YouTube disappeared after Skype sessions. She commented that Skype interaction was close to the real interaction because they had to react to what had been said on the spot.

I could do it in a real time and we could see the real reaction. The real rather than when it's YouTube, students can kind of practice and practice and then might be a rote memory thing versus in a Skype type of thing you have to be interacting in

real situation and real time right? So that's what real language use. I thought it's closer to real language use. [Yama]

Previously, online interaction was limited to asynchronous with YouTube videos and emails based on the teacher's comments, but the teacher's understanding of online interaction included the synchronous as well as asynchronous interaction after the Skype intervention. In addition, comparing students' engagement in YouTube and Skype activities, she stated that YouTube video activity might be based on a rote memory as opposed to the Skype interaction in which students needed to interact with each other using the language. This comment contradicted what she had been claiming about the interaction with YouTube before the Skype intervention. Her perception of online interaction had completely changed to an understanding that synchronous interactions might provide more relevant learning environment for students to learn how to apply the learned content.

Change in the teacher's understanding of students' capability of technology and online interaction. From the beginning, the teacher suggested her unfamiliarity with technology. When I introduced Skype to her, she was very concerned if she could use it or not. This concern was not only about her but also about her students. At the beginning, she mentioned that she wanted to keep the technology used in the course as simple as possible so that no students would fall behind due to the lack of technological skills. This was the reason why she did not change the basic format of the course with YouTube activity as well. When she started the course four years ago, there were more students who were not familiar with computers and not used to taking online courses than at present. Consequently, she had students who could not complete the course because of

the technological problems. However, after the Skype intervention, her anxiety about students' technological skills had gone.

Well, I found that first we went step by step, right? And then we saw it worked and then the other part is students are so used to it. People are used to, my students are much more comfortable and much more tech savvy than me. They were very comfortable with Skype. It was no problem for them. Therefore, if it is not a problem with them then it's not going to be a big resistance. [Yama]

At the beginning of the course, students started learning Japanese through the YouTube video activity. Only one student had a problem with how to upload the video. When we switched from YouTube to Skype activities, none of the students had a problem using Skype. It was quite a smooth transition that made her realize that her current students were more technologically advanced than previous students.

Skype intervention also made the teacher realize the difference between her and students in terms of the perception of synchronous interaction.

It's hard to say kid, you know, young people today both (online interaction and face-to-face interaction) are real realities. Neither of them are fake. Both online reality and face-to-face reality is just as high impact today versus my generation online is not so real. For my generation, I still have to be comfortable talking to you in person, but younger generation if you just as close talking to someone on Skype as real situation. There is a difference in our generation, comfort level or the way they see the reality. [Yama]

The teacher found that students were comfortable talking over Skype, but personally she still thought face-to-face interaction would be more comfortable for her. She attributed

this difference to generation gap though this realization led to her positive reflection toward Skype intervention. She continued saying that the most important thing was not her conformability but the students'. Since students were comfortable with technology, and could have more opportunities to interact with each other through Skype, she did not hesitate utilizing Skype any longer. After the Skype intervention, she even decided to use Skype for the final exam.

Emphasis shift reconciling competing themes. The researcher and the teacher met periodically to discuss improvements to current instruction considering instructional goals. From the very beginning, the teacher had the clear goal for the course which was to be able to apply what was learned in class to the real situations. When we started the preparation for the semester, the activities and assignments previously offered in the course were not well designed to enhance students' application of the learned content. The teacher agreed to create interventions for increasing interactions in class so that they could have more opportunities to practice, applying the learned contents in conversation. Thus, our mission was to alter the course activities that would better go along with the course goal as well as teacher's beliefs.

Throughout the semester, the emphasis of teacher's teaching philosophy had shifted, reconciling competing themes. As explained, there were five themes that the teacher emphasized to take into consideration in designing and implementing interventions: application of the learned content, workload control, controlled environment, technological skills and flexibility of students' learning. The theme of technological skills disappeared at the end because the teacher could realize that it was not too much of a problem for current students. Regarding workload control, the teacher

made an announcement ahead of time to prevent students being overloaded. This solution worked well, and most of the students completed all the assigned activities. Other themes were left competing in each activity, and repeatedly came up in the interviews. The summary of themes matched with each activity is shown in Table 2, where a cross mark represents no application, and a circle represents application of the belief to the activity.

Table 2

Teacher's Beliefs Stressed in Each Activity

	YouTube	Skype	Real-life experience
Application of the learned content	×	○	○
Controlled environment	○	○	×
Flexibility of students' learning	○	×	○

Although the flexibility of students' learning was maintained, YouTube video activity could not provide relevant interaction for the application of the learned content. Skype limited the flexibility but it helped students apply what they learned using the language yet it was still under the supervision of the teacher or teaching assistant. In the real-life experience project, there was no problem with flexibility and it encouraged students to apply the learned content to real situations. However, this project did not support the teacher's beliefs for a controlled or secured learning environment. In conclusion, the results from all the three activities prioritized the teacher's beliefs: the application of the learned content was the most important factor, and controlled learning environment was stressed secondly. At the end, the teacher did not stress the flexibility of students' learning very much. In the implementation of Skype intervention, the teacher's emphasis shifted from flexibility to application of learned content. However, from the results of the real-life experience intervention, the controlled environment seemed to be a critical factor

for the teacher to maintain. In conclusion, the Skype intervention satisfied the teacher more than the real-life experience intervention in terms of application of the learned content combined with controlled environment.

Analysis of Students' Engagement

In this section, how students were engaged in YouTube video activity and Skype intervention will be closely examined. As previously stated, however, I could not obtain recorded data that captured students' engagement in the real-life experience intervention because students dealt with real customers or employees who could not give their consent to their recordings. The data that I could collect regarding the real-life experience intervention were students' reflection paper and interviews. Such data only revealed how students thought about their engagement in real-life experience intervention, which will appear in the later section, called 'Analysis of Students Perception of Their Engagement.'

YouTube video production. As mentioned, YouTube video production was a major learning tool at the beginning in the course. In each unit, sound files of new vocabulary were provided with a short lecture on how to use the vocabulary if necessary. Students also had a video clip in which two people, acting roles such as a hotel employee and a guest, had a conversation following the model dialogue in each chapter (a human video). This was not created particularly for practicing speech but it showed how natural conversations would flow between two people. Students were provided another video in which characters spoke the same model dialogue (an animation video). The animation video was for students to practice how to speak, repeating after each speaker's turn. Since the following turn would not start unless one clicked the next button, students could pause between turns. Thus students could practice by themselves, listening to what was

said and repeating after one or a couple of phrases. Furthermore, students could see body movement such as bowing in both types of videos. In theory, students created a video after they practiced the dialogue several times and remembered it. In the YouTube video assignment, they were supposed to play both roles and completed the two-party conversation by themselves.

The teacher chose video production as a main form of assignment because video can show students' faces as well as their voices. With videos, the teacher could confirm if students remembered all the language expressions and pronounced them correctly. She also emphasized that students should perform as if they were interacting with Japanese customers while they spoke. For instance, students learned how to interact with Japanese tourists at the hotel front desk. In the situation, bowing and giving a hotel room key card with both hands was culturally critical especially in the first time meeting. She explained the cultural lessons behind the unique behavior in the unit and encouraged students to show it in their videos.

Since the teacher emphasized such cultural body movement, students faithfully acted with bowing and other motions. Therefore, I transcribed students' videos with what students did as well as what they said to investigate students' performance. I chose to analyze students' video on self-introduction because their production showed varieties in terms of content compared to those in other chapters. In the very first unit, students introduced themselves rather freely. Some students did not follow the model dialogue from the textbook and spoke with their own words. On the contrary, the videos created for other units turned out the same regarding what students said because students followed the model dialogue without making any changes.

Most of the students whose proficiency level was beginner followed the model dialogue as below:

hajimemashite. (bow)

NAME desu.

doozo yosorhiku onegaitashimasu. (bow & giving a business card with both hands)

Nice to meet you.

I am NAME.

Let's have a good relationship.

As mentioned, students could watch two different types of videos: the human video role-played by people and the other an animation video. These two videos showed a different pattern between the speech time and motion, although there was no specific instruction about the timing of bowing in relation to speech. In the human video, one bowed while he or she was speaking. On the contrary, in the animation video that students used for speaking practice, the character spoke a line and bowed after completing a sentence. In the animation, the timing of speech and bowing turned out as such due to the technical issues in putting animation and sound together. Here are the transcriptions of each video.

Table 3

Transcription 1: Human Video

Time for speech (sec.)	Speech	Time for motion	Motion

0.6	<i>hajimemashite.</i>		
1.7-1.9	<i>Tanaka desu.</i>		
		1.8	head went down
1.9	the end of his utterance		
		3.1	head came back to the original position
		3.8	move hands forward to give the business card
4.0-5.3	<i>doozo yoroshiku onegaitashimasu.</i>		
		4.7	head went down
5.3	the end of his utterance		
		6.1	the listener received the business card
		7.5	head went back to the standing posture

Table 4

Transcription 2: Animation Video

Time for speech	Speech	Time for motion	Motion
2.9-4.0	<i>hajimemashite. Tanaka desu.</i>		
		4.1	bowed

4.9-6.4	<i>doozo yoroshiku</i> <i>onagaiitashimasu.</i>		
		6.5	bowed while giving a business card with hands

In transcription 1, the speaker moved his body while he was speaking. For instance, when he started bending his body for bowing at 1.8 second, it was after he started saying the sentence “*Tanaka desu.* (I am Tanaka.)” at 1.7 second in the video. The same movement also occurred in the next sentence. While he was saying “*doozo yoroshiku onagaiitashimasu.* (Let’s have a good relationship.),” he bowed. As we can see in transcription 2, however, the relationship between speech and motion was quite different in the animation video. Although the dialogue was the exact same, the speech and motion were not synchronized in the animation video. In the animation video, the character spoke, and then bowed and gave his business card. The complete separation between speech and action seemed artificial, though it did not seem odd to those who watched the video because the speaker was not a real person.

With regard to students’ video production, they submitted two videos on self-introduction. One was only for practice and thus students spoke exactly what was in the model dialogue (practice self-intro video). The other one was for their own self-introduction, and so the content of the video varied depending upon students’ proficiency level (own self-intro video). Students were required to turn in the practice self-intro video first so that the teachers could advise them on their pronunciation and action, specifically bowing and giving a business card by using both hands in this unit.

Then, the students created another video in which they introduced themselves with their own words. For their own self-introduction, beginner level students followed the lines exactly in the dialogue whereas advanced level students spoke more about themselves using their own words. Beginners' performance showed the same motion patterns in relation to the timing of speech in their own self-introduction as well as in the practice self-introduction. Because of their limited vocabulary, their video resulted in changing the name to their own without making any other changes in the dialogue. However, the researcher found different patterns between the practice and own self-introduction in advanced students' videos. Here I selected videos of practice and own self-introduction from one beginner level student Betty and one intermediate level student Tim as examples. First, Transcription 3 and 4 present the timing of speech and motion in the practice self-intro videos. Since this was a practice, students were required to follow the same dialogue as in the model dialogue.

Table 5

Transcription 3: Beginner Level Student's (Betty's) Practice Video

Time for speech	Speech	Time for motion	Motion
1.6-2.2	<i>hajimemashite.</i>		
2.7-3.2	<i>Tanaka desu.</i>		
		3.2	head went down
		5.0	head moved back
5.2-7.4	<i>doozo yoroshiku onegaitashimasu.</i>		

		7.4	head went down
		9.6	head moved back

Table 6

Transcription 4: Advanced Level Student's (Tim's) Practice Video

Time for speech	Speech	Time for motion	Motion
0.7-1.4	<i>hajimemashite.</i>		
1.5-2.1	<i>Tanaka desu.</i>		
		3.2	head went down
		4.3	head moved back
4.0-6.3	<i>doozo yoroshiku</i> <i>onegaiitashimasu.</i>		
		6.4	head went down
		7.1	head moved back

Interestingly, the pattern of speech and motion in Transcription 3 and 4 turned out very similar to that in the animation video provided as course material. Both Betty and Tim spoke a line and then bowed or gave a business card in their practice videos. As the results suggest, the animation video seemed to make an impact not only upon students' speech but also their physical motion. The animation was created for the sake of student's repetitive speaking practice. Thus, the character's utterances were segmented into one or two sentences so that students could pause it and repeat after each line. Compared to the motion by actual people, however, the motion in the animation was artificial due to the

technological complexities. One animation went together with each utterance. While the character was speaking, he stood straight facing front with his mouth moving synchronizing with his speech. Right after he completed the sentence, he bowed and gave a business card. Because students practiced their speech using the animation rather than the human video in which actual people conversed, students' practice video production turned out presenting the same pattern of speech and motion observed in the animation video. Consequently students' performance ended up somewhat unnatural.

On the contrary, in their own self-introduction videos, two advanced level students talked about themselves more than the model dialogue. A different pattern of speech and motion was observed in Betty's versus Tim's video. Since Betty has never taken a Japanese language course before, she did not know much about how to talk in Japanese except for what she could learn in this course. Thus, her self-introduction did not vary from her practice video except for the name. On the other hand, Tim's self-introduction was longer than that in his practice video. Here is an example from Tim's self-introduction:

hajimemashite. watashi no namae wa Tim desu. watashi wa nijuugo sai de U daigakuno gakusee desu. watashi no shumi wa tennis to haikingu to bideogeemu desu. doozo yoroshiku onegaiitashimasu.

Nice to meet you. My name is Tim. I am twenty-five years old and a student of U university. My hobby is tennis, hiking, and video game. Let's have a good relationship.

Moreover, the timing of his speech and motion was quite different from that in his practice. Transcription 5 and 6 demonstrate the differences between Betty and Tim in their own self-intro videos. In Transcription 5, we can observe that Betty's motion started after her utterance. For instance, she finished saying the sentence "*Betty desu* (I am Betty.)" at 2.2 second and then she bowed. There was no overlap between her speech and motion. When Tim bowed, however, we can find the overlap between his speech and motion shown in Transcription 6. In the first bowing, he started bending forward at 1.1 second while he was uttering "*hajimemashite* (nice to meet you)." For the second bowing, he also bowed while he was talking. This was quite different movement compared to that in his practice video.

Table 7

Transcription 5: Beginner Level Student's (Betty's) Own Self-introduction

Time for speech	Speech	Time for motion	Motion
1.0-1.7	<i>hajimemashite.</i>		
1.8-2.2	<i>Betty desu.</i>		
		2.3	head went down
		3.9	head moved back
4.5-6.7	<i>doozo yoroshiku</i> <i>onegaiitashimasu.</i>		
		6.7	head went down
		8.3	head moved back

Table 8

Transcription 6: Advanced Level Student's (Tim's) Own Self-introduction

Time for speech	Speech	Time for motion	Motion
0.6-1.8	<i>Hajimemashite</i>		
		1.1	head went down
1.8	the end of his utterance		
1.9-3.5	<i>watashi no namae wa Tim desu.</i>		
		2.2	head moved back
3.5	the end of his utterance		
4.0	<i>watashi wa nijuugo sai de U daigaku no gakusee desu.</i>		
10.1	<i>watashi no shumi wa tenisu to haikingu to bideogeemu desu.</i>		
17.6-20.7	<i>doozo yoroshiku onegaiitashimasu.</i>		
		18.2	head went down
20.7	the end of his utterance	20.7	head moved back

Comparing two types of students' video production, practice self-intro and own self-intro, Betty's performance in both practice and own self-intro videos faithfully followed the animation video that she used for practicing how to speak and act. In a survey, she even commented about the animation video that it helped her the most among the materials offered in the course with intonation and body language. Most of the students performed

as Betty did in both their practice and own self-intro videos. Tim, on the other hand, showed different movement in his practice and his own self-intro videos (see Transcription 4 & 6). He performed in the same way in his practice video as the character in the animation did, but his body movement in his own self-introduction was similar to that in the human video. When Tim used the language to express himself with his words, his body movement became rather natural. In other words, when Tim read the dialogue in the practice video, he was not using the language but just saying words as he memorized for the sake of his assignment, whereas when he introduced himself, he was putting his voice in words that he chose to talk about himself such as what he does and what he likes to do. John who is an advanced student also showed the same patterns as seen in Tim's videos. This phenomenon may imply that these upper level students completed the tasks in different modes, which affected the naturalness of speech and gesture. In their practice videos, they spoke like a machine robot imitating what was shown in the animation video. As opposed to it, talking about themselves made them go beyond the artificial imitation and they appeared to speak and behave more naturally.

Since YouTube video production was one of the main learning tools in this course, students continued working on the same YouTube activity until midterm. Basically, students created YouTube videos in which they performed exactly following the model dialogues. Although the video production in the unit 1 allowed students to create their own self-introduction video, in other units, there were no other options but to follow the fixed dialogues. Moreover, the dialogues in other units were usually two-party conversations. Accordingly, students needed to memorize the lines without making any changes, imitating what they saw in the animation videos while playing two roles. For

creating videos, students edited speaking turns at the end so that it looked as though two people were conversing with each other. The nature of this task goes along with the cognitive information-processing theory that assumes L2 learning occurs in an individual brain. Even though the dialogues were based on conversation format, students worked on the video production by themselves through memorization and imitation without interacting with others. This YouTube activity consequently turned out mechanical and completely isolated from the context of interaction. Although the activity provided benefits with students such as helping them memorize phrases and pronounce them correctly, it contradicted the major goal of this course. The course had been tailored for students who were in need of practical speaking skills to work in the travel industry. On the course syllabus, the main goal was stated to become able to use what was learned in real life. However, what the task required students to do was to memorize expressions and imitate the body gesture in the videos, which would not help students accomplish the goal. Furthermore, this course particularly focused upon hands-on skills at work places, and thus, the sociocultural and ecological perspective could better contribute to designing instructional activities that fit with the course goal.

In conclusion, the theory behind the task mismatched the theory that supported the goal of this course, which was rather critical for teaching. The first intervention in this study, Skype activities, went along with the sociocultural and ecological view as explained in Chapter 3. Comparing students' engagement in YouTube activities with that in Skype activities, we could see how the activity design as well as the theory behind it affected students' engagement and accordingly made an impact upon their L2 learning and understanding of situational pragmatics.

Skype role-play activities. As mentioned in Chapter 3, Skype sessions consisted of three phases: an introductory session, peer-peer interaction session, and student-native speaker session. The introductory session did not involve interactional activity in which students conversed with each other in Japanese although the teacher lectured about new grammar and expressions. It was held mainly to prepare students to be able to conduct role-play activities with a peer and a native speaker smoothly using Skype technology. Thus, the first phase was not included in the analysis of students' engagement while the role-play interactions in the second and third phases were analyzed and are reported in the following sections.

Peer-peer interaction. Results showed that the role-play activities in the second and third phase showed different patterns in students' interactions. In other words, different types of negotiated interaction were observed depending upon the person students talked to. First, when they participated in the role-play with peers, various types of negotiated interactions were observed such as clarification requests, confirmation check, self-correction, co-construction and other-correction. Naturally, confirmation checks and clarification requests occurred quite often during the conversation due to the nature of the role-play in which students needed to negotiate the date and time for a restaurant reservation. The examples of a confirmation check and clarification request are shown in Transcription 7 and Transcription 8. Both examples were from peer-to-peer conversations, though these were also common in the interaction with a native speaker. In Transcription 7, line 3 shows a confirmation check, while Transcription 8 shows a clarification request in line 3.

Transcription 7: Example of confirmation check

Line

- 1 T: mooichido yukkuri onegaishimasu.
(would you) please (speak) slowly one more time?
- 2 P: juuichi gatsu nijuusan nichi doyoobi no shichi ji sanjuppun [desu.
December twenty third Saturday at seven thirty
- 3 T: [ah? sanjuppun?
[huh? thirty?
- 4 P: hai.
yes.

Transcription 8: Example of clarification request

Line

- 1 L: itsuga yoroshiidesuka.
when would be good?
- 2 B: juuichi gatsu juuni nichi no kinyoobi go ji han.
November eleventh Friday at five thirty.
- 3 L: hai, kashikomarimashita. Uehara desu (this 'desu' is supposed to be 'sama').
ofutari sama juuichi gastu juuni nichi de gozaimasune.
yes, certainly. (Ms.) Uehara, November eleventh for two people right?
- 4 B: hai soodesu
yes, that is right.

With peers, while gathering the necessary information for the restaurant reservation, students were also conscious about whether he or she spoke correctly or not. They corrected each other's grammatical mistakes and pronunciation through other-correction and co-construction that did not appear in the conversation with the native speaker. In Transcription 9, Tim assumed an employee's role while Paul played a customer's role. Tim's level was intermediate and Paul had near native proficiency. In this case, Paul corrected a Tim's mistake in Line 3. Tim used a wrong counter *yooobi* that was supposed to be used for the day of the week, for counting a day. Paul noticed his mistake and immediately cut into Tim's utterance, and corrected it to the correct counter *nichi*. Tim's incorrect use of the counter is underlined.

Transcription 9: Lexical other correction in peer-to-peer conversation

Line

1 T: ah mooshiwakegozaimasen. mooshiwakegozaimasenga I hate repeating all these.
ah I am sorry. I am sorry but I hate repeating all these.

2 Juuichi gatsu nijuusan yooobi=
November twenty-third (with a wrong counter)=

3 P: = nijuusan ni[chi doyoobi
= twenty third (with a correct counter) Saturday

4 T: [nijuusan nichi doyoobi no shichiji han wa
manseki desu.

[twenty third Saturday is full.

Another movement that was unique in peer-peer interaction was co-construction, suggested in Transcription 10-1. Roy was an intermediate student while John was an

advanced student. In this excerpt, Roy as a restaurant employee asked which date a customer John wanted to make a reservation. The scenario followed that John wanted to make a reservation at seven thirty on December twenty fourth. However, there were no available seats at seven thirty on that day. Thus, Roy was supposed to suggest another time which was at eight o'clock on the same day. Here, John was scaffolding Roy regarding putting words together as well as his pronunciation. In line 4 and 8, John said *no* which is a genitive case particle in Japanese. This functions as a postposition that connects nouns like a preposition 'of' in English. In Japanese, when people say month, date, and time, they use *no* to connect all three together as in '*ichi gatsu (January) no futsuka (2nd) no shichiji (7 o'clock).*' In line 3, Roy paused after he said *juuni gatsu (December)*, and thus, John suggested what he was supposed to say next in line 4. The line 5, Roy just repeated only *no* after John. John continued helping Roy with giving a next word. In line 7, Roy again repeated what exactly John said, but he tried to complete the whole phrase of the month-date-time by himself without help in line 9. Within this short exchange of words (line 4-10), John facilitated Roy's utterance as an expert peer.

Transcription 10-1: Scaffolding in peer-to-peer conversation

Line

- 1 R: *itsu ga yoroshii desuka.*
when would it be good for you?
- 2 J: *un. Juuni gatsu no nijuuyokka no nichiyooobi no shichiji han ni oengaishimasu.*
um, December 24th Sunday at seven thirty please
- 3 R: *ah mooshiwakegozaimasen. juuni gatsu*
ah, I'm sorry December

- 4 J: no
of
- 5 R: no
of
- 6 J: *nijuuyokka*
twenty fourth
- 7 R: *nijuuyokka*
twenty fourth
- 8 J: no
of
- 9 R: no *hachiji*. *hachiji* right?
eight. eight right?
- 10 J: ah *shichiji han*
ah seven thirty.

It was more obvious that John took an expert or teacher role to Roy, investigating the later portion of the conversation as continued in Transcription 10-2. In line 11, Roy could not pronounce *nijuuyokka* (twenty fourth) correctly. John asked Roy which date he was suggesting in Japanese in line 12. In his response of the next line, Roy still had the same problem with pronouncing *nijuuyokka* (twenty fourth) and showed his confusion saying “wait what?” in English. Then, John asked the same question “which date are you suggesting?” in English. In line 15, finally Roy was able to say *nijuuyokka* (twenty fourth) correctly, and confirmed the meaning of it in English. Confirming in English was commonly observed among other peer-to-peer interactions as well. Students requested

clarification in English in order to make sure whether they understood the meaning of sentences as well as whether they were conducting the role-play without any mistakes. In line 16, John responded repeating the part *yokka* that Roy could not pronounce. This emphasis in John's utterance implied that John focused particularly upon Roy's pronunciation of *yokka*. Throughout the interaction between Roy and John, John was leading the conversation, making sure that Roy could complete the task without any mistakes. This kind of interaction did not occur with a native speaker even though the native speaker was an expert in terms of Japanese linguistics, which reflected how students perceived the same role-play activities, peer-to-peer activity and one with a native speaker, differently.

Transcription 10-2: Other-correction on pronunciation in peer-to-peer conversation

11 R: ah shichiji han ahhh (6) wa manseki de gozaimasu. eto wait (13) oh okay toh (9)
ah juunigatsu no nijuu yaku no hachiji nara gozaimasuga.

ah there are not seats available at seven thirty. well, okay. and ah it would be okay if it's at eight on December twenty f... (he said 24th incorrectly.)

12 J: suimasen nannichi desuka.

excuse me. which day is it?

13 R: oh wait nijuuyoku yoku wait what?

oh wait. twenty f...f... wait what?

14 J: oh sorry what day are you suggesting?

15 R: nijuyokka. that's twenty fourth right?

twenty fourth. that's twenty fourth right?

16 J: yokka yeah yeah okay

fourth yeah yeah okay

17 R: ya

Native speaker interaction. On the contrary, with the native speaker whose name was Kazu, negotiated interaction was observed but limited to confirmation checks and clarification requests at a lexical level, and self-corrections. The native speaker neither picked up students' grammatical mistakes nor provided negative feedback that contributed to L2 acquisition, even though there were obvious mistakes that expert-peer students would have corrected. Grammar mistakes and lexical mistakes that students made were left uncorrected while they continued the role-play. In Transcription 11, first Roy said *nannin-sama* (how many people) but immediately self-corrected it to *nana-sama* which was still not correct. It was supposed to be *nana-mee-sama* in the first line. He was supposed to put the counter for people, *nee*, after the number of people, *nana*. Students often made such lexical mistakes related to counters because counters are unique to Japanese language. Depending upon objects, different counters are used. For instance, *nee* is used for counting people while *hiki* is used for counting animals. Thus, Japanese teachers and students are very cautious about the mistakes related to counters. Here, this mistake is not incomprehensible, but it should be corrected in a Japanese language classroom. However, Kazu showed neither a repair nor a confirmation request but accepted it. The uncorrected mistake is underlined in Transcription 11.

Transcription 11: Uncorrected mistakes in the interaction with the native speaker 1

Line

1 R: hai kashikomarimashita. Endo sama nan nin sama oh wait nana sama eto jyuuichi gatsu no juuyokka no rokuji de gozaimasune.

yes, certainly. well how many people oh wait seven people (without a counter)

November fourteenth at six right?

2 K: hai soudesu

yes, it is.

In Transcription 12, Kazu asked whether there was parking on the site in line 1. In response for that, Roy chose a wrong particle *de* that changed the meaning of the sentence completely. Roy should have said *chuushajoo wa gozaimasu* (there is a parking), instead of *chuushajoo de gozaimasu* (here is a parking). In this case, Roy made a mistake on particle usage, which was also a common mistake among students. This could be a very confusing sentence in a real situation, although Kazu did not point out Roy's grammatical mistake. Again the uncorrected error is underlined.

Transcription 12: Uncorrected mistakes in the interaction with the native speaker 2

Line

1 K: a sumimasen. chushajoo wa arimasuka.

excuse me. is there a parking?

2 R: hai chushajoo wa chushajoo de gozaimasu.

yes, parking- here is a parking

3 K: hai arigatoogozaimasu.

yes thank you.

This result suggests that the roles that students assumed in peer-peer interaction and those in the interaction with the native speaker were different. In the peer-peer interaction, students played two roles: the assigned role of a restaurant employee or a guest and the role of a peer student who helped each other as a learner. On the other hand, in the

interaction with the native speaker, students assumed only the employee's role because the native speaker did not assume the expert role in terms of linguistic capability. Since students were engaged in the same activity orienting to different roles, different kinds of learning occurred.

There are possible reasons for the different role orientation: the instruction given to the native speaker before the session, and the cultural background of the native speaker. First, the native speaker was asked to play the role of a customer who did not understand English very well. As mentioned, the purpose of the role-play activity was to have students experience the simulated situation of phone conversation in Japanese with a native Japanese speaker. In order to create the specific situation, the instructor asked the native speaker to speak only Japanese, and also asked students never to use English. This Japanese only policy during the role-play was maintained throughout the interactions, whereas the instructor allowed students to use English in the peer-peer interactions. Moreover, since the role that the native speaker assumed was a Japanese customer, he might consider the correction of students' mistakes or repetitive confirmation requests or questions awkward as a Japanese customer, which made him hesitate to make a repair move in the conversations.

From the information-processing theories, the interaction between a native speaker and student seen in the Skype intervention might not seem as beneficial as that between peers because there were not as many negotiation moves. As we observed, furthermore, students' mistakes were left as they were. However, with the sociocultural and ecological perspectives, the context where they could talk to a real native speaker provided different affordances for each individual. The following section demonstrates

how an advance student, John used the target language to present himself. Also, students' reflection about what they thought they learned suggested that talking to a real native speaker influenced meta-cognitive awareness in the students' L2 development processes.

John's case shown in Transcription 13-1 and 13-2 clearly shows how the different learning opportunities emerged in each given environment, assuming different roles. Their entire conversation is in Appendix I. The example also demonstrated that John perceived different learning environments, and acted upon what had been offered in the environment, changing his speech style, which reflected the complex and dynamic nature of learning in van Lier's term (2004). John's speech style was different in peer-peer interaction as compared with that in the native-speaker interaction in accordance with his different role orientation. Concerning the roles that John assumed, he played a student role as well as an assigned role interacting with Roy (Transcription 10-1 and 10-2). When John worked on the role-play with Roy, he corrected Roy's pronunciation and lexical mistakes. With Kazu, however, John acted as a restaurant employee, not as a student or language learner. Kazu's performance as well as John's reflected his role assumed in the activity.

Since Kazu did not correct John's lexical mistakes, learning on linguistic forms did not occur. For example, in line 5 in Transcription 13-1, John forgot to put the title, *sama* (Mr.), to the customer's name. In addition, the sentence is interrogative, which made his mistake obvious in the interaction because this was apparently not a self-talk. There was no uptake from Kazu on this. On the other hand, in line 21 in Transcription 13-2, John said an incomprehensible word *chuusha*, for which Kazu made a confirmation request. This suggests that Kazu's focus was not upon detailed linguistic forms but the

mutual understanding of the content of the reservation. In other words, Kazu did not take a linguistic expert role but the guest's role.

Transcription 13-1: John's interaction with the native speaker

Line

- 1 J: moshimoshi Tsukushi de gozaimasu.
hello. this is Tukushi (restaurant name).
- 2 K: a, moshi moshi seki no yoyaku o onegaishimasu.
hello. I would like to make a reservation.
- 3 J: kashikomarimashita. namae o onegaiitashimasu.
yes, certainly. could I have your name please.
- 4 K: ehh Sakamoto desu.
ehh it's Sakamoto.
- 5 J: ah Sakamoto desuka.
ah you are (without the title Mr.) Sakamoto.
- 6 K: hai.
yes.

With regard to the speech style, John changed speech style when he talked to Kazu, compared with a peer student Roy. The teacher had been emphasizing the difference between informal and formal speech in Japanese culture from the very beginning of the course. There were a couple of videos about honorifics provided in the unit one. In the video clips, two Japanese native speakers stressed how important students who assume the role of employees used honorifics all the time with their customers. Since many students will be working in the environment where they have to deal with

Japanese customers at a restaurant and a hotel, the teacher encouraged students to practice the polite speech style using honorific forms throughout the semester because it was culturally critical to express their hospitality as well as politeness with the particular linguistic forms. Thus, John must have known that he should use the honorifics to a peer student and native speaker who played a customer's role.

The change of John's speech style reflected the ecological shift in his role orientation. He consistently maintained formal speech style using honorifics in peer-peer interactions. However, when he participated in role-play with the native speaker, he did not speak in the same way as he learned in class. For instance, John elongated the end of sentence, which was usually considered as casual speech. In line 19, he put extra pressure to *yooo*, the prolonged part of the sentence *arimasuyooo* (there is). John's response *haaaai* (yes) in line 13 sounded quite informal with the prolonged vowel sound. He also used informal expressions that were not acceptable to talk to guests or customers such as *nja* (then) in line 17 and *jane* (see you) in line 26.

It might be hard for some students who previously learned Japanese elsewhere to maintain formal speech because they had gotten used to the alternative way of speaking in a casual way. Moreover, honorifics are not commonly taught at the early stage of learning Japanese because it is used in limited contexts such as interactions between customer and employee and formal ceremonies. In fact, although John obtained near-native proficiency after he learned Japanese for several years, he did not learn how to use honorific forms, which was one of the reasons why he took this course. However, when John worked on the role-play with the peer student, Roy, he maintained the formal speech style with honorifics, while he used the informal speech style when he talked to

the native speaker, Kazu. The shift of his speech style was quite obvious, which made me interview him about the reasons why he changed his speech style. I discovered that John intentionally changed his speech style in order to generate friendliness toward his guests. He acted based upon the value that he believed the most important in each situation. He valued formal speech style with a fellow student for practice and he valued casual speech style while talking to the native speaker for the employee-customer relationship. In other words, the different speech style that he used reflected how he perceived each situation and what values he wanted to emphasize in each situation.

Transcription 13-2: john's interaction with the native speaker

11 J: hai, kashikomarimashita ah nanmee sama desuka.

yes, certainly. ah how many people?

12 K: a, yonin desu.

ah four people.

13 J: haaaai, ja

yeeeeees then

14 K: hai

yes.

15 J: ja, shitsumon wa arimasuka.

then do you have any questions?

16 K: a, hai, doozo tsuzuketekudasai.

ah yes. please continue.

17 J: a, nja, Sakamoto, yonin sama, juuichigatsu juukunichi no hachiji han desune.

a then Sakamoto (without a title) November nineteenth eight thirty

- 18 K: hai, eh, nde, chuushajoo arimasuka.
yes, is there a parking?
- 19 J: arimasuyooo.
there is.
- 20 K: ah, hai, soreto, kurumaisu no hitoga hitori irundesukedomo, daijoobu desuka.
yes, and there is a wheel chair person, is it okay?
- 21 J: sono chuusha wa arimasuyo.
There is 'chuusha' (incomprehensible word)
- 22 K: hai, ah, seki mo daijoobu desyooka.
yes, seats are okay too?
- 23 J: seki mo daijoobu desuyo.
yes, seats are okay too.
- 24 K: hai, ja, onegaishimasu.
yes, then please take care.
- 25 J: hai, ja omachishiteorimasu.
yes, I am looking forward to seeing you.
- 26 K: hai, ah, yoroshikuonegaishimasu. jane. sayonara.
yes, please take care of it. Good-bye.
- 27 J: sayonaraah.
good-bye.

This incident resulted in offering an opportunity for John to learn the differences in values between American and Japanese culture and pragmatic appropriateness related to those values. Although friendliness might be appreciated in the

host-guest/employee-customer relationship, formality and politeness should be more emphasized than friendliness in Japanese culture, especially in phone conversations in which we cannot see each other. After the role-play session with the native speaker, I pointed out the different cultural values and explained to John the reason why he needed to talk in a formal way as taught in class.

In conclusion, students perceived the same role-play activity in a different way, and hence the assumed roles and affordance varied in each learning environment. The learning environment with the native speaker brought about the affordance for pragmatic learning related to socio-cultural value, while the environment with a peer offered a different affordance for L2 acquisition of linguistic forms.

Herrington, Reeves, Oliver, and Woo (2004) pointed out that authentic learning occurred in the dynamic interactions among the environment, the task, and the learner. In order to obtain optimal benefits from authentic activities, the environment and learners need to be immersed. Such immersive and embodied learning environments can afford learners meaningful and constructive learning experiences. Furthermore, Herrington, Reeves, and Oliver (2007) concluded that “it is the learning environment and task that create the conditions for immersion, not the technologies themselves” (p. 95). We can see the complex interactions of the environment, the task, and the learner in John’s example. The simulated environment where John needed to handle the native speaker or a peer student influenced how he perceived the situation and how he projected himself to different persons, which was portrayed in his negotiation movement as well as speech style. This example suggests that students’ engagement in the task led meaning making activities and hence it brought about meaningful learning experience (Herrington et al.).

In order for teachers to see if the class activity resulted in meaningful learning experience for students, I would like to emphasize not only the importance of the task design itself but also the observation of the dynamic process of students' engagement in the activity. It is imperative that instructors give heed to what students are doing in planned activities in order to understand what students are learning during the activity. In the Skype activities, students were engaged in the same role-play activity differently because students perceived each situation differently. The students' engagement during the role-play very much influenced what they learned from each interaction. Consequently each activity offered different learning opportunities: peer-peer interaction for development of linguistic knowledge and student-native speaker interaction for broader comprehension rather than grammatical accuracy as well as understanding of pragmatics related to the cultural values and context. The results reconfirmed the importance of instructor's careful observation of students' engagement to offer better learning environment that fits in with instructional goals. Furthermore, it is reconfirmed that the key to meaningful learning is not about how authentic the activity is designed but about how each student is engaged in the activity.

Students' engagement and activity design. As observed, these two activities, YouTube video activity and Skype activities, are rooted in theoretically different views on L2 learning. Comparison between these two activities demonstrates that the task design influenced students' engagement and accordingly their learning. YouTube video production did not involve any social aspect of L2 learning, while Skype activities were all based on synchronous interactions with rich contextualization.

With the YouTube video, students demonstrated that they could memorize new

phrases and expressions and pronounce them correctly. The entire learning process with the YouTube activity occurred in an isolated context. The way that students worked for YouTube video production reminds one of traditional L2 teaching methods called the audiolingual method. This method had been commonly used in the 1950s and 1960s and was strongly influenced by the behaviorist view in psychology (Omaggio, 2001). With this method, dialogue memorization and pattern drills were the means for their learning. Basically, students learned the target language through memorizing material, repeating it, and transforming it to their communication. One of the drawbacks was that if applied strictly, this method might make students continue performing at the novice level (Omaggio). In fact, the researcher could not find distinct improvement in their videos for six weeks. Meanwhile, they created six different videos in the same way that they did from the beginning till the last submission. As the examples above showed, students imitated the dialogue and body language in the animation video precisely. Consequently, there were not many differences among students' productions regardless of their proficiency levels. In other words, this activity might limit advanced level students' performance within a narrow scope of L2 learning that only allowed students to repeat and imitate what they saw in the animation videos. Consequently, the YouTube video activity prevented students from speaking their own voice to some extent. Expressing one's voice with L2 is, in fact, one of the crucial factors for students' L2 development from sociocultural and ecological perspectives.

The Skype activity required students to participate in a different way. First of all, there was no pre-scripted dialogue that students could follow. Students were supposed to handle customer's questions and requests by finding a solution with their own words.

Second, the specific context was provided for the activity. Furthermore, students were put in the simulated situation where they needed to take a reservation without seeing each other. Such specific contextualization afforded students a wider range of learning opportunities from a linguistic level to a sociocultural level. Third, students were very sensitive about ecological change associated with the person who played the role. Students' engagement changed in the interaction with a peer versus one with the native speaker. As mentioned, students accordingly gained varied learning opportunities from each phase. Furthermore, a student's engagement in Skype activities illustrated their dynamic and complex learning of sociocultural knowledge along with Japanese linguistics.

Analysis of Students' Perception of Their Engagement

In this section, I will focus on students' perception of their engagement in each activity. The sources of the data to explore students' perception of their learning were online survey, reflection paper on Skype intervention, project paper on real-life experience intervention, and interviews with selected students. The results complemented and reinforced what was found in students' engagement in the YouTube video and Skype interactions as discussed in the previous sections. As for the real-life experience intervention, students' papers and interviews reflected the affordances of real situations, and ecological language learning through real language use.

YouTube activity and Skype intervention. Here, I will review what students thought about their learning in YouTube video activity and Skype intervention. The survey about YouTube and other course activities was conducted before the Skype intervention was implemented. The survey suggested that students took YouTube video

activity positively although some mentioned awkwardness and discomfort in recording themselves. Especially, many people commented that they liked it because they could watch fellow students' productions. Here is an example of students' responses.

I think it is a great way to record progress and to somewhat meet in person. I am enjoying it, even though I think it takes some time to get used to getting in the mood, as it seems awkward to talk to the computer pretending as if you are talking to a customer. Once you get past that, it feels natural. [Ben]

After Skype intervention, reflection paper about Skype sessions and interview data suggested a much clearer distinction between YouTube video and Skype in terms of students' language learning and technological operation. Students described their learning in the YouTube video activity as memorization and repetition compared with Skype activity. On the other hand, learning through Skype was explained with two main themes: readiness to learn, and real language use. First, with regard to readiness to learn, students felt that it was easier to learn Japanese on Skype than YouTube because of two reasons: less technological skills required and immediate feedback. While YouTube required students to deal with a camera in addition to audio equipment, Skype intervention only required students to deal with the audio component. With YouTube, students had to create their videos and upload to the website of the YouTube group of this course. There were several steps to complete uploading the video as well. In contrast, once students installed the Skype program on their computer, they could join the class clicking one icon. The teacher herself also found it easier to use Skype compared to the YouTube video. Concerning immediate feedback, students appreciated immediate corrections from the teacher and teaching assistant. On the contrary, the feedback on YouTube was usually

posted about one week after students uploaded the video.

Learning how to structure sentences was definitely easier on Skype. I had a hard time with remembering what words go after some of the words and what order they should be in. ... I also had a hard time remembering the order of the words when it came to the month and date. But after the last Skype session we had when we spoke to a native Japanese speaker, I was able to remember it. ... Learning how to pronounce words correctly was also easier because I was able to hear it the correct way. With the YouTube videos, I would only be able to properly correct myself by reading feedback on my video. On Skype, I can hear the correct way and repeat it after *sensei* (teacher). That way I am able to get used to it and will remember the proper way of pronouncing it. [Liz]

As in the quote above, many students commented that Skype helped with how to pronounce words and how to structure sentences because corrections and explanations were offered right after students made mistakes or they asked questions. Students could repair their pronunciation not only listening to the correct version but also confirming with the teacher if they pronounced it correctly. The convenience and immediacy contributed to readiness of students' learning procedure.

Secondly, all the students who joined the Skype activity emphasized the benefits of live language use, specifically unscripted activity, contextualization, application of the learned content, and raising motivation and confidence. Many students appreciated the unscripted activity since they had been practicing only with pre-scripted memorized dialogue on YouTube videos. The opportunities to use the language required students to apply what they had learned and remembered in order to communicate with each other.

As a result, students could go beyond memorizing scripts. One student even suggested that a script did not benefit students because students could get by memorizing the script⁵.

Although the last session of Skype was unscripted, I think that we should not have a script at all for any of the sessions. The idea behind this class is to apply what we learn verbally. If we have a script, we are just memorizing sentences. ...

Learning on the spot in my opinion is better than just memorizing. [Tim]

In terms of contextualization, students could experience simulated situations where they were answering the phone as a restaurant employee, especially with the native speaker.

The contextualization had students understand what the real phone conversation would be like.

Skype allowed me to better understand the realities and complexities of dealing with customers in their native language and what you might expect when caught off guard and unprepared, as well as the opportunity to easily practice and learn useful information from the comfort of my home. [Jordan]

Real language use applying what was learned also provided students with an opportunity to realize what they could and could not handle in the situation with their current ability.

Lori whose proficiency level was intermediate commented that she realized her current capability, based on which she could set the next goal of her Japanese learning. She was a

⁵ Since this student was at the intermediate level, he might be able to speak without any scripts. However, some students were complete beginners in this course. Therefore, model dialogue was provided for the Skype interactions as in other units to help beginners.

unique student in the course because she was simultaneously taking a regular Japanese language course which was her fourth semester of learning Japanese. She also took Japanese classes in high school. Thus, her proficiency level was higher than other students at that time, though she never had an opportunity to use Japanese conversing with a native speaker.

At first I was nervous about it, but in the end I'm glad I had the experience of talking through Skype. ... Although I'm in Japanese 202, and I do have to study a lot for that class, I've never really applied it to real life all that much. I haven't had the experience of talking to native Japanese speakers at all. [Lori]

Considering her learning background, the Skype activity should not have been too difficult for her but she had a hard time to understand date and time in the interaction with the native speaker.

It wasn't easy, but it was challenging and a nice learning experience. Especially when talking with native Japanese speakers, from that I tell how much more I need to practice so I can speak more comfortably in the future. ... Counters in general have always been difficult for me to remember in Japanese, since there are always so many different counters for different situations. Going through this made me realize how fast I need to be regarding dates and times. ... From this experience, I learned about how much I need to improve. ... Overall, now I know what things I should be practicing in order to be more comfortable when speaking with a native Japanese speaker. [Lori]

As in the quote above, her spontaneous use of language provided her a clear vision on her progress of language learning. After the Skype session, she began to know that she

needed more practice on counters with months, dates, and time in order for her to respond at a natural speed.

Lastly, real use of L2 influenced students' motivation and confidence, which encouraged students to use Japanese outside of the class. A student who gained the confidence in speaking Japanese through Skype sessions became willing to speak Japanese with his Japanese friends.

Even though I have Japanese friends, I have never talked to them in Japanese. I would always respond to them in English because I had no confidence in my Japanese skills or that my sentences were correct. But through this activity, I feel like I am able to speak to them in Japanese and to be able to form sentences in my head. [Tim]

Another student's comments suggested that the Skype sessions strengthened her orientation to learn Japanese. She wished to be able to use Japanese for the interaction with her customers at her workplace. Again, her case also demonstrated that Skype interactions had students draw a connection with their own life.

I really enjoyed practicing on Skype and speaking with a Japanese native speaker because I was able to get a feel of how it would be in real life. I have interacted with Japanese guests at my internship, but I can't help them with their questions because I can't understand them that well. But if I keep practicing with all the lessons, I hope that I can interact with them and help them. I would especially like to help the Japanese guest with just directing them to a Japanese speaker that can help them with their questions. [Liz]

Once students used the language in the context, that experience was personalized, and

accordingly, it helped them tailor their orientations to learn Japanese, boost their confidence, and raise their motivation level higher than before. Regarding this point, students perceived their learning on Skype differently from YouTube activity. YouTube activity had offered the basic mechanical way of language learning through repetition and memorization, which did not show much individual difference in their video production. In contrast, the Skype activity required students to go beyond memorization and to use what they remembered and apply that to the context of restaurant reservations. Students' reflection papers illustrated that the design of the activity that focused upon students' agency, contextualization, and language use, positively affected not only students' understanding of linguistics but also their meta-cognitive awareness such as motivation and orientations.

Real-life experience intervention. The real-life experience project required students to interact with Japanese tourists or Japanese restaurant employees in Japanese. The activity was tailored for each individual because each needed to learn different kinds of vocabulary used in the particular situation that students chose in order to conduct the project. In this section, I will discuss what students learned in real-life situations based on their papers as well as interviews.

The connection between language learning in class and application to the real world. Lori who had intermediate proficiency tried ordering food at a restaurant. As in the excerpt above, since she took several other Japanese language courses, she thought she had sufficient linguistic knowledge to interact with a waiter in Japanese. However, the result was not what she expected, and she felt it quite challenging. She had never used what she learned in class in real situations before she took this course, although she

constantly practiced how to talk in Japanese in class. In the final paper, she wrote:

It's really a learning process for me. I think at times I don't feel completely confident in my Japanese yet, which is why I sometimes pause, and start to wonder if I said everything clearly. And when I speak with native Japanese speakers, at the rate that the words are being spoken, I need it to be repeated since it's too fast for me at times. Although, in my opinion I think that will improve once I speak more with native Japanese speakers. In the future I'll make more of an effort on that since I know I don't often speak Japanese outside of my classes. ... From this experience, I think I've learned quite a lot. Speaking Japanese in a classroom within a limited setting is a lot different than using the Japanese language in real-life situations. ... I think with all the Japanese classes I've taken here (I've taken it since Japanese 101), I've learned a lot of knowledge, and if I have the chance to travel to Japan in the future, I'd like to be able to use what I know now. [Lori]

She realized the difference between speaking practice in the class and using the language in real situations. The realization encouraged her to use and apply what she learned outside of the classroom. Another student, Jordan found that practicing Japanese in real situations reinforced what he learned in class. In other words, his reflection illustrated the essential tie between the knowledge learned in class and application of what was learned to real contexts for L2 development. He worked on a boat and needed to explain about famous buildings and landmarks in Japanese to guests who were mainly Japanese tourists when the boat passed by them. In the interview, he stated, "I think the most effective is the real life," because he could put the content that he learned in the course to use

immediately. In the paper, he explained that he conducted three trials of talking to Japanese tourists in Japanese for the real-life experience project. The first and second trials did not go well because he was not confident, and accordingly he looked at his memos when he spoke. However, he succeeded at the third trial without looking at his notes. In so doing, Jordan became able to use the language and made sense of what he learned in the course at his work place. He also compared what he did in the regular Japanese language courses that he previously took with what he did in this online course. The crucial difference was whether he was required to apply what was learned in contexts or not. In the Japanese language courses that he previously took, he had a hard time to remember and catch up with the content because it was too fast for him. He did not have time to practice or use what he learned. Thus, he forgot what he learned in class shortly after he completed the course. On the contrary, he found that since he used Japanese at his work now, what he learned in this class became solid in his mind. Therefore, the application and usage completed his learning in the course, which implied that the connection between classroom (in this case, it is a virtual classroom) and real-life was essential for L2 development.

Ecological learning in real situations. As explained in the literature review, real situations provided more resources in addition to linguistic information. Betty worked for a coffee shop where a majority of customers were Japanese students and tourists. Although she was one of the complete beginner students, she conducted the project at her work, dealing with her customers in Japanese. She was very sensitive to the affordances besides language, and utilized them to interpret what was going on with the customers. She emphasized the importance of other resources found in customer's behavior and the

way of speech in addition to what was literally said. In the interview, she stated:

Like hand in money with both hands when they hand in money to me like not every customer but you can tell which one is more formal when it comes to. I even pass their drink if I am making it. And they bow and like thank you, thank you. It's really just like they're really polite. If there is an informal Japanese customers, like you can hear them extend the words cuz I remembered it that was big thing. I extend the words when I first started. And now I try to catch which one is more like younger girls and guys are just more informal and also older Japanese customers, unlike 20s, they are more formal. And they bow, and you know, I think bow is a really good way to tell. [Betty]

This quote suggested that she observed her customers' gesture such as how to bow and how to hand in money. She also listened to not only what customers said but also how it was said, and paid attention to body language. Considering her proficiency level, it was not possible for her to understand what was said exactly, and yet, she caught how it was said without understanding the meanings. The how-information in speech contributed to her "seeing" the level of formality that her customers brought into the interaction with her. According to her, such additional resources that she could obtain in real situations were necessary for her to interact with people.

Not to mention, she utilized sociocultural and sociolinguistic knowledge in order to interpret her customers' behavior and speech. The course materials helped her build up her sociocultural knowledge. First, she learned at the beginning of the course, that different angular degrees of bowing at the waist determine the different formality levels in Japanese culture. The teacher explained the relationship between the degrees of

bowing and the formality. Second, the words that are pronounced with prolonged vowels at the end of sentences imply informal casual speech. In one of her YouTube videos, the teacher corrected her not to extend a vowel sound at the end of sentences because it sounded too casual for employees to use. In the quote above, she reported her observation that the words with an extended vowel sound were often used by younger generations. Therefore, she interpreted that younger customers interacted with her rather casually. Again, she utilized not only linguistic knowledge but also other resources in the environment, which reflected the ecological nature of human communication.

Her comment below suggested that she also used the situation-transcending information such as personality and his or her background to interpret situations. Again, comparing the real-life interactions with the audio interaction on Skype, Betty stressed the importance of the situation-transcending information as well as all the information that the environment afforded her right then. She further mentioned that she considered historical information concerning the relationship with the person.

I really pick up body language and personality from face-to-face interaction.

That's how I tend to pick things up. So, if I can't see your face or how you speak, whether it's English or Japanese, cuz your body language, you move your eyes, head, your arms, gesture, sometimes it's hard. So with other students (on Skype) if you don't know who they are, how their personality, you cannot even see their face, it makes a little harder. [Betty]

Here is her strong statement about how she thought the interaction should be.

I think for me personally, it actually seeing somebody face-to-face speaking into them just because body language is a big thing like I've said like bowing and stuff

like that because not seeing somebody else's face and body takes away that real interaction. [Betty]

Her reflection of the real-life experience project demonstrated that what she had learned came all together in reality, and she utilized all the affordances that she could obtain at the moment. When she was in the situation where Japanese was used, she was making connections among a variety of knowledge and information, such as aural information, visual information, linguistic knowledge, sociocultural knowledge, and the background information that she had about the speaker, in order to interpret the conversation. Her comments in the interview reflected the multi-layered complex learning processes where she put all the affordances into a perspective, and responded to her customers. I cannot even describe her learning in the real-life experience project within SLA. Using the language in the interaction with her customers, she developed the skills of perceiving and interpreting Japanese customers' behavior based upon which she responded back to them in an appropriate way that she thought fit each customer's behavior. In doing so, she was developing not only L2 linguistic skills but also overall communication skills when she used L2.

Broader scope of learning in a real situation. As discussed, the shifts of the course activities resulted in capturing the change in the scope of learning. In the YouTube activity, students repeated and memorized what they were supposed to say. Without contexts, their L2 learning was limited to memorization and correct pronunciation of phrases. With the Skype intervention, students experienced the use of language in a specific context. Since it was a simulation of phone conversations, they did not utilize the visual feature on Skype. They needed to rely only upon their listening skills, which

limited their learning scope to a certain degree. Moreover, since the context was specified with a scenario, the scope of learning did not go beyond what they were supposed to do which was written on the scenario. This might also control their L2 learning in a specific way. However, with the contextualization in the Skype intervention, students' perception of their learning drastically changed from the YouTube activity. Their learning was not about memorization any longer but utilization of the language that required students to be able to respond to the person spontaneously. It was also noteworthy that this shift of the focus in the class activities affected students' motivation and confidence in that many students were encouraged to use Japanese in their life. Lastly, the real-life experience intervention broadened students' learning not limited to learning of linguistics but also interpreting much richer information in reality. Lori and Jordan's comparison between language use in the classroom and actual language use outside of the classroom reflected students' realization of the complexity of actual human communication. Betty's experience illustrated the necessity of utilization of other resources besides linguistic information in reality. In conclusion, the scope of L2 learning became broader as the context for each activity became wider.

Summary

The results shown in this chapter answered all the research questions. In this section, I will summarize what was found. The first research question was posed to examine how students were engaged in each activity qualitatively. The study demonstrated how the different activity designs influenced students' learning processes with the comparison of the students' engagement in YouTube activity and that in Skype intervention. Moreover, it confirmed that the way that students were engaged in the

activity reflected the theory integrated in the activity design. Particularly, the close examination of different students' engagement on Skype activities suggested that not only activity design but also the students' perception and interpretation of the activity shaped their L2 learning as in John's case. The second question was to investigate students' perception about their own L2 learning. The results from students' reflection paper suggested what students thought they learned through each activity. The results complemented what was found in the analysis of YouTube videos and the Skype interactions in that contextualization, agency, and application of what was learned in class were critical for meaningful learning. Although the results from audio-recorded Skype interactions with a native speaker could not show much benefit for linguistic acquisition, students were able to personalize the experience easily, which resulted in raising meta-cognitive awareness. Some could shape their orientations, some were encouraged to use the language more often, and some realized what was needed for their further L2 development. At this point, the real-life experience intervention also positively affected students' motivation, orientations, and self-regulation. In addition, for the real-life experience project, students needed to develop communication skills that required them to utilize all the information, resources, and knowledge at once to handle situations in real life besides linguistic skills, as suggested in Betty's case. The third question was to understand teacher's perspective of students' engagement in each activity. The interviews with the teacher illustrated the shift in the teacher's beliefs and teaching philosophy regarding online instruction and L2 learning. Examining how the teacher reflected and reacted to the processes of implementation-reflection cycle in relation to her beliefs, all the factors in the educational setting were found interacting, influencing, and

changing each other: the activity design, the teacher's philosophy and role, and the students' perception, interpretation, and engagement. In the following chapter, I will consider the contributions from the study and suggest possibilities for future research.

Chapter 5

Discussion

In this chapter, I will discuss the results of the study in light of the theoretical framework, the sociocultural approach, and the methodological framework, formative design experiments (FDE). Next I will offer implications that flow from the study, explain limitations, present ideas for future research, and draw conclusions.

L2 Learning From Sociocultural Approaches

System of perception-action and students' L2 learning. One of the contributions of the study is the documentation of the process of students' engagement in different activities, namely the YouTube video activity and Skype intervention. Students' perception of the learning environment on Skype determined the way they were engaged in the intervention and accordingly affected their L2 development, which supported the central concepts of the perception-action system as well as affordances in ecological linguistics (Young, 2004; van Lier, 2008a).

The ecological approach explains the process of learning based on the concepts of the perception-action system in relation to the notion of affordance (Young et al., 2000). Students are considered as detectors of information, particularly with regard to affordances. Regarding affordances, a number of researchers defined the term (e.g. Gibson, 1979; Young, 2004; van Lier, 2004). Van Lier (2004) defined affordances as the relations of possibility/developmental potentials for learning between language users. Particularly for language learning, affordances are found in the relationship between a person and a linguistic expression (van Lier, 2004). van Lier (2008a) explained how affordance was detected in the cycle of perception and action as follows:

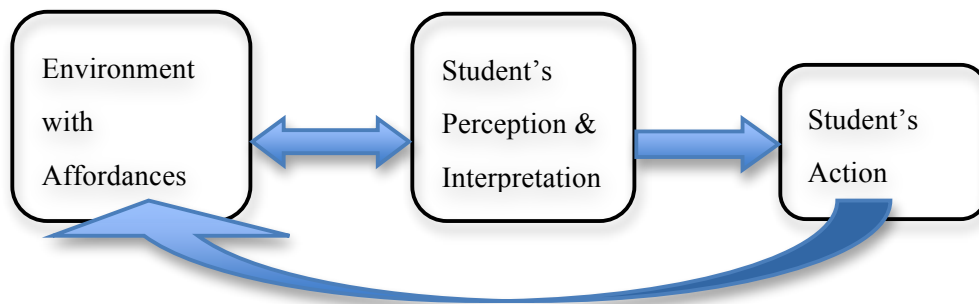
The notion of affordance ties perception together with action. While being active in the learning environment the learner detects properties in the environment that provide opportunities for further action and hence for learning. Affordances are discovered through perceptual learning (pp. 2-3).

In other words, students constantly take actions to reach out to the affordances through their perception and interpretation of the properties in the environment. Once a student picks up the affordance, it leads him or her to a more successful interaction or it might not, depending upon his or her abilities. The reciprocal and reflexive nature of action-perception system is another important characteristic of ecological linguistics (van Lier, 2008a).

In the study, there were two Skype sessions: one with a peer student and the other with the native speaker. How students were engaged in each session turned out completely different, and consequently, they learned different things from each activity. The difference came from the students' different understanding of the affordances offered by each activity. For instance, in the peer-peer interaction, students perceived her partner and herself as a student besides playing an assigned role. They corrected each other's mistakes on pronunciation and grammar. In terms of the perception and action, their mutually shared goal of the activity resulted in completion of the role-play conversation without linguistic mistakes. Consequently, such action of correcting and confirming answers specified the affordance which was linguistic information related to L2 learning as a student. On the contrary, in the interaction with the native speaker, students did not react to the linguistic affordances because they perceived themselves as an employee. In other words, students were immersed into the assigned role of a restaurant employee. The

native speaker also did not perceive students as language learners who needed help with linguistic information, and thus, he did not correct any mistakes that students made. The processes of students' interactions in the Skype interventions well captured the ecological nature of students' engagement in the intervention. It revealed how the affordances were realized and utilized for their L2 learning and other learning, and how the affordances were related to students' perception and action, as shown in Figure 1 below.

Figure 1. The Cycle of Perception and Action



As a result, the students' perception and action shaped what they learned in the activity. As shown in Chapter 4, in the peer-peer interaction, what they learned was limited to linguistic information. On the contrary, in the interaction with the native speaker, it showed the diversity of affordances depending on each individual's perception and abilities. For instance, many students focused only upon accomplishing their job as a restaurant employee, gathering correct information for a reservation which they considered the most important element in the interaction. The students' perception and action also led to meta-cognitive awareness of their own L2 development. This was a part of the developmental processes of students' L2 learning in terms of self-regulation skills. For students like Lori, the activity functioned as a reality-check so that students became aware of their current capability based on which they came to realize the next goal for

them to improve their L2 ability. Since students' perception and interpretation of the given environment varied, what they learned from each activity turned out different depending upon each individual.

Projection of self in L2 use. With regard to John's case, it also showed that his action of using casual forms reflected how he perceived the situation. His unique language use was derived not only from his perceiving the native speaker as his guest at a restaurant but also from his understanding of customer service deeply associated with his values based on his socio-cultural knowledge. John's action of presenting himself as a friendly person to the native speaker who played a guest's role reflected his agency in his language use. With the ecological view, the concept of the self is also associated with the cycle of the perception-action in which the self is constructed in the interaction.

The self is not a static identity, but rather a dynamic and ever-changing identity at each moment (van Lier, 2004). From the sociocultural and ecological point of view, language is a part of social activities, and its meaning is constructed in use. Specifically with the view of ecological linguistics, the shift of John's speech demonstrated how the self was expressed in his language use. With information-processing theories, his using casual speech would be considered as pragmatic errors, however with the ecological approach, the shift of his speech could be explained as his projection of the self based on the cycle of perception and action in the interaction.

Language as one of semiotics. The students' papers of the real-life experience project also illustrated a similar phenomena where students were interacting with environment and reaching out to the affordances to interpret current situations and to take the next action. Betty's paper suggested that the affordances were not only what they

heard but also what they saw such as facial expressions, body languages, eye gazing and so forth. Betty's explanation of the process of perceiving the world with all the other resources besides language reflected the central theme of ecological linguistics: language as semiotics (van Lier, 2008a). Semiotics is defined as "the study of sign-making and sign-using practices" (van Lier, 2004, p. 149). The resources are not only language but also "the body, cultural-historical artifacts, the physical surroundings" (van Lier, 2008a, P. 3). While interacting with customers, Betty was gathering the information of what she heard and saw at that moment and what she knew in terms of socio-cultural information as well as personal information, and making connections among the information. All of the information contributed to her perception and interpretation of the situations and her actions upon the situations.

Dynamic Processes of Implementation Illustrated with FDE

At a practical level, this study contributed to improvement of the instructional activities in an online Japanese language course, documenting the process of implementations with the FDE methodology. FDE primarily aims at improving practice creating workable and effective interventions (van den Akker, Koeno, McKenny, & Nieveen, 2006). The primary goal of FDE research is to figure out what works and not, and why, by carefully examining the process of the implementation. During the process of implementation, changes were observed at different levels. The FDE enabled documentation of the processes by which elements in the educational setting, such as the intervention, students' engagement, and teacher's beliefs and her perception of students' learning, were interacting and changing each other. In the following sections, what changes were observed and how the elements interacted during the course of

interventions are discussed.

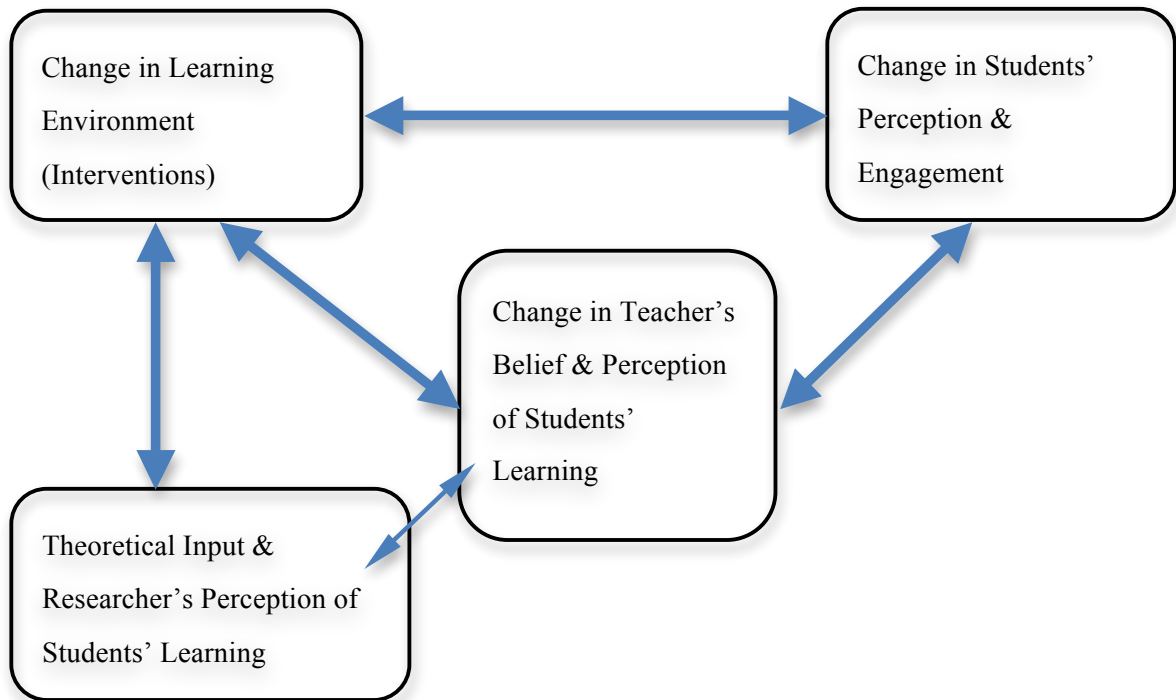
Activity design, students' engagement, and the goal of the course. In the comparison between the YouTube and Skype activity, it was suggested that the activity design could widen as well as limit students' learning. As explained in the previous chapter, the design of the YouTube activity reflected the concept of individual cognition and the notion of input/output from the information-processing paradigm. Consequently, the activity limited students' engagement to a particular way, repeating memorized phrases in the videos. On the other hand, in the Skype and real-life experience interventions that were designed with rich contextualization and that emphasized students' agency, students showed different engagement depending upon the individual L2 capability and given situations. As a result, there were variations in students' engagement and learning in both Skype and the real-life experience interventions. Investigating how students were engaged in synchronous Skype interaction in detail, we also observed that students' action and agency shaped their learning in addition to activity design. The qualitative examination of the process enabled us to see the chain of the changes. The Skype intervention changed students' learning environment, which led changes in students' engagement whereby students could utilize the language with their own words.

When teachers design instructional activities, it is crucial that the task design supports the main goal of the course. The close examination of students' engagement in the YouTube activity uncovered that the task design did not support the goal of the course fully because students did not have any opportunities to spontaneously use the target language. In contrast, Skype and the real-life experience interventions solved the mismatch between activity design and the goal of the course. The detailed documentation

of students' engagement and in-depth interviews revealed that both interventions encouraged students to use and apply what they learned in the course to the real world.

The influence of the teacher's beliefs on teaching. Concerning the teacher's understanding of students' online language learning, the study contributed to the teacher's professional development, which was a byproduct of the FDE research. With the FDE, teachers and researchers collaboratively make interventions better to fit in with a particular setting (Reinking & Beadley, 2008). During the course of implementation, the teacher and I discussed and shared opinions about how we could proceed with the implementation, and after the implementation we reflected on what happened and why. The reflective feature of the FDE was helpful for practitioners to improve their instruction (McLaughlin & Oliver, 1998).

The teacher's reflection on how students were engaged in the Skype intervention deepened her understanding of students' online L2 learning and also shifted the emphasis of her teaching beliefs from flexibility of students' learning to application of the learned content. At the end, the change in the teacher's understanding of students' online L2 learning guided her to alter the instructional activities so that she could use when she teaches the course the next time. In the interview, she mentioned that she planned to set up an introductory session with all the students on Skype from the beginning of the semester to bond them together as a class so that more collaborative interactions would occur throughout the semester. The chain of changes will continue to provide better instruction for students as shown in Figure 2. The study showed that the process-focused FDE methodology allowed researchers and teachers to see how the interactions among the elements seen in Figure 2 unfolded during the course of implementation.

Figure 2. Chain of Changes in the Study

Remaining dilemma regarding the real-life experience intervention. Lastly, the results from this study especially suggested the impact of teacher's values and orientations upon the whole process. As explained in Chapter 4, the teacher did not make any changes to the YouTube activity because of her belief that the flexibility of students' learning must be kept for online instruction. Through the discussions, she came to agree with the Skype intervention because she could see the agreement with her other belief, application of what was learned to the real world. The results from the Skype intervention brought about the shift in her emphasis. As for the real-life experience intervention, the teacher's dilemma caused by uncontrolled environment in the intervention was left unsolved. During the very last interview that was held after the semester, the teacher implied that she would not modify and utilize the real-life experience intervention in the

future, although when it was implemented, the teacher only showed her hesitation with her concern of overloading the students with the project at the end of the semester. I, however, came to know the critical factor that made her hesitate to implement the intervention during the last interview.

In the last interview, the teacher claimed that the necessity of having a controlled environment was for fair grading. She confessed that she had wondered how to measure students' learning outside of the classroom. Indeed, she said in a previous interview, "Cannot control or check. I'm still learning how to assess, this kind of assessment of learning, something is not so concrete, and yet, to be fair to everybody, maybe it's just they do it or they don't. Something simple like that." In other words, she needed to quantify students' learning in a somewhat controlled environment for her to grade them. This might be derived from current educational trends where students' ability should be quantified and their success level should be shown numerically on tests. As shown in Chapter 4, students' papers suggested their rich qualitative development in L2 learning processes such as meta-cognitive awareness and utilization of semiotics in addition to language used for communication. However, her strong responsibility as a teacher who needed to quantitatively evaluate students in a fair manner overrode the qualitative values that were illustrated in students' final papers. The unsolved dilemma might come not only from the teacher's philosophy but also her responsibility for documenting students' development based on quantitative data that all the teachers were encouraged to do at the college.

Eclectic Mix of Different Modes of Technology for Optimal Learning Environment

Recently, discussion has centered on how technology can facilitate students'

learning. It has been acknowledged that technology can offer a number of benefits for students' learning of various subjects. As for L2 learning, however, an online learning environment might limit semiotic resources that are utilized to understand the meaning of words, as compared to real face-to-face communication. This is one of the reasons why the real-life experience intervention was added to the course activities. The students indeed noticed and reported the difference between online interactions and face-to-face interactions in their reflection papers. The course was offered 100% online but the teacher had students experience three different modes of learning through YouTube, Skype, and real-life experience. Such a mixture of different modes of learning enabled students with diverse levels of language proficiency to develop varied L2 ability and related communication skills that each student needed at that moment.

Different benefits in different modes of learning environment. There are three modes of learning environment in the study: asynchronous online, synchronous online, and real situations. Each mode of learning had its unique advantages and disadvantages as observed in the previous chapters. Using YouTube videos, students could develop the skill of self-correction. It also strengthened students' descriptive linguistic knowledge through memorization and repetition. This activity was especially beneficial for beginner-level students who had never learned Japanese to develop the basic structure of the language with already-made scripts, although it might have produced a ceiling effect in that there were not many variations in students' engagement and their L2 use. On the other hand, Skype provided a space for each to perform the assigned roles as he/she wished. The situation expanded the scope of students' L2 development from descriptive linguistics to usage-focused applied linguistics, such as sociocultural linguistics,

pragmatics, and so forth. Furthermore, it influenced students' meta-cognitive awareness of their L2 development. The synchronous interaction with the native speaker allowed students to experience the simulated authentic learning environment. The synchronous interaction on Skype also enabled students to learn Japanese more easily with immediate feedback. Therefore, using different modes of the learning environment, asynchronous and synchronous, students could develop different skills of L2 learning even within the online context.

From the view of ecological approach, the online learning environment still limits the totality of semiotics. Even if students could have used the video feature on the Skype interaction, eye contact would not have been possible. Skype limits our sight within the area that cameras can capture. Consequently, the real-life experience intervention turned out to be vital for this course to fulfill the major course goal that students will become able to use the language in a business context. In the face-to-face interactions required for the real-life experience project, students realized much more abundant resources they could use to understand the situation and to interpret the conversation compared to the audio-only interactions over Skype. Regardless of their proficiency levels, all the students interacted with native speakers in real situations. In fact, Betty was one of the very beginners, and yet, she was keenly aware of the importance of semiotics to interpret customers' utterances.

Getting out of online space in a 100% online course. Reflecting on all the pros and cons in each activity, these three modes of learning environment in the study compensated for each other well. In other words, each learning environment had limitations, and thus, mixing different modes of learning was more helpful for students to

develop their L2 ability than utilizing only one of these modes. Teachers should know which mode of learning will facilitate what types of L2 learning so that they can prepare course activities with different modes to provide students with optimal learning environments.

In conclusion, I could see many more possibilities in utilizing different modes of learning environment in one course for wider L2 development. Even though the course is offered as 100% online, teachers do not have to limit the modes of learning within the online space. I emphasize the benefits of assigning a fieldwork project and getting students off-line so that students develop the sense of language use in real situations. As the students in this study showed, experience in real situations will push students to a further step of L2 development.

Implications

Researchers should consider L2 learning from sociocultural approaches in order to broaden the scope of SLA with a wider range of developmental potentials in L2 learning besides acquiring linguistic forms. Teachers need to look at L2 learning from the sociocultural approaches that consider L2 learning as social phenomena. As explained, language use can never be separated from the context where the language is used. In actuality, however, a number of practitioners still apply the teaching methods and testing based on traditional information-processing theory without becoming aware of the limited scope of SLA just as we saw in the YouTube video activity. For instance, examinations are often conducted without any context like standardized tests, which can measure only a part of students' L2 ability and might not evaluate their other skills for communication accurately.

With the sociocultural approaches, the fluid and dynamic nature of L2 learning can be portrayed. In order to better understand the mechanism of organic learning processes, both practitioners and researchers must pay more attention to the qualitative changes of elements in the environment, such as interventions/activity design, students' engagement, and teacher's beliefs. In so doing, we could understand the whole organic system of L2 learning, which would lead us to the intervention modification and eventually course development. Thus, it is critical for researchers to characterize instructional contexts in detail so that they can unfold how the elements in the educational setting interact with each other.

The results suggested the impact of the teacher's teaching philosophy and way of thinking concerning what course materials were chosen and the way that the instruction was delivered. Simultaneously, the results also showed the change in the teacher's belief system throughout the procedures. Thus, practitioners need to closely examine their belief system to see whether it augments or limits both the understanding of the students and the types of learning that occur, whether linguistic, meta-cognitive, or cultural.

In the end, I could not help admitting the challenge in promoting qualitative investigation of students' L2 learning at the practical level. The entire educational trends toward quantified evidence of learning has sunk into each individual teacher's mindset. Consequently, some teachers might result in stressing quantitative data for students' L2 learning and evaluating students with examinations and standardized tests. Such examinations were mostly limited to testing linguistic knowledge rather than focusing upon students' holistic development in various aspects including keen sensitivity of sociocultural knowledge and meta-cognitive awareness. Regardless of the current trends

towards quantitative assessment and evaluation, I would like to encourage practitioners to qualitatively investigate students' L2 learning. In order to provide an optimal learning environment for L2 learning, teachers are required to see the whole picture of complex and dynamic L2 learning.

Limitations

In this study, there are several limitations, and some of them could not be avoided due to the nature of the research procedure. In the Skype sessions, for instance, due to the recording purpose, either the teacher or I was present while students were working on the role-play activities. Our presence might have affected how students interacted with each other as well as with the native speaker. This might limit the degree of the authenticity as well.

As for the real-life experience intervention, video-recording was not allowed because of the teacher's concern about students' and other people's privacy. Thus, in the study, the reflection paper and interviews were used to understand how students worked on the real-life experience intervention. Analyzing the students' reflection papers, it is shown that students were utilizing all the information offered in the environment in addition to the language itself to communicate with native speakers. The reflection paper did not happen in real time at the point of interaction, and could never capture how students dealt with various resources in the environment at the moment for their communication with native speakers. Thus, investigation of their actual engagement through video-recording might help to understand how they made sense of the environment visually as well as aurally.

Another limitation was related to on-going analysis which is commonly applied in

grounded theory. In theory, I was supposed to conduct the analysis along with the process of implementation. Due to the close implementation in timing between two different investigations, I could not conduct a thorough on-going analysis of the students' engagement and the data of interviews with the teacher. Therefore, the complete analysis of every collected piece of data was conducted retrospectively, which might affect the results, especially for the real-life experience intervention. Because I could not conduct a detailed analysis on the teacher's philosophy on online instruction, I could not determine that the teacher's hesitation was specifically attributed to the fact that she wanted to keep students in a controlled environment for fair evaluation. If I had realized the fact ahead of time before the implementation, the real-life experience intervention would have been designed differently. For instance, I could have arranged restaurants where students could conduct the real-life experience project. In this way, we could have controlled the environment to some extent.

Lastly, due to the time constraint, I could not demonstrate documentation of the modified interventions after the first implementation. As mentioned, however, the teacher was considering the modification of Skype intervention at that time. She was also thinking of increasing peer-peer as well as student-teacher interaction through Skype. The continuous documentation of students' engagement in altered interventions would lead to a better understanding of online Japanese language learning. Although I could not continue with the teacher and implement any further interventions after revising them, the teacher's intention of modification counted as a good sign that the research influenced the improvement of practice.

Future Research

As mentioned, the empirical SLA research from a sociocultural perspective is far less than the research based on the traditional information-processing paradigm. Since sociocultural approaches have developed theories such as chaos/complexity theories and ecological theories, now is the time for researchers to apply the theories to analysis of empirical data in order to disseminate the sociocultural approaches. In so doing, we can further develop SLA theories that depict the complex L2 development more precisely. Although this study contributed to the demonstration of the dynamic process of students' L2 learning from sociocultural perspectives with empirical data, Skype sessions in the study limited language resources only to the aural information. It was because it perfectly fit to create a simulated situation of telephone interactions in this case. However, it would be interesting to investigate how students interact with their customers in real situations that involve other semiotic resources such as facial expressions and body language. For the analysis, video-recording would be ideal although video-recording outside of the class might not be easily allowed.

As for video-recorded interactional data, for future research, it might be possible to design a class activity that involves a visual component of Skype and to video-record the screens used for the videoconference. Such data might be able to reveal how other semiotics contribute to online communication in addition to language itself. Furthermore, since video conferencing has become quite common to use for daily communication and business purposes these days, the results might benefit students who are going to work internationally using such a medium of the technology.

Although I illustrated the dynamic process of implementation, the research did not

show the process of modifying the intervention because of the time limitation. In actuality, practitioners will continue the cycle of implementation followed by another implementation of a modified intervention. Documenting the second implementation would reveal the complete process of how the intervention affected students' learning. Thus, similar research should be conducted for a longer term.

Conclusion

The following three key conclusions can be derived from the study: the importance of sociocultural approaches to SLA, the benefits of qualitative investigation of students' engagement and teacher's perception, and the usefulness of FDE. First, using the sociocultural approaches, the study demonstrated that L2 learning counts as a social phenomenon. Students in the study did not process the language like a robot that retrieved linguistic items from their stored memories but were social entities who actively interacted with elements in the environment and made sense of the interactions. Therefore, L2 learning should not be illustrated with fixed tokens or codes as information-processing theories have suggested, but with the organic totality of semiotics. Furthermore, the results clearly suggested that students' perception and action emerged within a context, and accordingly L2 learning should never be separated from the context. In conclusion, this study confirmed that thorough examination from the sociocultural view helped researchers deepen the understanding of complex and dynamic L2 learning, illustrating the totality of semiotics and the students' perception-action cycle within the totality, which could not be captured by the information-processing theories.

Second, qualitative process-focused investigation of students' engagement benefitted in portraying the dynamic and complex L2 learning from the sociocultural

approaches and enabled teachers to see how and why the intervention worked or not. As explained in Chapter 2 and 3, much research emphasized the importance of contextualization, authenticity, and students' agency in class activities. The issue was, however, that previous research did not reveal how students learned L2 in the class activities that were designed to be well contextualized and to allow students' agency in a qualitative manner. The results suggested that the intervention worked well in that the authentic contextualization afforded the space where students could use what they learned in their own ways. This study showed how the authentic contextualization and students' agency in the activity augmented their L2 developmental potentials, which was not limited to linguistics but expanded to include pragmatics, sociocultural knowledge and meta-cognitive awareness.

Lastly, this study provided support for FDE as one of the most useful methodologies to bridge the gap between researchers and practitioners. It offered opportunities for the teacher and researcher to work together for the course development. The qualitative examination of the data challenged the issue of focusing only upon outcomes as seen in previous studies, illustrating the dynamic interaction among the intervention, students, and the teacher in practice. It eventually contributed to reconceptualize the theories in SLA as explained. Throughout the FDE procedure, the teacher gained opportunities to scrutinize the reason why the intervention worked and to reflect upon her beliefs for online instruction. This reflective nature of FDE is beneficial for practitioners to better understand their students as well as reflect on their own teaching philosophy. Any educational research has to deal with real educational settings where a number of elements influence each other. However, researchers often have to

control the variables or cut down a number of variables in the setting so that they can follow specific theories, which creates the gap between theories and practice. As shown in the study, dealing with the uncontrolled natural educational setting required in-depth qualitative analysis of every factor that may affect students' learning. In so doing, I found that the very process of analysis unfolded reality in a different way, which resulted in bridging the discrepancy between theory and practice.

Appendix A

Guidelines for the Real-life Intervention

CAPSTONE PROJECT (FINAL PROJECT)

Your final project is a fieldwork. You are going to ‘experience’ Japanese language in reality. What you are going to do is either to use Japanese to Japanese customers at your work place, to order food in Japanese at a Japanese restaurant, or to observe how Japanese employees interact with customers. After that, you submit a paper about your experience.

Deadline: Dec 10 (FRI)

In this course, we have learned how to speak Japanese to your customers in various situations such as at the front desk of a hotel, at a gift shop, and at a Japanese restaurant. You showed your mastery of appropriate speech to customers with several video productions. (We are proud of you!!) Now, it is the time for you to use the language in the real world.

Your mission is to talk to Japanese people using what you have learned in this course.

Here are some examples of what you can do:

1. If you are working in the environment where you can use Japanese to Japanese customers, try using expressions that you learned in this course as much as you can. If you want to know other expressions that you often use at your work place, please feel free to contact us. We will tell you how to say it in Japanese so that this project is helpful

and meaningful to you.

2. If you have opportunities to go to a Japanese restaurant and your waiter/waitress is Japanese, try order food in Japanese using expressions that you learned in Ch 8-9.

3. If you do not have any opportunities to interact with native speakers, go to the office of ABC Travel in Waikiki and observe how employees interact with Japanese people, focusing not only upon their language but also their behaviors such as body languages.

***If you can video-record or audio-record what you did, please do!! The recordings would be helpful for you to reflect what you said and what your customer did.

***DO NOT ask your friends to be the person who you talk to.

***If you are thinking of different situations, please let us know what you plan to do.

Before you conduct the fieldwork, we encourage you to read the cultural readings in Ch 6 and Ch 8 uploaded on Laulima (ch6_6_culture.pdf & ch_8_6_culture). The readings in Ch 6 explains how Japanese people consider host-guest relationship, whereas the one in Ch 8 tells you how Japanese people 'experience' foods.

After you conducted the fieldwork, you are required to write a report about your experience, considering the questions below. Please explain where you conducted the project and what you did.

Those who spoke to Japanese customer or ordered food in Japanese

1. What did the Japanese person react to your Japanese? Was she/he surprised? Did she/he speak Japanese back to you? Did you understand him/her? If not, how did you

respond?

2. When you speak Japanese, what was successful and what was a problem to you? How can you improve next time?
3. Do you think cultural readings are helpful during the interaction with the Japanese native speakers?
4. What did you learn from this fieldwork?

Those who did observations at the ABC travel

1. What did you notice in their language? How much did you understand their speech?
2. What did you notice in their behavior? Was his/her behavior different from or similar to yours?
3. If you were the agent, what would you do differently when interacting with the customers?
4. What did you learn from this fieldwork?

I understand how difficult your mission could be. However, I encourage you to take actions. Once you start using what you learned, you can learn much more from the actual experiences than just taking Japanese language courses. I am certain about this because I learned English as you learn Japanese as a foreign language. I did not have many chances to talk to English native speakers when I learned English. Therefore, when I started to live in English-speaking countries, I could not do anything in English. Even buying a coffee was a real challenge to me. I have experienced the thrills and fears to speak English in front of real native speakers. Later, however, I realized that using English in

real situations had me learn more and remember words better. So, why don't we try using what we learned in this course? Let's experience it!!

Appendix B

Student Consent Form for Utilizing Students' Production in the Course

Hello.

My name is Mayumi Shibakawa. I am a doctoral student in the College of Education at the University of Hawai'i at Mānoa. I am currently working on a project about online language teaching and learning. As a researcher, I am interested in analyzing and evaluating class activities online. As part of my ongoing research efforts, I am interested in observing and documenting the patterns and trends of students in the course. Your participation in the project will contribute to improve theories and practices in online language learning and teaching. Your cooperation is greatly appreciated by the investigator.

I wish to ask your permission to utilize some or all of the following as research data:

- Statements or comments that you may offer in response to assignments in the discussion forums and other course communication.
- You Tube video clips posted on the You Tube community.
- Formal surveys regarding your experience in the course, course activities, and overall program evaluation.

Your identity as a participant in the project will be kept confidential. Therefore, the identities and privacy of the participants will be protected. All data will be used only in conjunction with the research project for the dissertation or other related academic

research on this topic (ex. conference presentations, scholarly publications) pursued by the researcher. Your grade will not be affected whether you participate or choose not to participate in this study. Participation in this study is voluntary and may be terminated at any time without any negative consequence to the participant. In such a case, your data will be destroyed without any consequences. To the researcher's knowledge, there are no potential risks or discomforts involved in this survey. You may ask questions about the research at any time. Call the researcher at (808) 218-5251 or email at shibakaw@hawaii.edu

Statement of Consent:

I certify that I have read and understand the above, that I have been given satisfactory answers to any questions about the survey, and that I have been advised that I am free to withdraw my consent and to discontinue participation in the project at any time, without any prejudice or loss of benefit. I agree to be a part of this project with the understanding that such permission does not take away any of my rights, nor does it release the researcher from liability for negligence. If I cannot obtain satisfactory answers to my questions, or have comments or complaints about my participation in this study, I may contact: Committee on Human Studies (CHS), Biomed Bldg. 1960 East-West Road, Rm. B-104, Honolulu, HI 96822. Phone: (808)956-5007.

I consent to my participation in the research project. ____ Yes ____ No

Appendix C

Questions in the Student Survey

1. Have you met Professor Yama in person before you registered this course?
2. Please explain the reason why you decided to take this course.
3. What would you expect to learn in this course?
4. What do you think about virtual interaction on You Tube? Are you enjoying it or not?
Why do you think so?
5. What part of the course materials do you like the most so far? (e.g. cultural discussion, video clips about culture, cultural reading, You Tube, Dialogue animation etc.) Why do you like it?
6. What part of the course is your least favorite so far? Why do you think so? Please write specific.
7. If you have any suggestions about the course contents, materials, and assignment, please comment here.
8. Have you taken the course 100% online course (not hybrid) before?
9. If your previous answer is 'yes', please list course numbers and titles.
10. Have you used the You Tube movie before you take JPNS 131?
11. Have you used the Skype or Eliminate to talk to people?
12. Have you taken Japanese language course before?
13. If your previous answer is 'yes', please list the places where you learned and the course titles/levels if you remember. (e.g. Elementary school – afterschool program; Collage – Japanese 101 etc.)
14. Do you speak Japanese in daily life for interacting with Japanese native speakers?

(e.g. your friends from Japan, your family members, Japanese customers, Japanese co-workers)

15. If your previous answer is 'yes,' please specify the relationship with them (e.g. friend, co-workers, customers, parents). How often do you interact them? (e.g. three times a week, less than once per month, everyday)

16. Are you working in Japanese-spoken environment such as Japanese restaurants and shops? If so, where are you working? Please specify and write in the box below (e.g. hotel, Japanese store etc.)

17. Have you worked in Japanese-spoken environment such as Japanese restaurants and Japanese store etc.)

18. Name

19. Age

20. Your Major

Appendix D

Student Consent Form for Student Survey

AGREEMENT TO PARTICIPATE IN RESEARCH

Hello. Before you start this survey, please read the following statement.

My name is Mayumi Shibakawa. I am a doctoral student in the College of Education at the University of Hawai‘i at Mānoa. I am currently working on a project about online Japanese language courses. The title of my project is “College Students’ Experience in Online Japanese Language Courses: Mixed Methods Case Study” (tentative). This study is for understanding students’ experiences in online language courses. The survey is about your background information such as age, gender, and educational background. Your cooperation is greatly appreciated by the investigator as well as educators who deal with online language courses.

If you agree, you will be asked to participate in the survey. You may be selected and asked to participate in a follow-up interview with the researcher.

All identifying information (e.g. name) in this survey will be edited out in order to protect the identities and privacy of the participants. This survey does not affect your grade at all. All data will be used only in conjunction with the research project for my dissertation or other related academic research projects on this topic (ex. conference presentations, scholarly publications) pursued by the researcher.

Participation in this study is voluntary and may be terminated at any time without any negative consequence to the participant. In such a case, your data will be destroyed without any consequences. To the researcher's knowledge, there are no potential risks or discomforts involved in this survey. You may ask questions about the research at any time. Call the researcher at (808) 218-5251 or email at shibakaw@hawaii.edu

Statement of Consent:

I certify that I have read and understand the above, that I have been given satisfactory answers to any questions about the survey, and that I have been advised that I am free to withdraw my consent and to discontinue participation in the project at any time, without any prejudice or loss of benefit. I agree to be a part of this project with the understanding that such permission does not take away any of my rights, nor does it release the researcher from liability for negligence. If I cannot obtain satisfactory answers to my questions, or have comments or complaints about my participation in this study, I may contact: Committee on Human Studies (CHS), University of Hawaii, 2540 Maile Way, Honolulu, Hawaii 96822. Phone: (808)956-5007.

If you agree with the statement of consent, please move on to the next page. You should be over 18 years old to participate in this survey.

http://www.surveymonkey.com/s.aspx?sm=kDIKtzF1ImYDGW95hpalOw_3d_3d

Appendix E

Student Consent Form for Audio-recording on Skype

Title of the Study: The dynamics of audio-interaction in online Japanese language course (tentative)

Investigator: Mayumi Shibakawa, Doctoral student in the College of Education at the University of Hawai‘i at Mānoa

Purpose of this Research: This study is conducted to document students’ learning process and better understand their engagement in different class activities

What You will be Expected to Do

If you agree to participate in this research, your interaction with your classmate on Skype will be audio-recorded.

Your Rights

- To Confidentiality

All the recordings will be kept by the researcher in storage to which only the researcher will have access. Yet, you have the right to share the copies of audio-recordings both during and after completion of the research. Detailed transcriptions of the recorded interaction will be prepared. All identifying information (ex. name) in these materials will be edited out in order to protect the identities and privacy of the participants. All data will be used only in conjunction with dissertation projects or other related academic research projects on this topic (e.g. conference presentations and scholarly publications) pursued by the researcher.

- To Ask Questions at Any Time

You may ask questions about the research at any time. Call the researcher at (808)

218-5251 or email at shibakaw@hawaii.edu

- To Withdraw at Any Time

Participation in this study is voluntary and may be terminated at any time without any negative consequence to the participant. In such a case, your data will be destroyed without any consequences.

Benefits

The findings of this study are expected to contribute to an improvement of instructional designs in the field of foreign language teaching online

Possible Risks

To the researchers' knowledge, there are no potential risks or discomforts involved in this study.

Statement of Consent

I certify that I have read and understand the above, that I have been given satisfactory answers to any questions about the research, and that I have been advised that I am free to withdraw my consent and to discontinue participation in the research at any time, without any prejudice or loss of benefit. I agree to be a part of this study with the understanding that such permission does not take away any of my rights, nor does it release the researcher from liability for negligence. If I cannot obtain satisfactory answers to my questions, or have comments or complaints about my participation in this study, I may contact: Committee on Human Studies (CHS), Biomed Bldg. 1960 East-West Road, Rm. B-104, Honolulu, HI 96822. Phone: (808)956-5007.

I consent to my interaction with peers being audio recorded. ____ Yes ____ No

Your Name: _____ Date: _____

Signature: _____

Researcher's Statement

I have explicitly explained the research to the participant. I have asked whether any questions remain and have answered these questions to the best of my ability.

Signature: _____ Date: _____

Cc: Signed copy to participant

If you agree with the statement of consent, please e-mail the signed form back to me. Or please e-mail me stating your agreement.

Appendix F**Questions on the Skype Reflection Paper**

1. Unlike previous activities in this course, you did not have any pre-scripted dialogue in this activity. Was it different from following/reading pre-scripted dialogue? Was it easy/difficult compared to what you have done in this course (e.g. You Tube videos, midterm pair work)? Explain your answer and state reasons for your answer.
2. Was the Skype activity helpful for you to remember vocabulary, learn how to structure sentences, or learn how to pronounce words correctly? Explain your answers and give examples of what you have learned through the midterm preparation.
3. What did you learn talking to a native speaker who played a guest's role? Explain your answer with reasons.

Appendix G

Teacher Consent Form for the Interviews

Title of the Study: The dynamics of audio-interaction in online Japanese language course
(tentative)

Investigator: Mayumi Shibakawa, Doctoral student in the College of Education at the
University of Hawai‘i at Mānoa

Purpose of this Research: This study is conducted to document students’ learning process
and better understand their engagement in different class activities

What You will be Expected to Do

If you agree to participate in this research, you will be asked to do the following things:

- You will participate in interviews with the researcher which will last about half one hour.
- The interview will be audio-recorded.
- In the initial interview, you will be asked about the course in general and your previous experience of teaching the online course
- In the other interviews, you will be asked about your opinion about students’ learning in each phase.

Your Rights

- To Confidentiality

All the recordings will be kept by the researcher in storage to which only the researcher will have access. Yet, you have the right to share the copies of audio-recordings both during and after completion of the research. Detailed transcriptions of the recorded interview will be prepared. All identifying information (ex. name) in these materials will

be edited out in order to protect the identities and privacy of the participants. All data will be used only in conjunction with dissertation projects or other related academic research projects on this topic (e.g. conference presentations and scholarly publications) pursued by the researcher.

- To Ask Questions at Any Time

You may ask questions about the research at any time. Call the researcher at (808) 218-5251 or email at shibakaw@hawaii.edu

- To Withdraw at Any Time

Participation in this study is voluntary and may be terminated at any time without any negative consequence to the participant. In such a case, your data will be destroyed without any consequences.

Benefits

The findings of this study are expected to contribute to an improvement of instructional designs in the field of foreign language teaching online

Possible Risks

To the researcher's knowledge, there are no potential risks or discomforts involved in this study.

Statement of Consent

I certify that I have read and understand the above, that I have been given satisfactory answers to any questions about the research, and that I have been advised that I am free to withdraw my consent and to discontinue participation in the research at any time, without any prejudice or loss of benefit. I agree to be a part of this study with the understanding that such permission does not take away any of my rights, nor does it release the

researcher from liability for negligence. If I cannot obtain satisfactory answers to my questions, or have comments or complaints about my participation in this study, I may contact: Committee on Human Studies (CHS), Biomed Bldg. 1960 East-West Road, Rm. B-104, Honolulu, HI 96822. Phone: (808)956-5007.

I consent to my interview being audio recorded. ____ Yes ____ No

Your Name: _____ Date: _____

Signature: _____

Researcher's Statement

I have explicitly explained the research to the participant. I have asked whether any questions remain and have answered these questions to the best of my ability.

Signature: _____ Date: _____

Cc: Signed copy to participant

Appendix H

Semi-structured Teacher Interview Questions for the Initial Interview

1. Approximately how many students will stay in class?
2. How many semesters have you taught with the same teaching style?
3. Is there any change from last semester?
4. What do you see as the main goals of the course?
5. What do you do for students to accomplish the goal?
6. What have you observed when your students engage in class activities that you created? Please explain the issues that you have experienced in the past.
7. This course focuses on oral skills, what do you put most emphasis on in order to improve their oral skills through online communications?
8. What do you think about the current course content on the website? Is there any area that you want to improve? If so, how do you want to make a change?

Appendix I**Entire Interaction with the Native Speaker: John's Case**

Line

- 1 J: moshi moshi tsukushi de gozaimasu.
hello. this is Tukushi (restaurant name).
- 2 K: a, moshi moshi seki no yoyaku o onegaishimasu.
I would like to make a reservation.
- 3 J: kashikomarimashita. namae o onegaiitashimasu.
yes, certainly. could I have your name please.
- 4 K: ehh Sakamoto desu.
ehh it's Sakamoto.
- 5 J: ah Sakamoto desuka.
ah you are Sakamoto.
- 6 K: hai.
yes.
- 7 J: eto nanji ga yoroshii desuka.
well what time would you prefer?
- 8 K: ah etto juuichi gatsu juuku nichu noh hokuryoobi hachi ji han ni onegaishimasu.
ah well November nineteenth Thursday eight o'clock please.
- 9: J: what.... ah, mooichido yukkuri onegai itashimasu.
what ah would you speak slowly one more time?
- 10 K: hai, eh, juichi gatsu juuku nichu mokuryoobi hachiji han ni onegaishimasu.
Yes, eh November nineteenth Thursday eight o'clock please.
- 11 J: hai, kashikomarimashita ah nanmee sama desuka.
yes, certainly. ah how many people?

- 12 K: a, yonin desu.
ah four people.
- 13 J: haaaai, ja
yeeeeees then
- 14 K: hai
yes.
- 15 J: ja, shitsumon wa arimasuka.
then do you have a question?
- 16 K: a, hai, doozo tsuzuketekudasai.
ah yes. please continue.
- 17 J: a, nja, Sakamoto, yonin sama, juuichi gatsu jyuuku nichu no hachi ji han desune.
a then Sakamoto (without a title) November nineteenth eight o'clock.
- 18 K: hai, eh, nde, chuushajoo arimasuka.
yes, is there a parking?
- 19 J: arimasuyoooo.
there is.
- 20 K: ah, hai, soreto, kurumaisu no hito ga hitori irunndesu kedomo, daijoobu desuka.
yes, and there is a wheel chair person, is it okay?
- 21 J: sono chuusha wa arimasuyo.
There is 'chuusha' (incomprehensive word)
- 22 K: hai, ah, seki mo daijoobu deshooka.
yes, seats are okay too?
- 23 J: sekimo daijoobu desuyo.
yes, seats are okay too.
- 24 K: hai, ja, onegaishimasu.
yes, then please take care

- 25 J: hai, ja omachishite orimasu.
yes, I am looking forward to seeing you.
- 26 K: hai, ah, yoroshikuonegaishimasu. jane. sayonara.
yes, please take care of it. Good-bye.
- 27 J: sayonaraaah.
good-bye.

References

- Abrams, I. Z. (2006). From theory to practice: Intracultural CMC in the L2 classroom. In L. Ducate & N. Arnold (Eds.), *Calling to CALL: From theory and research to new directions in foreign language teaching* (pp. 181–209). San Marcos, TX: Computer Assisted Language Instruction Consortium.
- Aljaafresh, A. & Lantolf, J. P. (1994). Negative feedback as regulation and second language learning in the zone of proximal development. *The Modern Language Journal*, 78, 465–83.
- Anderson, T. (Ed.). (2008). *The theory and practice of online learning*. Edmonton, AB: Athabasca University Press.
- Baldry, A. & Thibault, P. J. (2006). Multimodal transcription and text analysis. Oakville, CT: Equinox.
- Blake, R. J. (2009). Review of brave new digital classroom: Technology and foreign language learning. *Language Learning & Technology*, 13(2), 22–28.
- Brab, S., & Squire, K. (2004). Design-based research: Putting a stake in the ground. *Journal of the Learning Sciences*, 13(1), 1–14.
- Brown, A. L. (1992). Design experiments: Theoretical and methodological challenges in creating complex interventions in classroom settings. *The Journal of the Learning Sciences*, 2(2), 141–78.
- Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18(1), 32–42.
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. London, UK: Sage.

- Cobb, P., Confrey, J., deSessa, A., Lehrer, R., & Schauble, L. (2003). Design experiments in educational research. *Educational Researcher*, 32(1), 9–13.
- Collins, A. (1992). Toward a design science of education. In E. Scanlon & T. O'Shea (Eds.), *New directions in educational technology*. New York, NY: Springer-Verlag.
- Collins, A., Joseph, D., & Bielaczyc, K. (2004). Design Research: Theoretical and methodological issues. *Journal of the Learning Sciences*, 13(1), 15–42.
- Creswell, J. W. (2008). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (3rd ed.). Upper Saddle River, NJ: Pearson.
- Dellinger, A.B., & Leech, N.L. (2007). Towards a unified validation framework in mixed methods research. *Journal of Mixed Methods Research*, 1(4), 309–332.
- diSessa, A. A. & Cobb, P. (2004). Ontological innovation and the role of theory in design experiments. *The Journal of the Learning Sciences*. 13(1), 77-103.
- Donato, R. (1994). Collective scaffolding in second language learning. In J. P. Lantolf & G. Appel, *Vygotskian approaches to second language research* (pp. 33–56). Norwood, NJ: Ablex.
- Doughty, C. & T. Pica (1986). 'Information-gap' tasks: Do they facilitate second language acquisition? *TESOL Quarterly*. 20(2), 305–326.
- Firth, A. & Wagner, J. (1997). On discourse, communication, and (some) fundamental concepts in SLA research. *The Modern Language Journal*. 81, 285–300.
- Foster, P. & Ohta, A. S. (2005). Negotiation for meaning and peer assistance in second language classrooms. *Applied Linguistic*, 26(3), 402–430.
- Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based

environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2(2-3), 87–105.

Gibson, J. J. (1979). *The ecological approach to visual perception*. Boston, MA: Houghton Mifflin.

Gilmore, A. (2007). Authentic materials and authenticity in foreign language learning. *Language Teaching*, 40, 97–118.

Gravemeijer, K. & Bakker, A. (2006). Design research and design heuristics in statistics education. *International Conference on Teaching Statistical Education*, 7.

Retrieved from

<http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CCUQFjAA&url=http%3A%2F%2Falexandria.tue.nl%2Fopenaccess%2FMetis218242.pdf&ei=YISYT-vxKYWRiQLtkqXkDw&usg=AFQjCNGTrSCqlGczWO3yplZLRBnKw-RS7Q>

Hall, J. K. & Verplaetse, L. S. (2000). *Second and foreign language learning through classroom interaction*. Mahwah, NJ: Lawrence Associates.

Heins, B., Duensing, A., Stickler, U., & Batstone, C. (2007). Spoken interaction in online and face-to-face language tutorials. *Computer Assisted Language Learning*, 20(3), 279–295.

Herrington, J., & Oliver, R. (2000). An instructional design framework for authentic learning environments. *Educational Technology Research and Development*, 48(3), 23-48.

Herrington, J., Reeves, T., & Oliver, R. (2007). Immersive learning technologies: Realism and online authentic learning. *Journal of Computing in Higher Education*,

19(1), 80–99.

- Herrington, J., Reeves, T., Oliver, R., & Woo, Y. (2004). Designing authentic activities in web-based courses. *Journal of Computing in Higher Education*, 16(1), 3–29.
- Ivey, G. & Broaddus, K. (2007). A formative experiment investigating literacy engagement among adolescent Latina/o students just beginning to read, write, and speak English. *Reading Research Quarterly*, 42(4), 512–545.
- Jepson, K. (2005). Conversations - and negotiated interaction - in text and voice rooms. *Language Learning and Technology*, 9(3), 79–98.
- Johnson, M. (2004). *A philosophy of second language acquisition*. New Haven, CT: Yale University Press.
- Kelly, A. (2004). Design research in education: Yes, but is it methodological? *Journal of the Learning Sciences*, 13(1), 115–128.
- Kern, R., Ware, P., & Warschauer, M. (2004). Crossing frontiers: New directions in online pedagogy and research. *Annual Review of Applied Linguistics*, 24, 243-260.
- Kramsch, C. (2002). *Language acquisition and language socialization*. London, UK: Continuum.
- Krashen, S. (1985). *The input hypothesis*. London, UK: Longman.
- Long, M. H. (1985). Input and second language acquisition theory. In S.M. Gass & C.G. Madden (Eds.). *Input in second language acquisition* (pp. 377–393). Rowley, MA: Newbury House.
- Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In W. Ritchie and T. Bhatia (Eds.), *Handbook of second language*

- acquisition* (pp. 413–68). New York, NY: Academic Press.
- Lantolf, J. P. (1996). Second language acquisition theory-building: “Letting all the flowers bloom.” *Language Learning*, 46(4), 713–749.
- Lantolf, J. P. (2000). *Sociocultural theory and second language learning*. Oxford: Oxford University Press.
- Lantolf, J. P. & Apple, G. (1994). Theoretical framework: An introduction to Vygotskian approaches to second language research. In J. P. Lantolf & G. Appel, *Vygotskian approaches to second language research* (pp. 33–56). Norwood, NJ: Ablex.
- Larsen-Freeman, D. (1997). Chaos/complexity science and second language acquisition. *Applied Linguistics*, 18(2), 141–165.
- Larsen-Freeman, D. (2002). Language acquisition and language use from a chaos/complexity theory perspective. In C. Kramsch (Ed.), *Language acquisition and language socialization: Ecological perspectives* (pp. 33–46). London, UK: Continuum.
- Larsen-Freeman, D. (2007). Reflecting on the cognitive-social debate in second language acquisition *Modern Language Journal*, 91, 773–787.
- Lee, L. (2007). Fostering second language oral communication through constructivist interaction in desktop videoconferencing. *Foreign Language Annals*, 40(4), 635–649.
- Lee, L. (2008). Focus-on-form through collaborative scaffolding in expert-to-novice online interaction. *Language Learning & Technology*, 12(3), 53–72.
- Lee, C., Turner, S., Huang, W., & Kessler, Greg. (2007). Using synchronous computer-mediated communication to teach foreign students spoken English: An

- exploratory study. In C. Crawford et al. (Eds.), *Proceedings of society for information technology and teacher education international conference* (pp. 397–404). Chesapeake, VA: AACE.
- Lemke, J. L. (2002). Language development and identity: Multiple timescales in the social ecology of learning. In C. Kramsch (Ed.), *Language acquisition and language socialization: Ecological perspectives* (pp. 68–87). London, UK: Continuum.
- Levy, M. (1997). *Computer-assisted language learning: Context and conceptualization*. New York, NY: Oxford University Press.
- Linell, P. (2009). *Rethinking language, mind, and world dialogically: Interactional and contextual theories of human sense-making*. Charlotte, NC: Information Age Publishing, INC.
- Long, M. (1985). Input and second language acquisition theory. In S. M. Gass & C. G. Madden, *Input in second language acquisition*. (pp. 377–393). Rowley, MA: Newbury House.
- Long, M. (1996). The role of the linguistic environment in second language acquisition. In R. William & B. Tej, *Handbook of second language acquisition*. (pp. 413–468). San Diego, CA: Academic Press.
- Mackey, A., Gass, S., & McDonough, K. (2000). How do learners perceive interactional feedback? *Studies in Second Language Acquisition*, 22(4), 471–497.
- Maxcy, S. J. (2002). Pragmatic threads in mixed methods research in the social sciences: The search for multiple modes of inquiry and the end of the philosophy of formalism. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in*

- social & behavioural research*. (pp. 51–90). London, UK: Sage.
- Maxwell, J. A. (2005). *Qualitative research design: An interactive approach*. (2nd ed.). London, UK: Sage.
- McLaughlin, C., & Oliver, R. (1998). Planning a telelearning environment to foster higher order thinking. *Distance Education*, 19(2), 242–264.
- Morgan, D. L. (2007). Paradigms lost and pragmatism reigned. *Journal of Mixed Methods Research*, 1(1), 48–76.
- Murday, K., Ushida, E., and Chenoweth, N. A. (2008). Learners' and teachers' perspective on language online. *Computer Assisted Language Learning*, 21(2), 125–142.
- Nakahama, Y., Tyler, A., & van Lier, L. (2001). Negotiation of meaning in conversational and information gap activities: A comparative discourse analysis. *TESOL Quarterly*, 35, 377–405.
- Nassaji, H., & Swain, M. (2000). A Vygotskian perspective on corrective feedback in L2: The effect of random versus negotiated help on the learning of English articles. *Language Awareness*, 9, 34–51.
- Newman, D. (1990). Opportunities for research on the organizational impact of school computers. *Educational Researcher*, 19(3), 8–13.
- Ohta, A. S. (2000). Rethinking interaction in SLA: developmentally appropriate assistance in the zone of proximal development and the acquisition of L2 grammar. In J. P. Lantolf, *Sociocultural theory and second language learning* (pp. 51–78). New York, NY: Oxford University Press.
- Omaggio, H. A. (2001). *Teaching language in context*. (3rd ed.). Boston, MA: Heinle &

Heinle Publishers.

- Onwuegbuzie, A. J. & Leech, N. L. (2010). Generalization practices in qualitative research: A mixed methods case study. *Quality and Quantity*, 44, 881–892.
- Ortega, L. (2010). *Understanding second language acquisition*. London, UK: Hodder Education.
- Patton, M. Q. (2008). *Utilization-focused evaluation* (4th ed.). Landon, UK: Sage.
- Patton, M. Q. (2002). *Qualitative research & evaluation methods*. Landon, UK: Sage.
- Pica, T. (1994). Research on negotiation: What does it reveal about second-language learning conditions, processes. *Language Learning*, 44(3), 493–527.
- Reeves, T. C., Herrington, J., & Oliver, R. (2002). Authentic activities and online learning. In A. Goody, J. Herrington, & M. Northcote (Eds.), *Quality conversations: Research and development in higher education: vol. 25* (pp. 562–567). Australia: HERDSA.
- Reinking, D. & Bradley, B. A. (2008). *Formative and design experiments: Approaches to language and literacy research*. New York: NY, Teachers College Press.
- Resta, P., & Laferriere, T. (2007). Technology in support of collaborative learning. *Educational Psychology Review*, 19, 65–83.
- Romiszowski, A., & Mason, R. (2004). Computer-mediated communication. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology* (pp. 397–431). New Jersey, NJ: Lawrence Erlbaum.
- Stahl, G., Koschmann, T., & Suthers, D. (2006). Computer-supported collaborative learning: An historical perspective. In R. K. Sawyer (Ed.), *Cambridge handbook of the learning sciences* (pp. 409–426). Cambridge, UK: Cambridge University

Press.

Stake, R. E. (1995). *The art of case study research*. London, UK: Sage.

Swain, M. (1985). *Communicative competence: Some roles of comprehensive input and comprehensible output in its development*. In S.M. Gass & C.G. Madden (Eds.), *Input in second language acquisition* (pp. 235–253). Rowley, MA: Newbury House.

Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. P. Lantolf, *Sociocultural theory and second language learning* (p. 97–114). New York, NY: Oxford University Press.

Swain, M. (2006). Languaging, agency and collaboration in advanced second language proficiency In H. Byrnes (Ed.), *Advanced language learning: The contribution of Halliday and Vygotsky* (pp. 95–108). London, UK: Continuum.

Swain, M. & Lapkin, S. (2001). Focus on form through collaborative dialogue: Exploring task effects. In M. Bygate, P. Skehan, & M. Swain, *Researching pedagogic tasks: Second language learning* (pp. 99–118). New York: Longman.

Sykes, J. M. (2005). Synchronous CMC and pragmatic development: Effects of oral and written chat. *CALICO Journal*, 22(3), 399–341.

Tallent-Runnels, M., Thomas, J. A., Lan, W. Y., Cooper, S., Ahen, T. C., Shaw, S. M., & Liu, X. (2006). Teaching courses online: A review of the research. *Review of Educational Research*, 76(1), 93–135.

The Design-based Research Collective. (2003). Design-based research: An emerging paradigm for educational inquiry. *American Educational Research Association*, 32(1), 5–8.

- Throne, S. (2007). Computer-mediated communication. In N. Van Deusen-Scholl & N. H. Hornberger (Eds.), *Encyclopedia of Language and Education: Volume 4: Second and Foreign Language Education* (2nd ed.) (pp. 1–12). New York, NY: Springer.
- van den Akker, J. Gravemeijer, K. McKenney, S. & Nieveen, N. (2006). Introduction to education design research. In J. van den Akker, K. Gravemeijer, S. McKenny, & N. Nieveen (Eds.), *Educational design research* (pp. 1–8). New York, NY: Taylor & Francis.
- van Lier, L. (2000). From input to affordance: Social-interactive learning from an ecological perspective. In J. P. Lantolf, *Sociocultural theory and second language learning* (pp. 245–259). New York, NY: Oxford University Press.
- van Lier, L. (2002). An ecological-semiotic perspective on language and linguistics. In C. Kramsch (Ed.), *Language acquisition and language socialization: Ecological perspectives* (pp. 140-164). London, UK: Continuum.
- van Lier, L. (2004). *The ecology and semiotics of language learning: A sociocultural perspective*. Norwell, MA: Kluwer Academic Publishers.
- van Lier, L. (2008a) Ecological-semiotic perspectives on educational linguistics, In B. Spolsky and F. M. Hult (Eds.), *The handbook of educational linguistics*. Oxford, UK: Blackwell Publishing Ltd. doi: 10.1002/9780470694138.ch42
- van Lier, L. (2008b). Ecology of language learning and sociocultural theory. In A. Creese, P. Martin & N. H. Hornberger (Eds.), *Encyclopedia of language and education: Volume 9: Ecology of Language* (2nd ed.), (pp. 53–65). New York, NY: Springer.
- Varonis, E. M. & Gass, S. M. (1985). Non-native/non-native conversation: A model for negotiation of meaning. *Applied Linguistics*, 6(1), 71-90.

- Vygotsky, L.S. (1978). *Mind in society*. Cambridge, MA: MIT Press.
- Walker, D. (2006). Toward productive design studies. In J. van den Akker, K. Gravemeijer, S. McKenny, & N. Nieveen (Eds.), *Educational design research* (pp. 9–18). New York, NY: Taylor & Francis.
- Wang, Y. (2006). Negotiation of meaning in desktop video-conferencing-supported distance language learning. *ReCALL*, 18(1), 122–146.
- Wang, S., & Reeves, T. (2007). The effects of a web-based learning environment on student motivation in a high school earth science course. *Educational Technology Research & Development*, 55(2), 169–192.
- Warschauer, M. (1997). *Computer-mediated collaborative learning: Theory and practice*. HI: Second Language Teaching and Curriculum Center.
- Warschauer, M. (2004). Technological change and the future of CALL. In S. Fotos & C. Brown (Eds.), *New perspectives on CALL for second and foreign language classrooms* (pp. 15–25). Mahwah, NJ: Lawrence Erlbaum Associates.
- Warschauer, M. & Healey, D. (1998) Computers and language: An overview. *Language Teaching*, 31, 57–71.
- White, C. (2006). Distance learning of foreign languages. *Language Teaching*, 39, 247–264.
- Woo, Y., Herrington, J., Agostinho, S., & Reeves, T. C. (2007). Implementing authentic tasks in web-based learning environment. *Educause Quarterly*, 3, 36–43.
- Young, M. F. (2004). An ecological psychology of instructional design: Learning and thinking by perceiving-acting systems. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology* (pp.169–177). Mahwah,

NJ: Lawrence Erlbaum Association.

Young, M. F., Barab, S., & Garrett, S. (2000). Agent as detector: An ecological psychology perspective on learning by perceiving-acting systems. In D. H. Jonassen & S. M. Land (Eds.), *Theoretical foundations of learning environments* (pp. 147–169). Mahwah, NJ: Erlbaum.

Zheng, D., Young, M. F., Wagner, M. M., & Brewer, B. A. (2009). Negotiation for action: English language learning in game-based virtual worlds. *Modern Language Journal*, 93, 389–511.