Studies of Japanese Elementary School Pupils' Foreign Language Development:

Integrating Multimodality into Sociocultural Theory

2021

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Abstract

This study examined Japanese elementary school pupils' foreign language development in the classroom. Close attention was paid to the ways in which various means of expression contribute to language development from a sociocultural perspective.

The first theoretical framework I refer to is the sociocultural theory (SCT), which is grounded in Lev Vygotsky's developmental psychology. The key concept in SCT is that the development of the human mind is realized in social interactions through the "mediation" of various cultural tools. Of these, Vygotsky places the greatest emphasis on the mediating nature of language; Vygotsky's (1987) distinction between "meaning" and "sense" is an important analytical concept for observing a child's mental development through language learning. In Vygotsky's view, meaning is described as "a stable zone within sense" (Mok, 2017, p. 34) with personal emotions arising from the learner's own lived experience.

Traditionally, emotions have rarely been discussed on the same footing as cognition. Rather, emotions have been afforded a more inferior and primitive role, as noted by Swain (2013). However, Vygotsky overcame this cognocentric view in a concept termed *perezhivanie*, in which he argued that emotions and cognition together mediate mental development. His notion of emotion-cognition integration is also supported by recent research by neuroscientists such as Damacio (1999) and Barrett (2018). It is often difficult for human beings to immediately put into words the things they feel or experience in life (i.e., *perezhivanie*)

(Vygotsky, 1994); it takes time for humans to truly understand a word's meaning. This is particularly applicable to young learners who are still in the process of language development and those whose classroom activities are conducted in a foreign language. Vygotsky argues that as the transition from thought to speech is heavily mediated, mediational means in the transitional process can be multifaceted. In SCT, language is the most essential, mediational means to open up the process. However, many other non-verbal means, including visual images, can also help individuals reveal their thoughts. This is the rationale for including another theoretical framework—multimodality.

Multimodality is an approach or pedagogy to realize multiliteracies (New London Group; NLG, 2000). The core of multiliteracies and multimodality learning is creatively producing "designs of meaning" (NLG, 2000, p. 19) by the learner from among the available media of representation. As Kress (2010) notes, the central feature of multimodality is to recognize the limits of language as the dominant means of human communication. As per the multimodality approach, one can represent their meaning effectively and impressively through whichever multimodal media is best suited to it.

This study integrates the theory of multimodality with SCT into van Lier's (2004) concept of ecological learning context; it updates the mechanism of the agent's mental development by the integrated theory of SCT and multimodality. In the integrated theory, foreign language learning can be recognized as transforming the *available designs* (Cope &

Kalantzis, 2000), which are distributed between the environment and the individual, into the "redesigned of the available designs" to generate a meaning of their own. In this, the *perezhivanie*, one of the *available designs*, plays a key role in progressing the learning process. This is because it is owned by the individual alone, despite the wealth of knowledge and skills that teachers may possess. This distribution of *available designs* between the individual and the environment can allow the learner to activate all their inner mental functions to describe their own *perezhivanie,* rather than only aiming to mindlessly reproduce ready-made or static grammar and meanings provided by the teacher and textbook. In this study, I used this integrated theory as a framework for the analysis and conducted the following two case studies.

Case One was conducted at a Japanese public elementary school with fifth graders. The lessons were aimed at teaching/learning the meaning of the English word "share" using a story from an English picture book. Pupils were tasked to draw pictures of something that they shared with somebody. The drawings and conversations between the pupils and their teachers were analyzed to show how they represent their meaning of "share" multimodally and how their *perezhivanie* affects meaning-making.

Case Two was conducted in a cross-curricular class in a different public elementary school—also in Japan—with sixth graders. Pupils were given the task to describe their favorite memories of their elementary school days using Henri Matisse's "Cut-Out" technique and presenting it in English. As *redesigned* objects, pupils' cut-outs, in which they

converted their visual art into language and *vice versa*, were comprehensively analyzed based on a synthesis of both manifestations to examine the artist's thoughts.

The analysis of these cases revealed that the two different modal logics can illuminate different aspects of one's mind and bring out different understandings of its development. In particular, the visual images reflected the pupils' *perezhivanie*. This enabled the teachers to diversify their interactions, including verbal dialogues, with the children. Therefore, in Case One, a child succeeded in creatively producing a new foreign word, and in Case Two, the linking of the teachers involved in the interaction led to the discovery of a new word that the pupils themselves found valuable and relevant. Thus, the interplay between language and image enabled pupils to develop their foreign language skills. This was due to the creativity of the learners being brought out by coordinating the different expressive constraints and liberations of the two logical modes and the reorganizing power of the visual image that transforms the teacher-learner relationship from a hierarchical to a collaborative one, as pointed out by Yamada (2018).

In this study, I only focused on the bimodal relationship between language and image, for which the pupils were asked to express their intentions in language in combination with images. Possible future research areas include practicing activities that combine language with other modal texts, such as speech and music, and/or practicing in groups of children from diverse linguistic and cultural backgrounds. In future research, I aim to explore

how such activities differ in representations of learners' *perezhivanie*, and open up possibilities for learners' L2 (second language) learning.

Acknowledgments

This dissertation could only have become a reality with the considerable support and help of many individuals. I would like to extend my sincere thanks to all of them.

Foremost, I would like to offer this endeavor to our God Almighty for the wisdom he has bestowed upon me and the persistence, peace of mind, and good health that allowed me to complete this research.

I would like to express my gratitude toward my co-researchers, teachers, and the pupils with whom I worked for providing the necessary information and insights regarding the research projects.

I am highly indebted to my supervisor, Professor Tatsuhiro Yoshida, for the contribution of his knowledge and expertise to this study. I am grateful for his precise academic guidance and understanding of my work throughout this project.

I would like to extend my special gratitude and thanks to my family. They have always been on my side and given me the necessary encouragement and support (with a fair dose of humor) to pursue this undertaking.

My appreciations also go to the reviewer at *Editage* (www.editage.com), whose insights have enriched and extended my ideas.

Throughout this period, I have suffered at times but have mostly enjoyed an “in-between” relationship with the individuals mentioned above. As a result, I realize that I have become a

new person. I believe that this “result” will certainly be a “tool” or springboard for my future studies and lead to the further development of my career. Thank you all. ARIGATO!

Chapter 1

The movement of people across national borders caused by economic globalization has posed new challenges in various industries and academic fields, including foreign language education. As the foreign language status of learners has become more diverse, language educators have been urged to rethink their traditional approaches to language learning and teaching for more effective communication between people. This study aimed to examine Japanese elementary school pupils' foreign language[1] development in the classroom. Close attention was paid to the ways in which various means of expression contribute to language development from a socio-cultural perspective.

As part of the 2011 language education reform by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) in Japan, "foreign language activities (FLAs)" were introduced to fifth and sixth graders in the elementary school curriculum. However, it was not acknowledged as an academic subject in the curriculum, rather an experience-based lesson taught for 35 hours per year (i.e., once per week), and did not require numerical grading or testing. Although it is called FLAs, practically only English was taught in these classes. In the 2017 revision of the elementary school curriculum guidelines by MEXT, FLAs were further introduced to third and fourth graders, and English was taught in the fifth and

[1] In Japan, the number of people who do not speak Japanese as their mother tongue has been increasing, and in the guidelines for primary education, FLAs do not only target English. However, in this study, FLA refers solely to English.

sixth grades with two lessons per week. English now being treated as an academic subject suggests that pupils learn four skills—listening, speaking, reading, and writing—that are assessed along with their attitudes toward "proactive, interactive, and authentic learning" (MEXT, 2017b, p. 6), which will be discussed later.

Rationale

What occupied my mind in the process of establishing my research theme involved a sense of frustration and discomfort with what was happening in the field of elementary school FLAs. Let me begin by describing an episode from an elementary school FLA that I observed as a parent in February 2016 (i.e., before the revision) on a school visitation day. An English class held for the sixth graders was titled, "What do you want to be?" In the main activity, the pupils had to fill in the blanks on their worksheets with their classmates' desired occupations. A friend of my son, when asked by several other students, repeated his response ("I want to be a soccer player") in a lively voice. He was very convincing; however, I was confused because both he and my son belonged to the same track and field club in which he had been working very hard. After class, I asked him why he did not say that he wanted to be a *rikujyo-senshu* (a track and field athlete). He instantly replied, "I don't know how to say *rikujyo-senshu* in English." I said, "Well, why didn't you ask your teacher?" He replied, "Noooo way (*iyayawa*), it's too much of a bother (*mendokusai*). It would also be too embarrassing (*hazukasi-si*)."

The above episode is a common occurrence in FLA classes in elementary schools. The problem with this approach is that the teacher will always have the "correct" answer, thereby locking the learners into a relationship where they are "containers [to be] filled with knowledge and skills by teachers" (Kozulin, 2003, p. 16). Pupils may seek to be "correct" in the eyes of their teachers; they are thus inevitably less likely to express themselves spontaneously and creatively. In this episode, the pupil's desire to learn a foreign word, which was likely to have been meaningful to him, did not outweigh the inconvenience and embarrassment it would entail. Therefore, he superficially managed to complete this activity by doing only what he already knew and could do. Beyond some word definitions of occupations and a sentence structure that he applied to them, what did he learn from this activity? Did he have any joy for FLAs and a desire to learn more? How can activities that do not arouse a learner's insatiable motivation lead to autonomous learning? This study explores what teachers can do to create an environment that encourages children to spontaneously learn a foreign language.

Revised Curriculum Guidelines

The 2017 curriculum guidelines were designed based on the recommendations of the Central Council for Education, which proposed the significance of not only what to learn but also how to learn. The report proposes that to improve the quality of knowledge and skills acquired by students, human nature and abilities must be cultivated to move toward deeper

learning, including the "abilities to think, make judgments, and express themselves" (MEXT, 2017b, p. 3). To achieve this, "proactive, interactive, and authentic learning" is essential. In positioning it as a goal for all subjects and domains in the revised "Courses of Study," the MEXT (2016) incorporated an analysis of the barriers to effective "active learning" (Bonwell & Eison, 1991), which was later relabeled as "proactive, interactive, and authentic learning." The report discussed the learning process starting from the motivation that directs learning (p. 126) and the components of behaviors, cognition, and emotions that support the desire to learn (p. 127). It was acknowledged that learners' own intentions are important for their increased independence to manifest themselves in action; further, it was noted that both cognitive and emotional aspects are important in supporting a learner's intention. Regarding learners' attitudes toward "proactive, interactive, and authentic learning," the national curriculum guidelines indicated that *nebarizuyosa* (persistence)[2]—in the acquisition of knowledge and skills through persistent thinking—and *jikochoseiryoku* (self-regulation)[3]—in the process of one's learning—should be assessed. The revised edition presents instructional content in line with the views and ideas that correspond with the characteristics of each subject.

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[2] Since the Japanese term *nebarizuyosa* has not been officially presented in English by MEXT, I utilize the term "persistence," which exists in the OECD's (2019) report on Future of Education and Skills 2030: OECD Learning Compass 2030, which MEXT referred to when the 2016 reports were issued.

[3] The English term "self-regulation" for *jikochoseiryoku* was presented in the OECD's (2019) report for the same reason indicated above.

This revision shows that the basic policy underlying the curriculum guidelines for school education has shifted from emphasizing the quantity of knowledge and formality to focusing on the use of knowledge and skills, starting from the development of independence in the "intentional aspects" (*ishiteki na sokumen*; author's translation; MEXT, 2016, p. 62). Behind this is a recognition of the importance of fostering "competencies for living" (MEXT, 2016) and "rich creativity" in the process of "autonomous and self-motivated learning" for the learners to "be the builders of a sustainable society" (MEXT, 2016). However, there are two major concerns in the guidelines that I challenge in this study. The first relates to how cognition and emotion support learners' intentions and actions; particularly, how emotion contributes to cognitive functioning. The second involves the role of non-verbal activities in language learning. Regarding the former, in the 2016 report, the Council noted the importance of the emotional aspect of learning; however, there is little description in the revision concerning how emotion affects cognitive behavior. For example, most of the strategies that the revised version (MEXT, 2017a) proposes involve motivating children to move toward deeper or "authentic" learning, which relates to persistence and self-regulation, such as being aware of one's goals, not giving up, staying focused, and acting spontaneously to overcome difficulties (MEXT, 2016, p. 127). There is, however, little explanation of the relationship between the role of emotions in supporting such strategies.

Concerning the latter, the guidelines note the importance of using non-verbal elements such as gestures and facial expressions when expressing one's feelings (MEXT, 2017a, p. 118). It also recommends the development of cross-curricular activities from an interdisciplinary perspective to arouse the interdisciplinary aspects of learners' interests (p. 125). The cross-curricular activities recommended in the guidelines include (as in the case of foreign languages) links with Japanese, where language is the direct object of study, and with non-linguistic subjects, such as music and arts and crafts. From these guidelines, it appears that non-verbal communication is intended as a means of compensating for the lack of language skill; in foreign language classes, there is a tendency to prioritize acquiring language knowledge and skills and expressing one's feelings in a "foreign language." The same stance can be seen in cross-curricular activities. For example, the guidelines introduce an example of the "show and tell" (MEXT, 2017a, p. 126) activity in arts and crafts, in which children verbally introduce their creations. However, the mechanism behind why and how these verbal and non-verbal activities are related to each other and arouse children's interest needs to be clarified.

From a Cognitivist to Sociocultural View in the Field of Second Language Acquisition (SLA)

A learner's desire for authentic learning cannot begin without their internal initiative. In my view, however, to date, foreign language education has been approached exclusively

from a cognitive perspective. This section will consider the theoretical foundations of Second Language[4] Acquisition (SLA) research that have been developed to explain this background. The field of SLA, which has undergone an extensive evolution since the 1950s, has primarily adopted a "linguistic-cognitive" (Ortega, 2014, p. 33) view of learners as computational systems and learning as information processing or abstract knowledge acquisition. The theoretical foundation of foreign language education in Japan has followed such a cognitivist-based framework (Yoshinaga, 2009).

As stated in the national curriculum guidelines, "communicative competence" (MEXT, 2010), deemed the goal of foreign language education throughout learners' elementary years to high school, constitutes the cognitive theory of SLA, as modeled by Canale and Swain (1980). It comprises four components; grammatical, sociolinguistic, discourse, and strategic competence. Canale and Swain were the first to explicitly propose a theoretical model of communicative competence in linguistics education, based on Hymes' (1972)[5] response to Chomsky's (1965) abstract notion of linguistic competence and performance. It was found that communication cannot be established by linguistic

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[4] The term "second language" or "L2" will be used throughout this paper to refer to any language acquired or learned beyond one's first, without distinguishing beyond second, third, foreign, etc. There is often a distinction made between "acquisition" and "learning" in the SLA literature: "acquisition" refers to the unconscious process of picking up a language through exposure, whereas "learning" refers to the conscious process of studying it (Krashen, 1982). However, I will not distinguish between these terms and use them both interchangeably.

[5] Hymes' concept of communicative competence differs from the later concept of "interactional competence" (e.g., He & Young, 1998), in which the source of competence is situated in intersubjective social relations rather than the individual.

competence alone, a notion that set the theoretical framework for subsequent SLA research. Linguistic-cognitive SLA studies are "grounded in the assumption that the basic mechanisms of acquisition are situated inside learners' heads" (Lantolf, 2011, p. 37), which is the central concept commonly been shared by mainstream cognitivists in the field. In their scientific research, they adopt the causes-and-results-based methodology to determine what particular elements (causes) lead to what products (results) of learning following certain pedagogical interventions. The results have been "cast in the shape of generalizations from a sample to a population and of accurate predictions of future occurrences" (van Lier, 2001, p. 90). SLA studies relying on linguistic cognitivism have remained mainstream; therefore, it is not surprising that the teaching methods of foreign language education are centered on the cognitive perspective.

This "cognocentric" (Atkinson, 2019, p. 726) view, however, has been criticized since around the 1990s by several socioculturalists; they believe that human actions, including language learning, are not solely attributable to individual abilities but occur in intersubjective relationships between people or with the environment. Such alternative epistemological notions of the influence of situation and relation dependency began to be discussed simultaneously, not only in the field of SLA but also in other relevant research fields, such as linguistic anthropology, sociology, and developmental psychology. Firth and Wagner (1997) cast a stone in the major cognitive SLA study field, suggesting the expansion

of research domains to include a social and contextual orientation to language and language learning. They criticized the abstracted and isolated notions of competence that have prevailed in the field of SLA studies and the reduction of the concept of context to a set of stable and monolithic independent variables. They conclude that language is "not only a cognitive phenomenon … [but] also fundamentally a social phenomenon, acquired and used interactively, in a variety of contexts for myriad practical purposes" (Firth & Wagner, 1997, p. 296). Therefore, as a challenge to the cognitive, experimental, and static perspectives that have pervaded the field, the ecological view of language and language learners or users as socioculturally situated and mediated has become prominent since the mid-1990s. This shift has been termed "the social turn" (Block, 2003). In this vein, the field is currently undergoing an "affective turn"[6] to redress the widespread lack of attention to emotion and its imbalanced relationship with cognition (Prior, 2019). With the above background, research on the role of emotions from the sociocultural perspective in relation to cognition in SLA research has just begun.

"Semiotic turn" (Luo, 2018) in Language Education

Apart from the emergence of sociocultural views in the SLA field as described above, the rapid economic globalization of the world has led to human migration, causing a

[6] Swain (2013) likened the issue on emotions to the "elephant in the room," as they have traditionally been "poorly studied, poorly understood, [and] seen as inferior to rational thought" (p. 11).

change in the field of education known as “a semiotic turn” (Luo, 2018). Scholars in mass immigration countries that draw from the linguistic and semiotic work of Michael Halliday (1978) have, in recent decades, challenged the very definition of traditional literacy, what Eco (1979) called “verbocentrism” (p. 228). They extended the means of expressing learners’ intentions and interests to multiple social semiotic forms, including visual and auditory information, rather than limiting them to language alone. The fact that it is only the performance of linguistic skills that is expected and assessed underestimates the learners’ potential for expression. In multimodality theory (Jewitt, 2009), gestures and visual images are recognized not as subordinate to language expression but means of expression with the same value as language. This fundamentally differs from the traditional view of language learning as well. In addition to traditional linguistic theories, there have been various alternative epistemology-based theories of L2 learning in response to the demands of the times.

Theoretical Framework

In this study, the development of pupils’ foreign language learning will be viewed in terms of the framework of multimodality theory integrated within the sociocultural theory (SCT), which in itself originates from Vygotsky’s developmental theory. The role of emotions in human mental development was a central concern for Vygotsky. Although Vygotsky did not complete his theory during his short lifetime, subsequent scholars have

explored his concept of emotion and begun to apply it in SLA research (see Chapter 3). The basic principle underlying SCT is that human cognitive activities do not work solely within the individual's brain but exist in relation to other mental functions, such as emotions within the biological body and social environment. The theoretical framework that integrates multimodality into SCT makes it possible to expand the tools for mediating mental development to include not only language but also other non-linguistic media.

In this study, among these means of expression, learners' language development will be examined as it relates to the use of visual images. Therefore, this study will promote a discussion viewing language learning as a socially co-constructed activity with others, created by making use of various expressive media. Returning to the example of the boy who belonged to the school track and field club, he did not necessarily have a weak "autonomous and self-motivated intention" to learn English in an authentically further. There may also not have been any problems with the teacher's instructional abilities. However, by altering the perspective of observation—that is, the framework of learning theory—new possibilities for the development of learners' abilities may arise. The theoretical foundation of this study is unique in that it integrates conceptual theory, which focuses on the role of emotion in SCT, and a multimodal pedagogy that considers language as a part of human expression.

Organization of the Paper

Chapters 2–4 discuss the theoretical construction of this study. In Chapter 2, I provide an overview of the literature on the SCT framework. Chapter 3 focuses on the role of emotion in SLA studies. I review the literature on Vygotsky's (1994) notion of *perezhivanie*, an important concept of emotional and cognitive integration, and extend it to the discussions related to word meaning/sense. Chapter 4 reviews the multimodality theory that integrates SCT, presented as the theoretical framework for this study. Further, Chapter 5 describes the methodology of multimodal discourse analysis (MMDA; Kress, 2011) to analyze the multiplicity of representational means. To examine learners' intended meaning across various learning contexts, I refer to the theoretical framework of SCT. Next, Chapters 6 and 7 discuss the practical studies of pupils. In Chapter 6, Case One discusses how fifth graders learned the meaning of the word "share." They increased their understanding of the word in an activity of drawing pictures of something they shared with somebody. In Chapter 7, Case Two examines a study conducted in a cross-curricular English class combined with arts and crafts for sixth graders at another public elementary school. Pupils were asked to describe their favorite memories in elementary school. In Chapter 8, the final chapter, I discuss the pedagogical significance of my study and make concluding remarks.

Chapter 2

SCT in SLA Studies

SCT originated from the psychological theory of human consciousness. It was proposed by L. S. Vygotsky (1896–1934) and his colleagues, who aimed to understand the process of human mental functioning in relation to various cultural, historical, and institutional settings. From the perspective of SCT, L2 development is not just about the acquisition of language for communication within the individual but also concerns their capacity for cognitive thinking, perceiving, and representing things as social events in the external world. The fundamental principle of SCT is that human mental functioning is mediated by cultural artifacts, social or interactional activities, and concepts. Developmental processes occur through participation in cultural, linguistic, and historically formed settings, such as family life, group interactions in institutional contexts such as schools or workplaces, and organized social activities. In this chapter, I review the fundamental principles of SCT, namely mediation, internalization, and zone of proximal development (ZPD).

Mediational Means

Mediation is the central concept that runs throughout Vygotsky's (1978) thinking of the development of individuals' higher psychological processes. Within SCT, the relationship between humans and the world is presupposed to be mediated rather than direct. All higher mental functions or consciousness—that is, "functions such as memory, attention, rational

thinking, emotion, and learning and development that come under the intentional and voluntary control of the person" (Lantolf & Thorne, 2006, p. 59)—are mediated by culturally constructed auxiliary means. Auxiliary or mediational means include physical and symbolic or psychological tools that comprise artifacts created by human culture(s) over time and are made available to succeeding generations. For individuals, physical tools "expand their physical abilities and thus enable them to change the conditions in which they live" (Johnson & Golombek, 2016, p. 22). Similarly, psychological tools such as "symbols, diagrams, numbers, music, art" (Lantolf & Poehner, 2014, p. 8), and "concepts and belief systems" (Swain et al., 2015, p. 2) have the power to reconstruct and transform the whole system of activity of our mental functions. In SCT, all mediational means, whether physical or psychological, are thought to be human-made artifacts. They are considered material and conceptual in that they transform human psychological functioning. Above all, Vygotsky regarded language as the most powerful human symbolic creation; this notion is at the heart of his psychological theory.

This perspective of SCT has been applied in studies of L2 learning by SLA scholars in the last few decades. One of the pioneers in this field, Lantolf (2000), along with his students and colleagues, has extended SCT to researches in L2 learning and teaching (Lantolf & Appel, 1994; Lantolf & Poehner, 2008, 2014; Lantolf & Thorne, 2006). Van Compernolle (2015) has also extensively discussed interactions based on SCT; Johnson (2009) created

second-language teacher educational modules from a sociocultural perspective; Hall (2018) provided an extensive review of interactions in L2 activity from a sociocultural perspective; Swain (2000), who proposed the output hypothesis, extended this concept to include its function as a socially constructed cognitive tool under the title "The output hypothesis and beyond"—the "beyond" here refers to a collaborative dialog that is both a cognitive and social activity; finally, Atkinson (2011) has also written extensively on SCT praxis based on a holistic, sociocognitive approach to SLA. A sociocultural approach using conversational analysis by Kasper and Wagner (2011) was also prominent in emphasizing these processes.

Unlike the reductionistic stance of the conventional theories in SLA, there is "an irreducible tension" (Wertsch, 1998, p. 25) between an individual and the mediational means from the perspective of SCT. L2 language is itself a powerful mediator; however, human mediators, such as teachers or peers, can also contribute to creating conditions for development. Further, L2 language learning involves a holistic and dynamic process of human mental development. Thus, L2 pedagogy in SCT encompasses various forms of educational activities designed to control the language that learners are studying with any form of physical and/or psychological mediation.

Internalization

What characterizes the significance of mediation and mediational tools is their involvement in processes wherein children take in knowledge and rules of the world from a

social context. This process of transformation is understood as “internalization” (Vygotsky, 1981) in SCT. Internalization allows individuals to “gain the capacity to perform complex cognitive and physical-motor functions with progressively decreasing reliance on external, and increasing reliance on internal, mediation” (Lantolf et al., 2020, p. 228) to voluntarily control and organize the aforementioned functions. In conventional SLA literature, the term “internalization” has been used as an equivalent to the term “acquisition,” as Vanpattern & Benati (2010) note in their book *Key terms in second language acquisition*. According to them, “acquisition” is “a cover term for what happens to learners to develop an implicit (unconscious) mental representation of language regardless of context and regardless of whether they explicitly practice rules or not” (p. 61; see also footnote 4). Superficially, these two terms seem to share the idea that the individual learners are expected to be in control of their L2. However, in SCT, which focuses on diverse social, historical, cultural, and political contexts where language learning occurs, internalization is not regarded as a universal process of direct transmission of stable knowledge regardless of what contexts are involved, rather as embedded in contexts or situations. As internalization was originally translated as “interiorization or in-growing” (Lantolf & Poehner, 2014, p. 44) from the Russian term “*urashchivanie*,” it is defined as “a process of reorganization of the person-environment relationship that itself emerges with person-environment relationships” (Winegar, 1997, p. 31, cited in Lantolf and Thorne, 2006, p. 154). According to Vygotsky (1981), “Any function

in a child's cultural development appears twice or on two planes. First, it appears between people as an interpsychological category, and then within the child as an intrapsychological category. This is equally true regarding voluntary attention, logical memory, the formation of concepts, and the development of volition" (p. 163). Following his idea, through various forms of mediation in interpsychological interaction (external processes), the learner will gradually perform self-control or self-regulation—a result of having internalized an assisted performance. This is ultimately characterized as development (Vygotsky, 1978). Discussing Vygotsky, Lantolf and Poehner (2014) note the following:

> He recognized that the process is transformative rather than transmissive and, therefore, in movement from interpersonal to intrapersonal communication, societal convention is imbued with personal sense in accordance with an individual's motives and goals [that are] carried out in concrete practical, or intellectual, activity. (p. 45)

Highlighting the significance of internalization, the authors note that it "is not the result of direct transmission from old to new members of a community" (p. 47); rather, mediated and transformed driven by an individual's intentional, cultural, or conceptual development in relation to their environment. The process does not only occur inside an individual's head in isolation but is viewed as something "distributed between the self and others" (p. 48; including the artifacts they have created).

Internalization brings about conceptual development, and conceptual transformation through mediation is central to SCT. This concept, as Vygotsky (1987) defines it, "is an act of generalization; [it is] not simply a collection of associative connections learned with the aid of memory [or] an automatic mental habit, but a *complex and true act of thinking* that cannot be mastered through simple memorization" (p. 169; italics in original). Vygotsky (1986) distinguished two kinds of concepts: spontaneous (everyday) and scientific (academic).[7]

Spontaneous concepts are the result of the generalization of children's everyday lives or personal experiences in the absence of systematic instruction (Karpov, 2018). In contrast, academic concepts "are the result of the generalization of the experience of humankind that is fixed in science, and they are learned by students consciously and according to a certain system" (Karpov, 2018, p. 103). Vygotsky noted that the two lines of development are opposite: "*the child's spontaneous concepts* proceeds (sic) *upward*" (Vygotsky, 1986, p. 193; italics in original) from an individual's unsystematic, empirical experience to abstractions; they are, therefore, sometimes incomplete and wrong. However, scientific concepts develop downward (p. 193) through "the intentional introduction of signs designed and introduced by an external agent, such as a tutor" (Wertsch, 2007, p. 185).

[7] Although Vygotsky (1986) uses the terms "spontaneous and every day" and "scientific and academic" interchangeably in his writings, I consistently use the terms "spontaneous" and "academic" throughout this thesis to refer to the two different types of concepts.

To explain Vygotsky's theory of concept development or concept transformation, Karpov (2018) offers an example of the concept of a bird: preschoolers do not characterize penguins as birds; however, they do characterize bats as birds because they develop an idea from their everyday experience that the ability to fly is the defining characteristic of a bird. However, after they learn the systematic classification of animal species in a science class, they can distinguish penguins as birds (although they cannot fly) and bats as mammals (although they have wings to fly) based on scientific knowledge. This example illustrates that children develop their spontaneous concept of birds and non-birds based on their observations; however, the concept of "bird" (and "mammals" simultaneously) is later reconceptualized when they gain additional knowledge.

Concerning the process of conceptual development in children, Vygotsky (1986) illustrates the opposite vector direction between spontaneous and scientific concepts by using the example of learning a foreign language. For him, learning a foreign language is a "downward" process that develops using semantics as the academic concepts that are already developed in the native language; this is contrasted with an "upward" process derived from spontaneous concepts whose foundation is rich life experience: "In spite of all these differences, the acquisition of the foreign and the native languages belongs to one general class of the processes of speech development" (Vygotsky, 1986, p. 159). He argues that a

child's understanding of their native language is "enhanced by learning a foreign one" (p. 160) when two different concepts are integrated into a general process.

Thus, Vygotsky (1986) did not privilege academic concepts over spontaneous concepts since he argued that neither is sufficient for a child to become fully self-regulated. Instead, he argued that the goal of concept development is for academic concepts and spontaneous concepts to become united into "true concepts" (p. 149). Indeed, he notes that "the strong and weak aspects of scientific and spontaneous concepts are different—the strong side of one indicates the weak side of the other, and *vice versa*" (p. 158). Therefore, spontaneous concepts, which are scientifically wrong (i.e., weak) but strongly engaged with one's immediate and everyday emotional experiences, can at times open up a developmental process of conceptual transformation through mediation. The most important process is to have these two dichotomous aspects of concepts engaged with each other so that academic concepts "restructure and raise spontaneous concepts to a higher level" (Vygotsky, 1987, p. 220) into true concepts. Thus, in Vygotsky's notion of concept development, the child needs to intertwine both spontaneous and academic concepts as a single process to achieve the status of true concepts; that is, they are in a dialectic relationship in the process of internalization. The procedure involves internalizing the system of psychological operations through interpersonal connections between individuals.

Concerning preschoolers' concept of "bird," as discussed previously, the child confronts contradictory problems that cannot be solved using their spontaneous concepts from observation. The same applies to learning a foreign language; the different concepts of one's mother tongue and foreign language are in a conflicting relationship while they become a single process. To solve such a problem, children need to go through the complex undertaking of learning the systematic classification of animal species so that they can distinguish penguins as birds and bats as mammals based on scientific knowledge. The child is internally engaged with the reconciliation process of upward and downward vectors between two concepts, thereby taking in their social resources or any form of mediational means to become fully self-regulated. In doing so, the child establishes a unique social relation with other mediational or supportive members. This is what Vygotsky (1978) calls the ZPD—another compelling concept among his theories for understanding the uniqueness of human psychological activity.

ZPD

Vygotsky (1978) distinguished between learning and development. He considered learning to be a necessary and universal aspect of the process of developing human psychological functions: "learning awakens a variety of internal developmental processes that can operate only when the child is interacting with people in his environment and in cooperation with his peers" (p. 90). However, for him, learning is not synonymous with

development; rather, “the developmental process lags behind the learning process” (p. 90). To help explain the way this social learning occurred, Vygotsky (1978) developed his concept of ZPD.[8]

ZPD is concerned with the notion of assisted performance; that is, “successful educational practices [are] to be ones in which a more capable “other” guides someone less capable through a learning process in which the interaction between the more and less capable is of utmost importance” (Holzman, 2018a, p. 42). The difference between what the less capable can do “alone” and with help is what Vygotsky called the ZPD: “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” (Vygotsky, 1978, p. 86). The concept of ZPD has typically been discussed concerning the educational role of parents and teachers and the potential for learners’ educational progress. Therefore, the implications of the concept’s implications were likely to be limited to pedagogical treatments in the classroom, such as Vygotsky’s (1978) scaffolding of the teacher. However, Minagawa (2014) asserts

[8] Some argue that ZPD is similar to Krashen’s (1982) notion of $i + 1$ in the field of SLA. However, Lantolf et al. (2020) asserted that this assumption is inaccurate. According to Lantolf and colleagues (p. 232), Krashen’s model is assumed to be the same for all learners with very little room for differential development. For them, there is no way of determining precisely the $i + 1$ of any given learner in advance of development, whereas “the ZPD focuses on the nature of the concrete dialogic relationship between expert and novice” (p. 232). Therefore, development in the ZPD is not just “a function of shifts in the learner’s linguistic performance, as in the case of Krashen’s model, but is also determined by the type of, and changes in, mediation negotiated between expert and novice” (p. 232). Thus, ZPD deals with the learner’s development in a more holistic and dynamic manner.

that “it is not enough to understand the concept by reducing to the aspects of educational efforts” (p. 139); thus, the concept can be applied to many other interactional situations that are more or less capable.

Expanding the range of this concept, Holzman (2018a) interprets it in a revolutionary way. She notes that Vygotsky proposed a new kind of relationship between development and learning/instruction—in Russian, there is one word for both, namely *obchenie*. Vygotsky (1986) argued that optimal instruction “marches ahead of development and leads it,” focusing on “ripening” mental processes (p. 188). Holzman notes that learning and instruction, which are inseparable, are a source of development (i.e., qualitative transformation). Indeed, Vygotsky (1987) writes, “Instruction would be completely unnecessary if it merely utilized what had already matured in the development process, if it were not itself a source of development” (p. 212). In short, learning and instruction “lead” development: “The only instruction which is useful in childhood is that which moves ahead of development, that which leads it” (p. 211), “pushing it further and eliciting new formations” (p. 198). Further, it is noted that “Learning awakens a variety of internal developmental processes that can operate only when the child is interacting with people in his environment and in cooperation with his peers” (Vygotsky, 1978, p. 90). Thus, for Holzman (2018a), ZPD, which is actively and socially created, is a sociocultural activity of people creating the “zone” (the learning-leading-development environment) as well as what is created (learning-leading-development;

p. 45). More precisely, the ZPD is not to be understood as a "zone" in the sense of "place" but rather as a "creative, improvisational activity" (Newman & Holzman, 1993).

Newman and Holzman (1993) make the revolutionary claim that the development that emerges from the "zone" is not only the result of learning but, simultaneously, also a tool for forthcoming development. Development that arises from learning is, concurrently, a mediational tool for further development. In this way, development can be considered both a mediational tool and result; in other words, development is continually renewed by a never-ending succession of results or tools. Holzman (2018b) called this the "tool-and-result methodology" (p. 38). Holzman, who follows Vygotsky's (1978) notion of development, argues that the tool, which can also be the result (not for the result), should be understood as "an activity" (a "search") that generates both the tool and result concurrently and is a continuous process (i.e., not applied). For them, "[t]hey're elements of a dialectical unity/totality/whole" (Holzman, 2018b, p. 38). Thus, the tool (learning) and the result (development) are continuous or everlasting processes that promote the child's mental development in the ZPD. This leads to a crucial question: how are the ZPDs created? I will note the four concepts that move ahead of developments: "non-knowing growing" (Holzman, 2018a), play, imitation, and completion.

Non-knowing Growing (ZPD Before Knowing)

According to an insightful interpretation by Holzman (2018a), ZPDs can be created even if the more and less capable are not aware of having created them. Vygotsky (1987) recognized "the child's potential to move from what he is able to do to what he is not" (p. 212) as the "mundane and magical characteristic and creative activity of human life" (Holzman, 2018a, p. 45). Holzman (2018a) touched upon how caregivers and relatives carry on conversations or communication with children, including infants and babies, before they know how to talk or even listen to the sounds they make. They are not premised on being the "knowers" to create the ZPD. ZPDs can be created between caregivers and caretakers (i.e., their children) before the latter can self-regulate their speaking and listening activities.

Play

According to Vygotsky (1997), play[9] is not an "accidental whim, a pastime, but an important vital necessity, because it entails movements that are linked to future activity" (p. 88). He notes, "In play, a child always behaves beyond his average age, above his daily behavior; in play it is as though he were a head taller than himself" (Vygotsky, 1978, p. 102). Why is that? Holtzman (2018a) notes the importance of the contradictory characteristics entailed in the activity of playing: "What makes play developmental is the interplay of imagination and rules. Imagination frees us; rules constrain us. Creating an imaginary

[9] In Russian, the words "play" and "game" are the same. (Lantolf, 2003, p. 355)

situation frees the players from situational constraints and, at the same time, imposes constraints (rules) of its own" (p. 46). The creation of voluntary intentions and the formation of real-life plans and volitional motives appear in play and make it the higher level of one's mental development. This is because play provides a much wider gamut for changes in one's needs and consciousness. Vygotsky (1978) demonstrates that voluntary intentions and motives are formed in the process of accommodating the conflicts that "stem from an imaginary situation" (p. 95). Vygotsky (1997) argues that play and work are not "polar opposites" but, in fact, "possess the same psychological nature. This underscores the fact that games are the natural form of work in children, a form of [a learning-leading development] activity that is inherent to the child, as preparation for his life in the future" (p. 93).

Imitation

Chaiklin (2003) notes that Vygotsky's technical concept of imitation is crucial to understanding his explanation for the existence of the ZPD since "a person's ability to imitate, as conceived by Vygotsky, is the basis for a subjective zone of proximal development. The objective zone exists through the social situation of development" (p. 51). Imitation is not "a mindless copying of actions" (Vygotsky, 1997, p. 95; 1998, p. 202) but refers to all kinds of activities "that the child cannot do independently, but which he can be taught or which he can do with direction or cooperation or with the help of leading questions" (Vygotsky, 1998, p. 202). Children's imitation games require self-directed motivation and

creativity. For Vygotsky (1987), “development based on collaboration and imitation is the source of all specifically human characteristics of consciousness that develop in a child” (p. 210). In short, imitation becomes possible when the child, whose independent performance is inadequate, can use the collaborative actions and accompany their intellectual actions with their mental functions, that is, intentions and motives in the ZPD.

What play and imitation have in common is that they are both closely related to one’s cognitive functions, such as voluntary intentions, volitional motives, and creativity. “Imitation” provides an essential mediating act for development, and “play” creates an imaginary situation or environment for development. The relationship between “imitation” in “play” and “development” depends on the activation of the individual’s intentions, motives, and creativity, and *vice versa*. The key to this is the conflicts that arise between the “liberation” by one’s imagination and the “suppression” by rules, which are characteristic of “play.” Voluntary intentions, volitional motives, and creativity are the indispensable driving forces for confronting and reconciling the psychological conflicts that arise in “play.”

Completion

Another notion compatible with imitation is that of “completion.” Vygotsky’s theory explains the relationship between thinking and speaking as follows:

> The structure of speech is not simply a mirror image of the structure of thought. It cannot, therefore, be placed on thoughts such as clothes off a rack. Speech does not

> merely serve as an expression of developed thought. The thought is restructured as it is transformed into speech. It is not expressed but is completed in the word. (Vygotsky, 1987, p. 251)

Concerning the creation of the ZPD, which is co-constructed between the more and the less capable other, Holzman (2018a) notes that "the 'completer' does not have to be the one who is doing the thinking if the process is continuously creative in sociocultural space" (p. 49):

> Child: "Coo-coo!"
> Adult: "Want a cookie?"
> Child: "Mama."
> Adult: "Yes, Mommy's giving you a cookie."
> Child: "Mama cookie."

Holzman (2018a) understands this dialog as follows: "[t]he baby's babbling (rudimentary speech) is a creative imitation of the adult's speech" (p. 49). In this case, the baby's line of thought is completed by the adult's speech; although the baby's speech was immature, their intention was successfully shared in this joint activity. In other words, the baby's goal was accomplished with intentional assistance from an adult. Importantly, what should be understood by "accomplishment" is that the solid relationship (i.e., secure attachment) between the baby and the adult has already been established. The adult could not have completed the baby's line of thought without her conscious intention to relate to the baby, in addition to the ability to "read" and complete the baby's thinking in words.

Therefore, ZPD plays an essential role in the transformation from learning to development by providing opportunities for interaction. As Vygotsky (1987) emphasizes, "[a] true and full understanding of another's thought is possible only when we understand its affective-volitional basis" (p. 252). In Vygotsky's theory, the cognitive development of an individual cannot be discussed without considering the function of emotion, which is inseparably related to one's intentions or volitionality.

Summary

To sum up the basic principles of SCT, human action is always mediated by physical and/or psychological tools because such mediational means are inserted as a link between human activity and the environment. Vygotsky (1987) employed an analogy from chemistry by referring to the relationship between water and its elements of oxygen and hydrogen to rationalize why human action needs to be examined with the mediational means in relation to the environment; in this analogy, one will never succeed in explaining the characteristics of the whole (water) by analyzing the characteristics of its elements (hydrogen, which burns, and oxygen, which sustains combustion; p. 45). Applying this analogy to the relationship between the individual and the mediational means, Wertsch (1998) suggests that the notion of an agent must be redefined. Instead of assuming that an agent, considered in isolation, is responsible for action, the appropriate designation of the agent may be something like an

"individual operating with mediational means," referred to as "mediated agency" (Wertsch et al., 1993, p. 342).

Overall development begins with external/social activities and ends with internal/individual activities in the ZPD. Learning awakens various internal developmental processes that can operate only when the child is interacting with people in their environment and in cooperation with their peers. The mechanism of learning leading into development is expressed well in Vygotsky's (1997) botanical metaphor: "learning" refers to the "bud" (potential development) rather than the "fruit" of development. What is important for him is the "buds" that have the potential to become the "fruits" and "flowers" of development in the future. The ZPD is premised on the view that development has both social and psychological dimensions. The social dimension is where the "buds" of learning grow; when the functions acquired through assistance become autonomous, they develop into "flowers."

Vygotsky's theoretical discovery of the unit of human activity is meaningful in understanding the process of development. This is the core concept of SCT. However, in the last few years of his life, when Vygotsky (1987) tried to elaborate the process of development with language as the most essential mediational means in his thinking and speech, he shifted his focus to analyzing the structure of consciousness as a dynamic semantic system that includes emotional dimensions related to cognition. Although Vygotsky could not fully theorize the function of emotion in development during his life, later scholars discovered that

emotions are the driving force behind the activation of the mental system. Accordingly, in SCT oriented SLA, there is an intimate association between thinking and emotion in SCT. This has contributed to providing an alternative perspective needed to re-examine the roles and meanings of the emotional dimension in the process of L2 learning.

Chapter 3

Role of Emotions from a Sociocultural Perspective in SLA Studies

Throughout his short life, Vygotsky continued to explore the role of emotions[10] in human psychological development. In this chapter, I discuss the process of human mental development in relation to words as mediational means, focusing on his concept of *perezhivanie* (Vygotsky, 1994) and its relation to word meaning/sense. *Perezhivanie* is a complex and dynamic concept that not only shapes learning but also provides evidence of development that occurs as a result of learning. To study *perezhivanie*, it is vital to consider the learner or the environment "[not] as independent entities that have an external relation to each other, but as intrinsically related, requiring both to be considered together as a [dialectic] unity" (Veresov & Mok, 2018, p. 96). As the way in which an individual interprets their emotions may have different developmental outcomes (even within the same learning social situation), it is important to investigate L2 learning from the emic perspective of the learner.

The Role of Emotions and Cognition

Traditionally, scientists have tried to understand emotions solely on a physiological basis. Many authors have perceived emotions as an "isolated mind" (Brothers, 1997) that is

[10] In this study, I interchangeably use the terms "emotion" and "affect" alongside intellect and cognition.

not directly related to thought. Swain (2013) states that the separation or conflict between cognition and emotion has been forcefully developed from the time of Descartes to the present day (p. 197). This dichotomous view can be traced back to Solomon's statement in Swain's article: "The view placed emotions in an inferior role," describing them as "more primitive, less intelligent, more bestial, and more dangerous than reason" (Solomon, 1993, p. 3 cited in Swain, 2013, p. 197). This is despite modern neurobiological research that shows the guiding role of emotional processes in cognition, as asserted by Damasio[11] (1999) and Barrett[12] (2018), for example.

In the field of SLA, L2 literature covers various affective factors[13], such as motivation and language anxiety. Language practitioners have proposed various humanistic and affect-

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[11] According to Antonio Damasio, somatic markers are emotional reactions with a strong somatic component that support decision making; emotions are, however, not a substitute for reason (the somatic-marker hypothesis; Damasio, 1999). Damasio views "emotion as an embodiment of the logic of survival" (p. 29): "It certainly does not seem true that reason stands to gain from operating without the leverage of emotion. On the contrary, emotion assists reasoning, especially when it comes to personal and social matters involving risk and conflict" (p. 29). Therefore, Damasio's neuroscientific study suggests that emotion is not at the opposite end of the spectrum from reason; reason is not entirely independent from emotion as it was once believed. Instead, the two are dependent on each other as a whole. Individuals cannot make rational decisions unless emotions ("a support system") are "well-targeted and well-deployed" (p. 29).

[12] Neuroscientist Lisa Feldman Barrett (2018) also focuses on the study of emotion, particularly "the theory of constructed emotions." According to her research, emotions do not just happen to us, as the classical view assumes, but our brains construct emotions from our sensory input and past experiences: "From sensory input and past experience, your brain constructs meaning and prescribes action" (p. 31). She claims that one's brain makes predictions at a microscopic scale as millions of neurons talk to one another. In the process of prediction, "[y]our brain uses your past experience to construct a hypothesis—the simulation—and compares it to the cacophony arriving from your senses. Your brain predicts which objects and events will impact your body budget, changing your affect" (p. 27). One's experience is the source of affective realism. Barrett's theory of constructed emotions echoes strongly with Vygotsky's concept of *perezhivanie.*

[13] Imai (2010) reviews prior studies concerning the factors that affect L2 learning.

sensitive language teaching approaches such as suggestopedia (Lozanov, 1978), silent way (Gattegno, 1972), and community language learning (Curran, 1976). However, affective factors have long been understood as a matter of individual differences, variables, and personal traits in the field of SLA. These individual differences have typically been treated as cognitive rather than affective (Prior, 2019). To redress this situation, in recent decades, sociocultural scholars in the field have suggested theories that acknowledge the central role of emotions as they relate to an individual's cognitive system. Among others, Vygotskyan researchers, who will be introduced later, have developed SLA studies based on Vygotsky's (1994) original concept of *perezhivanie*[14], insisting that the concept mediates the process of cognitive *and* affective development, which eventually mediates L2 language development.

Unlike the traditional cognocentric theory, socioculturalists' understanding of SLA, which considers cognition and emotion as a unity, leads to different findings. Swain changed her epistemological view by expanding the focus of analysis from the cognocentric foundation of the individual to the sociocultural foundation of collaboration with others. She developed her sociocultural view in the extension of her output hypothesis (Swain, 1985), which she proposed in opposition to Krashen's input hypothesis. In her studies (Swain, 1995, 2005), she interpreted a short identical dialog between two young learners of L2 French through four different analytical frameworks: the first lens is through a cognitive perspective,

[14] The concept of *perezhivanie* was first introduced to the field by Mahn and John-Steiner in 2002.

that of the output hypothesis; while the other lenses are through a sociocultural perspective, specifically a Vygotskian SCT of mind perspective (Swain, 2000, Swain et al., 2015), including an emotional lens. Therefore, she obtained another epistemological view of interaction: what she determined is that the two learners' dialog "did not lead to language learning: it CONSTITUTED language learning in progress" (Swain, 2013, p. 200, emphasis original).

Swain et al. (2015) reported studies of L2 learning grounded on the key concepts of SCT as analytical tools. In their book, *Sociocultural theory in second language education: An introduction through narratives*, Swain et al. demonstrate that emotions exert a complex impact on learners' motivation in L2 learning from a particular case study of a 50-year-old woman named Grace. With Greek as her native language, she immigrated to Canada as a child. Grace felt greatly "humiliated" when, at eight years old, she was laughed at in the classroom for expressively saying "*aggouri*," the Greek word for "cucumber." Further, when she enrolled in a graduate program in her mid-40s, she became aware of the gaps in her knowledge of academic English in particular. She was embarrassed by her writing skills. However, she pushed herself to learn new words that she had missed in class. In this case, Swain argues that the function of emotion is not as simple as Krashen's emotional filter theory, and, like Grace, "experiencing negative emotions does not always switch learning off, and sometimes it [even] pushes one to work harder" (p. 82).

Observing the process at the microlevel—what Vygotsky called the microgenesis of learning an aspect of L2—should give us multiple perspectives on focusing on learning/teaching language, thereby enriching the previous interpretation of learners' performance. As Swain (2013) showed from her data, "the relationship between cognition and emotion is, minimally, interdependent; maximally, they are inseparable/integrated" (p. 196).

Scholars other than Swain have also focused on the role of emotions as the theoretical foundation of their SLA research. Benesch (2012, 2017) explored pedagogical situations that may provoke language teachers' emotions, particularly those that are unfavorable or inequitable. To conceptualize her critical perspective, she noted that emotions have historically been considered impediments to rational thought. Concerning teacher education, Johnson and Worden (2014) identified and analyzed the cognitive/affective dissonance experienced by a teacher-learner in L2 teaching and learning experiences, focusing on the transformation of her *perezhivanie* mediated by interactions with her teacher educator. Golombek and Doran (2014) also conducted content and discourse analyses of a novice language teacher's journals; they demonstrated that pervasive emotional content, reflecting the individual teachers' *perezhivanie,* is a motivated, structural component of teachers' processes of cognitive development. Of the studies that have focused on *perezhivanie*, few have been conducted with young learners instead of adults. Veresov and Mok (2018) and

Lantolf and Swain (2020), both leading researchers on *perezhivanie* in the SLA field, refer to Cross (2012) for a study with children. He conceptualized the cathartic process, which is the transformative potential of emotion, and rethought the qualitative nature of pedagogy to facilitate young learners' learning and subsequent development. Specifically, he analyzed videotaped classes of fourth graders in a content- and language-integrated geography program in Australia, which was taught in Japanese.

The above is a review of the trend in SLA research from a time when it was traditionally cognocentric to an increasing focus on the role of emotions. In the following sections, I will argue how cognition and emotion have been recognized as a unity and its relation to word meaning/sense.

Perezhivanie

The term "*perezhivanie"* has been mentioned several times already, but I should clarify its exact meaning again here. *Perezhivanie* is a vital concept that explains the mechanism underlying the dynamic interconnection between cognition and emotion that organizes human socio-cognitive activity. Vygotsky placed special emphasis on the role of emotions in various facets of human socio-cognitive activities throughout his life. González Rey (2016) states that the concept of *perezhivanie* is closely associated with Vygotsky's idea that psychical functions in creative performances always embody the "indivisible unity of intellect and affect" (p. 306). His integration of emotion and cognition was already discussed

in his early work, *The Psychology of Art* (1971), which he presented as his doctoral thesis. In the last few years of his life, he elaborated on the essential role of emotions in the process of constituting cognitive development in his last work, the well-known *Thought and Language* (1986). However, he did not thoroughly explicate the relationship between the two during his lifetime. Therefore, we can only infer the significance of *perezhivanie* by carefully investigating the works of successive Vygotskian scholars

The word *perezhivanie* is difficult to translate into English, although it is a common Russian word[15]. Difficulties in translating it into English and the different theoretical paradigms of its concept have led to various interpretations (Verosov & Mok, 2018). Some scholars interpret *perezhivanie* as emphasizing emotion, that is, "emotional experience" (in "The Problem of the Environment," Vygotsky, 1994), "intensely-emotional lived-through experience" (p. 164; in "Vygotsky and Creativity," Ferholt, 2010), and "lived emotional experience" (p. 8; in "Vygotsky and Creativity," John-Steiner et al., 2010). Some others interpret this as an emphasis on cognition. Leontiev, for example, understood *perezhivanie* as being determined by the child's "degree of comprehension of the environment and on the significance it has for him [or her]" (Leontiev, 2005, p. 17). Extracting a common denominator from the various interpretations mentioned above, *perezhivanie* is typically

[15] According to Robbins (2007, December 1), the word is derived from the everyday Russian verb "*perezhivat*," which means "to be able to survive after some disaster has overwhelmed you." It has two stems: "*pere*" ("to carry something over something, letting something pass beneath and overleaping it) and "*zhivat*" ("to live").

translated as “emotional experience” or “lived emotional experience”; what was important for Vygotsky is that *perezhivanie* is not equivalent to emotions *per se* in isolation but refers to emotions that arise in the individual’s mind as a result of experiencing a particular situation. Vygotsky (1998) called the environment or a given situation for the development of a specific individual within *perezhivanie* the “social situation of development” (p. 198; SSD, hereafter). Additionally, Lantolf and Swain (2020) note that the SSD is “itself a dialectic process in which the environment shapes the individual, but at the same time that individual brings particular features of his or her psychology to the environment that in return shapes the social environment” (p. 85).

In fact, Vygotsky (1994) developed the notion of the emotion-cognition dialectic in relation to the SSD by investigating a particular case of an alcoholic and an abusive mother and her three children. The siblings’ mental reactions completely differed even though they had been caused by the same situation. Vygotsky witnessed that the eldest child was not overwhelmed by the emotional responses caused by the mother because he could understand the situation, including his own and his younger brothers’ emotions. In this case, Vygotsky (1994) concluded that what matters is “how a child becomes aware of, interprets, [and] emotionally relates to a certain event” (p. 341). For Vygotsky (1998), the mental activity of developing an intellectual orientation is to understand “the logic of feelings” (p. 291), that is,

the reasons behind emotions, which refers to a "generalization of *perezhivanie* or affective generalization" (p. 291).

I define *perezhivanie* as a state of mind in which the individual interprets their SSD. For Vygotsky, *perezhivanie* represents the "full vitality of life" (1987, p. 50), which binds all personal characteristics and environmental characteristics together. It functions to "determine the role and influence of the environment on the development of… the child's character, his psychological development" (Vygotsky, 1994, p. 341) like his analogy to "a prism" (p. 341). A prism is a medium that refracts light waves. Following his analogy, a state of mind refracts and is refracted by the SSD or the environment, which is "a source of development" (Vygotsky, 1994, p. 351). Earlier in Chapter 2, I mentioned that Wertsch and his colleagues defined an "individual operating with mediational means" as the fact that people's actions are always mediated. Considering the principle of *perezhivanie*, which links all the characteristics of the personal and the environmental and orients one's actions, their notion can be more precisely defined as an individual operating with mediational means driven by *perezhivanie.*

***Perezhivanie* in Relation to Word Meaning/Sense**

Perezhivanie is activated and simultaneously activates human psychological activity in mind through interaction in words. Crucially, individual *perezhivanie* appears in words. In fact, during the same period that Vygotsky was working on the concept of *perezhivanie,* he

also developed the idea of the relation between word meaning and word sense. For Vygotsky, "language is located on the border between an individual and society, between the internal world of a person and reality"[16] (Zavershneva, 2014, p. 68). Indeed, language mediates humans to "voluntarily organize and control (i.e., mediate)" (Lantolf & Thorne, 2006, p. 62). Vygotsky (1987) made a distinction between "meaning" (*znachenie*) and "sense" (*smyzl*). The former refers to static and stable meanings used in a speech community, which comprises a group of people sharing a set of linguistic norms and expectations regarding the use of language. The latter refers to the meaning that people construct as they interact with themselves in actual goal-directed communicative activities. According to Vygotsky (1987), word meaning is described as a stable zone within sense, "the aggregate of all the psychological facts that arise in our consciousness as a result of the word" (pp. 275–276). Sense is understood as "a dynamic, fluid, and complex formation which has several zones that vary in their stability" (p. 276).

We can illustrate the distinction between word meaning and word sense by examining Zavershneva's (2014) example of a dog. The word meaning of "dog" is explained as "a common four-legged animal, especially any of the many varieties kept by humans as companions for hunting, working, guarding, etc." (Longman Dictionary of English Language

[16] Vygotsky's notion of internalizing a word through two planes—once interpersonally then intrapersonally—echoes that of Bakhtin's (1981) statement: "the word in language is half someone else's" (p. 345). It becomes "one's own" only when the speaker populates it with their own intention, that is, their own semantic and expressive intention. Prior to this moment of appropriation, the word does not exist in neutral and impersonal language (pp. 293–294).

and Culture, 1992). In contrast, the sense of the word "dog" varies depending on the individual: for a toddler, it sometimes refers to something that is "soft" (its fur) or "wet" (its nose). For a preschooler, it might include specific characteristics like "something that barks loudly" or "something that can bite." For a dog owner who is not enthusiastic about waking up early or having to leave home on a cold weekend morning to go on a walk, his pet might be a "burden." Thus, "[t]he characteristics of a word reflect different personal perspectives to 'see' a dog depending on its visual and perceptual features or the animal's functional characteristics" (Zavershneva, 2014, p. 78). As Vygotsky (1987) remarks, "in different contexts, a word's sense changes" (p. 276).

The important point to note here is that word meaning is not subordinate to word sense; nevertheless, "in inner speech—highly abbreviated, non-verbalized, self-directed speech—sense predominates over meaning" (Mok, 2017, p. 34). Instead, "both sense and meaning should be understood as parts of word meaning, which together with inner speech, are all situated on the plane of 'verbal thought'" (p. 34), that is, thought mediated by language. Thus, word meaning and sense should be considered as another dialectic unit as a whole with word meaning "existing on the plane of verbal thought" (p. 34) and word sense representing "the deeper and broader planes of thought or consciousness" (p. 34). Further, Mok notes, "Though sense draws its 'psychological facts' from beyond word meaning in consciousness, it is nonetheless 'constrained' within word meaning" (p. 34).

This relates to what Zavershneva (2014) defines as word meaning: “the meeting place of all psychological processes” (p. 77). The relationship between meaning and sense overlaps with that between scientific and spontaneous concepts in the process of human concept formation. Vygotsky did not privilege academic concepts over spontaneous concepts. Similarly, if this notion is applied to the relationship between word meaning and word sense, it must be united into word meaning as a scientific concept through word sense to understand a word as a “true concept.” Accordingly, one is required to overcome the conflict between word meaning and sense, which exist in a dialectic relation. Zavershneva (2014) conceptualizes the process of articulating one’s thought in stable words, that is, the process of coming to an understanding of word meaning as a true concept in three stages, as per the research of Vygotsky and colleagues (1932–1934): syncretism, complex thinking, and conceptual thinking. For Zavershneva, one goes through the process from a syncretic state in which individual thinking is a chaotic and diffuse whole, leading to the stage of conceptual thinking and thus complex thinking.

Here, I present an example of a conceptualizing process by borrowing from Barrett’s (2018) episode of the word *gazellig. Gazellig* is a Dutch word, and according to Barrett, no single word in English accurately conveys its experience. As a native English speaker, she did not automatically comprehend the meaning of the word when she first heard it from her Dutch friend in Belgium; the meaning of this foreign word appeared in the state of the

syncrete, which was incomprehensible to her. However, her friend explained that the word refers to a combination of multiple emotions such as comfort, coziness, and the feeling of togetherness when at home with friends and loved ones. Curled up in her friend's living room, sharing wine and chocolates, she said she "immediately experienced it" by automatically employing her own concepts of "close friend," "love," and "delight," with a touch of "comfort" and "well-being" (p. 105). Her mental activity of making sense of the unknown word meaning of *gazellig* with the mediation of relevant spontaneous or everyday concepts from her life experience involves the second stage of complex thinking. During this stage, she intellectually related to her own concrete, factual, and apparent concepts in her practical life experience mediated by an interaction with her friend.

Seen from Vygotsky's view, the interaction with her friend allowed her to activate her *perezhivanie* to facilitate the rationalization of the word meaning of *gazellig*. Further, her intellectual process was facilitated by a conceptual understanding evoked by her spontaneous concept from her emotional experience since cognition and emotion work as a unity. However, as shown in this example, it is *perezhivanie* that mediates the following stages in collaboration with cognition. Consequently, the unknown foreign word *gazellig* has become a meaningful tool that should function to deepen their friendship. Therefore, through complex thinking, she has gained a "true concept." Barrett was able to relate to her own concepts concerning the word sense of *gazellig* "in [her] American way of experiencing [it]" (p. 105).

As described above, *perezhivanie* activates the personal sense that one feels through the word and helps one to conceptualize its abstract meaning. This is used as a tool to encounter the world and realize higher mental development.

Summary

In this chapter, I demonstrated the integral role of emotions in L2 development. As Swain (2013) argued, SLA literature has overlooked the key role of emotional aspects of interactions and experiences in L2 learning. This is despite modern neurobiological research that shows the guiding role of emotional processes in cognition, as asserted by Damasio (1999) and Barrett (2018), for example. Further, Vygotsky developed his foundational concepts of sign, mediation, and internalization with the concept of ZPD. These concepts have formed the basis of the sociocultural approach to SLA. In the last few years of his life, however, Vygotsky shifted his focus to analyzing the structure of the mental system as a dynamic semantic system that includes emotional dimensions related to cognition. Vygotsky's concept of *perezhivanie*, "a [holistic] unit of personality and environment as it is represented in development" (Vygotsky, 1998, p. 294), is thought of like "a prism" (Vygotsky, 1994, p. 341). Thus, the concept of *perezhivanie* has allowed SCT researchers to examine the reflexive relationship between L2 learning in a holistic manner. However, except for a few studies, scant empirical research has been reported in the field, particularly with young learners.

For research on *perezhivanie* in L2 studies, it is crucial to elicit learners' emotions in response to their experiences or environments. However, it is very difficult for the learner to provide an emic view for analysis because "a research subject is only able to convey aspects of experience of which they are cognitively aware; they may not yet fully understand a particular affective experience" (Verocev & Mok, 2018, p. 96). In fact, human thinking is predominantly syncretic or chaotic in the beginning, and articulation or expression is "restricted by the limits of language and the linguistic ability of the subject" (p. 96), particularly at this early stage. As Vygotsky argues, the transition from thought to speech is heavily mediated; hence, mediational means in the transitional process can be multifaceted. In SCT, language is the most essential mediational means for opening up this process. However, many other non-verbal means, such as audio and/or visual images, gestures, and music, should also help individuals reveal their thoughts. This is the rationale for including another theoretical framework of multimodality, which is discussed next.

Chapter 4

SCT from a Multimodal Perspective

Thus far, I have argued that L2 learning is mediated by various physical and/or psychological tools in the co-construction process of the interactional learning arena, conceptualized as ZPD by Vygotsky (Chapter 2), and the whole system is essentially driven by the learner's *perezhivanie* (Chapter 3). In this chapter, I discuss the rationale for integrating the perspective of multimodality into SCT. Language learning in SCT, viewed as social, not only analyzes the individual's cognitive changes but also regards their bodily activities during interactions with others, such as gestures, postures and gazes, and emotions as integral to cognitive activities. Nevertheless, there has not been much research on emotion integrated with cognition. However, some studies have examined the integration of verbal and bodily actions. Studies by McNeill (1992, 2005), McCafferty (2002), Atkinson et al. (2007), and Atkinson (2014), in which bodily movements are assumed to form part of language, represent multimodal research that relies on SCT.

My suggestion is to apply the notion of an SCT-based multimodal perspective to other non-linguistic means in representation or communication, such as visual images. In fact, the idea of multimodality is closely related to van Lier's sociocultural "ecological" view of language. For van Lier (2004), language is a "meaning-making activity that takes place in a

complex network of complex systems that are interwoven amongst themselves" (p. 53). Such activities are mediated by meaningful interactions with other learners and teachers and the use of various resources such as L1 and many other kinds of linguistic and metalinguistic knowledge. Based on this understanding, as van Lier (2004) suggests, not only the aspects of language (i.e., phonology, morphology, meaning, pragmatics, discourse, and bodily actions that are integrated into language) but also other meaning-bearing systems, such as visual images, can be the focus of attention.

Recent Development of a Social Semiotic Multimodal Approach

It is not surprising that mainstream language classroom research has focused on the role of language in describing learning processes and evaluating learning outcomes. However, the traditional notion of the monolithic language learning model has been challenged by the multilingual and multicultural reality of learners that occurred as a result of the drastic economic process of globalization that began around the world in the late 1970s to 1980s. In response to this situation, countries that have accepted immigrants, such as England, Canada, and Australia, have established a systematic media literacy education (Cope & Kalantzis, 2000). Along with the advancement in innovative and multimodal technologies, there has been a movement toward "a semiotic turn" (Luo, 2018). Scholars have turned their attention to effective interactions by "using multiple languages, multiple Englishes, and communication patterns that more frequently cross cultural, community, and

national boundaries" (Cope & Kalantzis, 2000, p. 6). To guarantee learners' "effective citizenship and productive work" (Cope & Kalantzis, 2000, p. 6), educators need to rethink what Eco (1979) calls the "verbocentrism" (p. 228) of conventional school literacy and stop privileging the written text and normative rules or standard forms of language. This can be achieved by creating opportunities for learners to be exposed to a multiplicity of discourses to thereafter produce such discourses in the classroom.

With the 1996 publication of a proposal for a pedagogy of "multiliteracies" (NLG, 1996, 2000), English education researcher group, the New London Group (NLG), have challenged the definition of literacy as a language-based monolithic skill to make classroom teaching more inclusive of cultural, linguistic, communicative, and technological diversity in increasingly globalized societies. Critically looking at traditional literacy pedagogy, which refers to reading and writing as "restricted to formalized, monolingual, monocultural, and rule-governed forms of language" (NLG, 1996, p. 61), the NLG suggested an extension of the idea and scope of literacy pedagogy to include a mixture of different semiotic systems, such as visual and aural forms, in combination with language (NLG, 2000).

The core of multiliteracies learning is not aimed at mindlessly reproducing ready-made or static grammars and meanings, rather facilitating learners to creatively produce "designs of meaning" (NLG, 2000, p. 19) from among the available media of representation. The NLG uses the term "design" to describe forms of meaning and avoid the negative

connotations associated with the term "grammar." They propose to treat any semiotic activity, including using language to produce texts, as a matter of design involving three elements: *available designs*, *designing*, and *redesigned*. Cope and Kalantzis (2000, p. 20) explain that a person chooses useful conventions or *available designs* (available cultural/semiotic resources for design) and creatively applies and combines them in the process of *designing* to transform the conventions into the "*redesigned*." The *available designs* include 1) standardized language rules including grammar, vocabulary, metaphors, and gestures understood as norms by society; 2) socially shared knowledge or beliefs that are developed by the members of a group and gradually acquired by individuals; and 3) personal interpretations based on an individual's values and experiences (Okamoto, 2020, p. 74). *Designing* refers to the active and dynamic process of shaping emergent meaning, thereby involving any designing acts of re-articulation or recombination of the given resources of *available designs*, that is, making new use of old materials (Cope & Kalantzis, 2000). The outcome of *designing*—the *redesigned*—is the resource produced and transformed through design. It is neither a simple reproduction nor simply creative; it is "the unique product of human agency founded on historically and culturally received patterns of meaning" (Cope & Kalantzis, 2000, p. 23). Thus, the *redesigned* has now become a new *available design*[17]—a new meaning-making resource. The process of meaning-making activities, which is constantly in tension, is

[17] The looping cycle of a pedagogy of multiliteracies overlaps with Newman and Holzman's (1993) concept of the tool-and-result approach to mediating development.

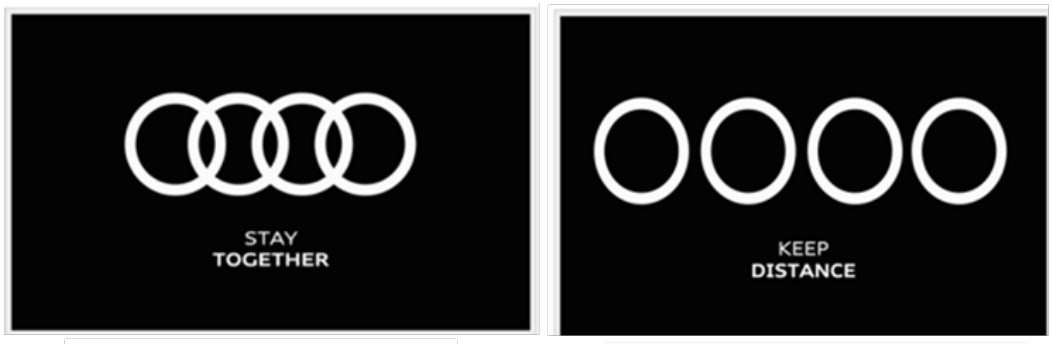
considered “learning” in the pedagogy of multiliteracies.

For the NLG, learning is no longer treated as a process that depends on the dominance of language, rather acts as a “dynamic process of transformative sign-making” (Candlin & Sarangi, 2001, p. xiii). To transform the *available designs* to meet the agent’s intended meaning, they need to see the plural texts as a whole at a higher dimensional level in the design process of meaning-making.

Concerning signs of meaning, the following is an example of a corporate message about the COVID-19 pandemic (available online: https://car.watch.impress.co.jp/docs/news/1243153.html). The original logo of the automobile company comprises four overlapping rings (left), which symbolize the union of Germany’s four automakers, known as “four rings.” However, owing the pandemic, people are being encouraged to keep their distance from others; therefore, the company left a gap between each of the rings to encourage people to respect others’ space (right).

Figure 1

T*he original (left) and the Redesined (right) logos with words*



If we look at the company's attempt in the context of multiliteracies, it used its logo design (i.e., *available design*) and transformed the original logo into the text of the *redesigned*, which calls for a social message. The company thereby demonstrates a uniquely produced meaning by showing an animated video clip in which the overlapping rings of the original logo move apart to keep their (social) distance from each other. The video also concurrently presents a verbal message in words. Consequently, in the redesigned text, the company's social message for solidarity becomes more powerful through the combination of a visual image and words as a unity rather than just rings or words in isolation. The words identify the meaning behind the overlap/separation of the rings, while the image visualizes the concept transmitted by the words so that the readers/viewers can understand the message in depth.

The process of *designing* leads to the creation of another meaning in the *redesigned* fashion based on the conventional *available designs*. Non-linguistic modes such as visual images, gestures, and music are not subordinate or adjunct to words; rather, all the functional components of a meaning system have equivalent meanings. Further, all the respective elements combine to make up a single meaning. The pedagogy of multimodality, which involves *designing* or constructing unique meanings through interaction across "modes," was proposed to realize multiliteracies in education (Jewitt, 2008). Therefore, "[t]ogether, the linked concepts of multiliteracies and multimodality constitute a new way of conceptualizing

how teaching and learning occur in contemporary classrooms" (Stein et al., p. 2).

Key Concepts for Multimodality[18]

Mode

The notion of mode is central to multimodality. The term "mode" was suggested by Kress (2010), a semiotician and NLG member, who defined it as "a socially shaped and culturally given resource for meaning-making" (p. 79); examples of modes used in representation and communication include "image, writing, music, gesture, speech, moving image, soundtrack and 3D objects" (p. 79). All modes make meanings differently; however, there is no hierarchy among them; that is, "[a]ll modes of representation are, in principle, of equal significance" (Kress, 2010, p. 104), thereby carrying different potentials and forming a single integrated system. In his view, each mode makes a partial meaning in isolation and interweaves with other modes to make the full meaning of an event or text. From a multimodal perspective, human communication is multimodal. For example, speech is shaped crucially by language; however, concurrently, other non-verbal modes such as gesture, posture, and image can coexist. A single text is also viewed as a multiplicity of signs. An image of writing or letters in different fonts, for example, can be interpreted both visually and linguistically; songs comprise music, words, and/or lyrics, and when reading a picture book, an individual is required to "read" or interpret various sign systems operating in one

[18] From here on, I use the term "multimodality" to refer to a multimodal approach without mentioning the social semiotic frame.

multimodal entity (print, visual display of print or typography, illustrations, photographs, etc.) simultaneously. It is noted that "these elements come together to create a meaning gestalt" (Crafton et al., 2009, p. 33). Thus, a central feature of multimodality is to recognize the limits of language as the dominant means of human communication. Further, Kress (2010) writes that language is "no longer as central and dominant, fully capable of expressing all meanings, but as one means among others for making meaning" (p. 79).

Affordance of the Modes

Affordance is another central notion in multimodality theory. Multimodalists argue that each mode has a modal affordance, referring to a specific logic of a mode, regarded as "modal logic" (Jewitt, 2009, p. 25), that provides different communicational and representational potentials. This notion was extended from Halliday's (1978) social theory of communication and applied to multimodality; representation or communication in other modes, including visual images, gestures, and actions, have evolved through their social usage into articulated semiotic systems in the same way as language. According to Kress (2010), "In image [which is based on the logic of space], meaning is made by the positioning of elements in that space; but also by size, colour, line and shape" (p. 82). Conversely, in language, meaning is "spoken" or "written" with words and/or sounds organized as phonology, and the syntax and grammar of speech or writing are "strongly governed by the logic of time" (Jewitt, 2009, p. 25). Accordingly, some things can only be signified through

language and others only in an image; other entities, such as a picture book, however, can be realized in combination with image and writing. The logic of a distinctive mode assists the learner in concurrently articulating their thoughts in the selected mode. As Kress (2011) claims, “the wider range of available modes increases the possibilities and potentials of apt representation of the framed” (p. 47), and the multimodal affordance enhances synergies with one’s representation of meanings and extends the range of human representation.

Let me refer to one example from my previous research (Iwasaka et al., 2017) to illustrate the concept of multimodal affordance. In that study, the participants, both Japanese and international students, interviewed each other to understand their cultural experiences. They then collaborated in writing a free-styled poem based on the discussion they had. Below is a poem titled “日本食 mogmog” (referring to the Japanese-style dish)” drafted by a Japanese college student, M, based on her understanding of the cultural experiences of her student partner from Germany.

Figure 2

Work of M, a Japanese student (Iwasaka et al., 2017, p. 60)

題：日本食 mogmog（1）

からあげもぐもぐ（2）
お好み焼きもぐもぐ（3）
Rico mag Karaage and Okonomiyaki（4）
つられておなかがすいてきた（5）
私も食べたい（6）
Ich mag もぐもぐ（7）
Wir mögen もぐもぐ（8）

詩を書いた人　M
インタビューを受けた人　R

In this work, we can see an ensemble of different modes, including several different letterings in different languages and the Japanese onomatopoeia of "*mogu mogu*," which represents the sound of chewing or crunching food. M used this phrase to express a robust appetite alongside images of a cutlery set and chopsticks. In her multimodal texts, the reader and viewer can see that she really enjoyed "playing" with both German and Japanese through her interactions with her partner. In my interpretation, it was this emotional experience that inspired or mediated M to produce the text using a multiplicity of modes, namely to express "to eat" in Japanese and German characters; to include onomatopoeia in English and Japanese inspired by the phonetic sound of the German word "*mag*," which sounds similar to the Japanese onomatopoeia "*mogu*"; and to draw a cutlery set in both Western and Japanese

styles. To be more precise about the notation of the sounds, M altered the usual notation "*mogu*" in Romaji to "*mog*" so that it can resonate with the German notation "*mag*."

Looking at this work from the perspective of multimodality, M's alteration (i.e., her *designing* act) was created through the mediation of the *multimodal affordance* of a German word, which occurred in the interaction of the activity; accordingly, she intentionally picked alphabet letters to express the similarities between the languages. M made good use of the distinctive materiality of the respective modes to respond to her interests and needs. Thus, a multimodal perspective allows us to claim that M's choices of expression were facilitated by multimodal affordances or the potentials of the modes. In fact, she was able to more elaborately externalize interculturality across a multiplicity of modes than she might have in a single mode. She achieved this by orchestrating a complex system of language variation and drawing images of culturally based cutlery sets, which function as depictions of the relevant image of the framework for the topic. Therefore, at a glance, her text turned out to be rather amusing but simultaneously demonstrated the complex orchestration of different modes that synergistically work together as an integrated whole. One can represent their meaning effectively through whichever multimodal affordances is best suited. This artistic "poem" comprised images and written language forms, including various letterings and onomatopoeia in the same space. It is a good example of how multimodal affordance emerged in the process

of semantic linkages between image and language can expand one's meanings.

Concerning the analysis of images, such as drawings, the notion of "visual narratives"[19] (Yamada, 2018) shares the same basic core concepts as multimodality. Yamada's understanding of visual narratives is closely related to the different logics of multimodality and the synergistic effect of orchestrating different modes. Most importantly, Yamada (2017) understands that a visual image creates a triadic relationship in which *you* and *I* stand side by side *viewing* something together, although a verbal dialogue is a relationship in which *you* and *I* face each other. The visual image transforms the relationship between *you* and *me* into that of "joint attention" and "empathy" (p. 84). This is the result of multimodal affordance, that is, the interplay of the logic of the image and language. Thus, the visual narrative or integration of image and language in multimodality helps learners redesign their *available designs* in the environment while also reorganizing the relationship between teacher and learner into a collaborative one. Learning a foreign language in a more multimodal way creates a variety of meaningful ways or affordances, thereby mediating the "zone" of learning more intimately and securely and *vice versa*.

[19] Yamada's (2018) approach of visual narratives is applied to analysis in clinical psychological studies. In the present study, I apply it to educational pedagogy.

Figure 3

A drawing by Giorgia **(Kress, 2010, p. 125)**

"I think my mum is the most beautiful mum in the world. I love it when she lets me wear my party dress. My dad is very nice. He has a bad leg and has to carry a stick" (Kress, 2010, p.125)

Let me show another example of the image–language interplay from Kress's book. The above drawing (Kress, 2010, p. 119)[20] was made by a four-year-old girl called Giorgia, and the text on the left is her spoken "story" of her family. For Kress, it is an example of "transduction" (Kress, 2010, p. 125), which involves the process of moving meaning-material from image to speech. Although Giorgia's "story" was spoken not in her L2 but her first language, we as viewers can see how she elaborates on her meaning while moving across the distinctive logics of different modes. A viewer can deduce her affective feelings about her family from the way she drew the three figures in the image, for example, the happy facial expressions of her parents, the closeness of the figures in the house, and so on. From the ways in which she spoke about her family, we are informed that the crown that the lady wears on her head may symbolize Giorgia's pride in her "beautiful mom," while the figure drawn on the right of the little girl (Giorgia herself) is her father. The vertical line drawn on the right

[20] The semantic interpretation of Giorgia's work is done by the author referring to Kress's (2010) description.

of her "dad" is "a stick" that he carries because of his "bad leg." From her spoken words, this vertical line symbolizes her feelings of sympathy and caring for her father. For Kress (2010), the child's spoken account is hugely general compared to the specificity of the images; "the images are much 'fuller,' more precise, more specific as indications of just what the child considered as 'like'" (p. 128). Indeed, the "drawings are talking" (Inözü, 2018), particularly those by younger children who are limited in their vocabulary and language skills. As I see it, however, the rationale for Giorgia's feelings, which can be "read" from her drawing, is persuasive only through words: these include "dad" and "mum," which indicate the relationship between the figures; "love" and "nice" to communicate her affection; and "bad leg" for her father's specific situation.

In this way, synthesizing information gained from different modes (i.e., multimodal affordance) provides a clearer vision of the agent's intention and feelings in their meaning-making activities. Therefore, the notion of affordance is also vital in SCT.

Integration of Multimodality into SCT

Van Lier's Notion of Affordance in Ecological Linguistics

Affordance was first presented by Gibson (1979) in his research on visual perception. For Gibson, visual perception is not based on the stimulation of receptors by physical energies, rather depends on the act of picking up information to guide action. Gibson's notion of affordance emphasizes that the environment affords actions or behaviors to an animal. For

example, if an object is found to have a certain firmness to an infant's jaw and gums, it affords mouthing (Gibson & Walker, 1984); similarly, if a ball falls with a certain velocity relative to a person's running speed, it affords catching (Oudejans Michaels et al., 1996). Gibson's concept stems from direct and immediate information available in an environment. More precisely, direct perception is possible without internal processing by an agent when there is information in the environment that uniquely specifies affordance (McGrenere & Ho, 2000).

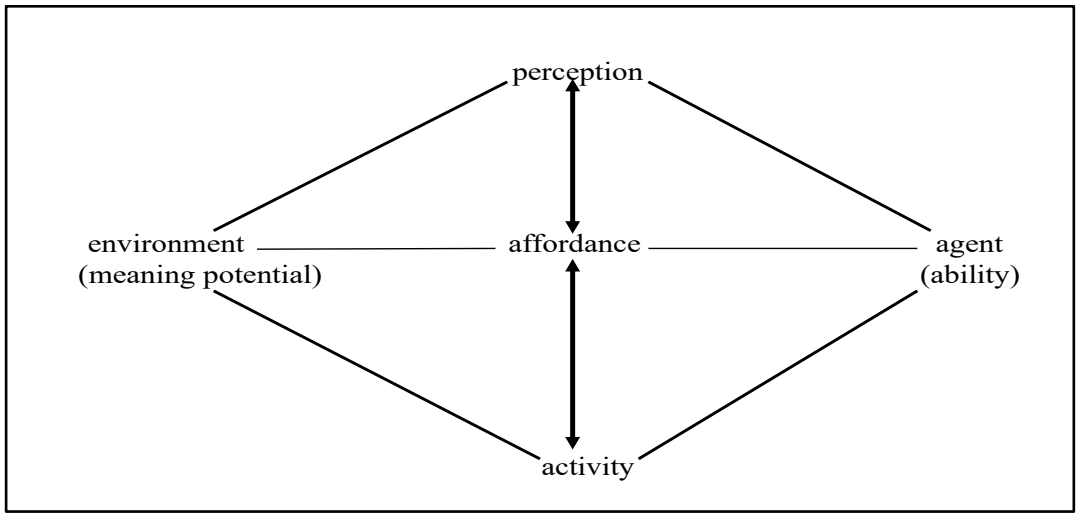
Van Lier (2004) applied his understanding of Gibson's ecological psychology to language learning. He defined affordances as "meaningful ways of relating to the environment through perception-in-action" (van Lier, 2002, p. 147), insisting that a direct affordance invites or mediates another affordance. He finds affordances not only in the direct and immediate environment but also in the indirect and cultural environment, which he terms as "mediated affordances*"* (van Lier, 2004, p. 94)—an important notion to understand human psychological development as situated learning. For van Lier, affordances, whether natural/cultural or direct/indirect, can offer "a relationship between a learner (an agent) and the environment, that signals an opportunity for action" (p. 4).

Figure 4 depicts van Lier's concept of affordance as an ecological relationship between an actor or agent and an environment that is filled with meaning potential (Halliday, 1978), including all physical, social, and symbolic affordances that provide the basis for

activity. For van Lier, "[the] affordance fuels perception and activity and brings about meanings" (p. 96) for "further higher-level activity as well as more differentiated perception" (p. 96).

Figure 4

van Lier's (2004) Affordance in Context (p. 96)



I consider van Lier's conceptual diagram with illustrations from his 2004 book, in which he offered an illustration to explain the function of affordances in the context of L2 learning (p. 93). Let me summarize his example: suppose I visit a lady in an office, and she says something to me in a foreign language. I have no idea what her words mean, but there is a chair there, and she is pointing to it with an outstretched hand. I sit in the chair and say, "Thank you." She smiles.

Considering the reasons underlying this successful communication in relation to van Lier's affordances (without actually knowing what the lady was saying), the following can be observed: in this context, the chair offers the immediate affordance of sitting in it, and the

lady's gesture, which functioned as a socially mediated invitation, is an offer for me to carry out that action. Thus, van Lier notes that "immediate and mediated affordances act in consort to link language to action via perception" (p. 94). Language learning involves myriad connections that promote further action. In this way, van Lier's notion of affordances helps an entire system flow or relate each element, not unlike the heart, which transports nutrients to all parts of the body through the circulatory system. Eventually, meanings will emerge to the agent in the process of generating the circulatory system; simultaneously, new meanings will generate the system so that they activate the affordance. Thus, for van Lier, affordances fuel this dialectic relationship between the agent and the environment, thereby facilitating learners' mental development. As argued above, van Lier finds conceptual congruence among Gibson's original notion of affordance (1979), Halliday's theory of language (1978), Bakhtin's dialogical theory[21] of language (1981), and Vygotsky's theory of mental development (1978), while extending his argument by positioning the concept in his ecological linguistics.

Multimodal Affordance Related to van Lier's Notion of Affordances

How does van Lier's concept of affordance relate to multimodal affordance? The

[21] Bakhtin (1981) insists that "unfinished" words carry an "internally persuasive discourse" (p. 346). As I understand it, for Bakhtin, who considers language as a social construct, unfinished or incomplete discourse gives room for collaboration between persons to create meaning. If I apply this notion to van Lier's example, I understand that the incomprehensibility of the foreign language nevertheless helped the agent establish the meaning of the dialogue by activating the immediate and mediated affordances of the environment.

following is a brief review of the two concepts of affordance: modal affordance provides different communicational and representational potentials guided by the logic of each mode. Van Lier's affordances, however, align the relationship between the learner (agent) and the environment in the ZPD by creating opportunities for meaningful action on the part of the learner. Considering the above, I would like to position multimodal affordance from the logic of modes within the environment of van Lier's circulatory system. I see it as a meaningful potential or element of the *available designs* embedded in the learning environment.

As argued earlier, the particular logic of modes helped college student M (Figure 2) and Giorgia (Figure 3) express their complex feelings and thoughts in a clearer vision. Importantly, however, what realized their creative vision was not only modal affordance but also the learners' varied linguistic knowledge and skills imparted to them by their surrounding teachers, parents, and peers, all of whom assisted in turning their inspirational thoughts, feelings, and concepts into letters and pictures. Additionally, the most essential and fundamental element of this practice is the artist's thoughts and the emotional experiences that drive such thoughts; that is, their *perezhivanie*. In the two aforementioned cases, without M's enjoyment in her interactions with the German student or Giorgia's love and care for her parents, the ideas and progression of the work would not have developed, even if the authors had the necessary language knowledge and skills to do so. If *perezhivanie* is an element of multimodality, then it is more appropriate to regard it as the *available designs* within the

individual, which, as I understand it, is in a dialectic relationship with the environment in SCT.

Integration of Multimodality into SCT

Multimodality can extend the potential of learners' communication and representation abilities in the field of education. However, if we consider multimodality from the perspective of SCT, the *available designs* in the environment—such as learners' linguistic knowledge and skills—and the logics of modes remain dormant unless they are recognized, drawn out, and effectively utilized by the learner (agent) to generate meaning. To activate the *available designs* between the agent and the environment, the learner or designer's consciousness must be raised through mediation and interaction with humans, objects, and processes in the learning space. The intentions and thoughts of the learners can be expressed using meaningful affordances, which make all the *available designs* associated with them able to be visualized or vocalized. Kress (2010) argues that the "[l]inking of entities—humans with humans, with places, objects; objects with objects; objects with processes; processes linked with processes—is a major resource for making meaning" (p. 119).

Given the overlap between van Lier's ecological SCT and Kress's notion of multimodality, the various linking acts that take place in the ZPD—such as a learner's mindful imitation as well as their process of "translating" (Kress, 2010, p. 125)—act across various modes alongside a teacher's completion of their lines of thought. Many other acts are

also part of the available resources of generating meaning. Emotions and thoughts rooted in the learner's personal social experiences—that is, their *perezhivanie* in SCT—are powerful *available designs* distributed to the individual in the context of multimodality theory. Without *perezhivanie,* none of these acts of design would co-operate. In contrast, even if the learner has *perezhivanie*, the work will not be accomplished as the *redesigned* unless the affordances can link it to the knowledge and skills embedded in the learner's environment. Once the affordance or relationships within the learning system are activated, the agent's *perezhivanie* is also mediated. Concurrently, the agent is mediated to become engaged in the activity so that they can sharpen their perceptions. Japanese student M's curiosity in the foreign language (German) and enjoyment of the interaction with the student and Giorgio's love and care for her parents are well represented in their *redesigned* objects. Their acts of translation across modes and various mediation and interaction processes happened within the ZPD. Taking these arguments together, let us revisit the relationship diagram of meaning-making in the context of van Lier's ecological learning model.

Figure 5

The Integration of Multimodality and van Lier's (2004, p.96) Ecological Learning

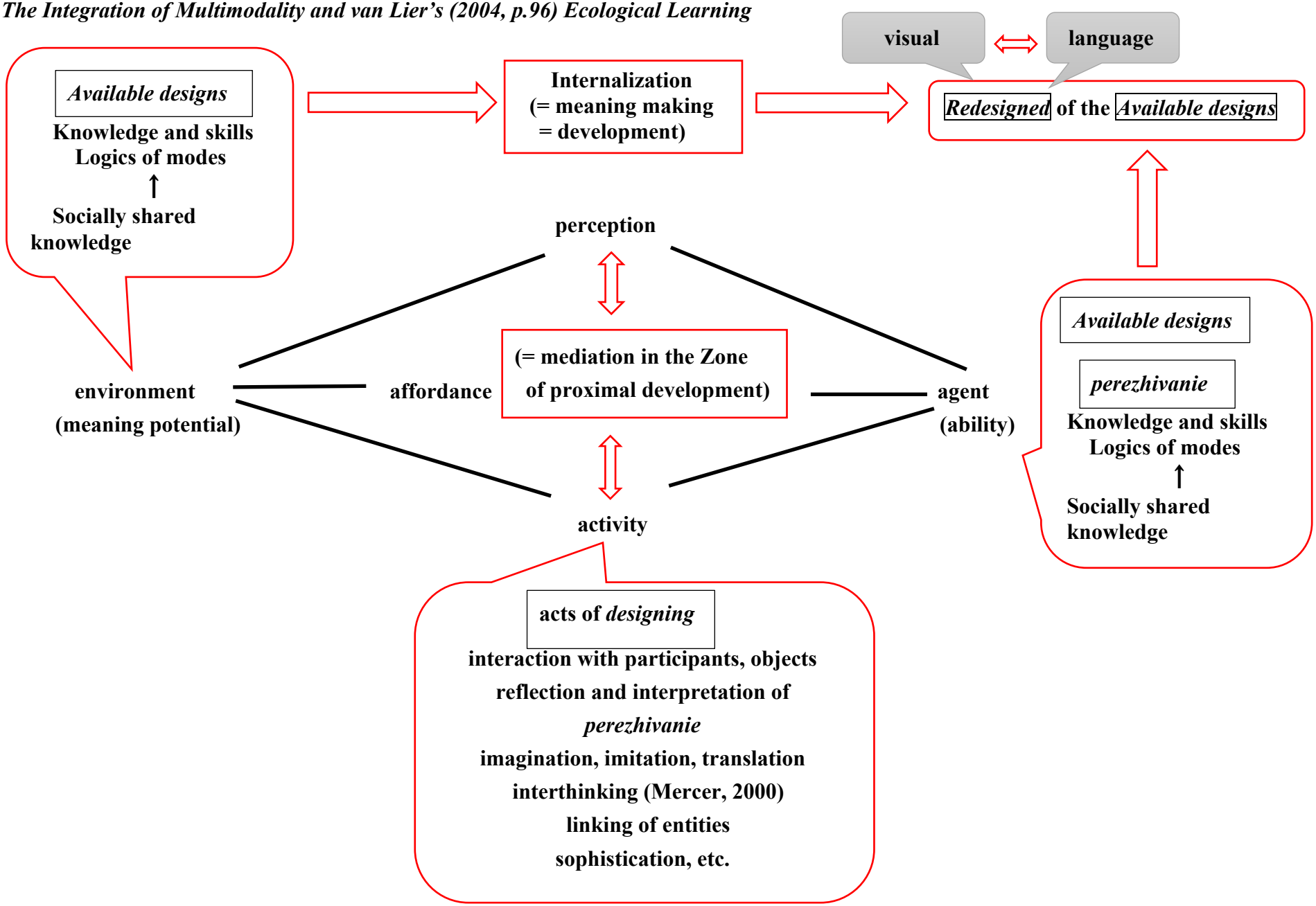


Figure 5 illustrates the theory of multimodality integrated into SCT in the framework of van Lier's (2004) ecology and semiotics of language learning. Utilizing this theoretical framework, I have hitherto noted that I would pursue the L2 learning process of a pupil's development with a unit of analysis, namely an individual operating with mediational means driven by *perezhivanie*. I would like to summarize the rationale for this in the following three points.

"Meaning" in Meaning-making in the Redesigned

Language learning, which aims to achieve multiliteracy, is recognized as a component of meaning-making activities combined with various modes of visual, auditory, and gestural communication. In this section, I reaffirm what "meaning" should be aimed at in multimodality. I explicated Vygotsky's (1987) distinction between "meaning" (*znachenie*) and "sense" (*smyzl*) in Chapter 3; to restate his argument, the former refers to static and stable meanings used in a speech community, while the latter refers to the meaning that people construct as they interact with themselves in a purposeful communicative activity. For Vygotsky, word meaning is described as "a stable zone within sense" (Mok, 2017, p. 34). Considering Vygotsky's distinction between the "meaning" and "sense" and the objective of multimodality, "meaning" in meaning-making activities refers not only to static and stable meanings used in a speech community but also to socially shared knowledge grounded by a personal sense "refracted" by the "prism" of *perezhivanie* gained through the individual's

private experiences. Socially shared meanings of words or dictionary definitions are important for building a common ground with others; however, in any meaning-making activity that aims to redesign *available designs*, a process in which the *perezhivanie* is centrally involved, it is not enough to simply accumulate static and stable knowledge that is not associated with personal meaning-sense. Therefore, the meaning-making activities aimed at in this study also include a personal sense; the term "meaning" will thus also refer to a meaning that contains one's sense of a word, unless otherwise specified.

Internalization in Multimodality

As mentioned in Chapter 2, internalization, originally a concept of SCT, is a process of learning or the reorganization of a person-environment relationship; it requires spontaneous attention, logical memory, concept formation, and the development of the will. How, then, can internalization be accounted for in an agent's process of learning or meaning-making in multimodality? Let us recall Okamoto's (2020) list of *available designs* mentioned earlier in this chapter. As she specifically mentioned the elements of knowledge and skills related to the mode of language, the compatible elements of image are added and summarized in the table below (Table 1). The knowledge and skills of each mode (as *available designs*) include the following elements determined by the respective logic.

Table 1

A Comparison of Different Modes (Based on Okamoto, 2020)

	Image (art)	Language
Logic	Simultaneity of elements in space	Sequence of elements in time
Knowledge and skills	Color, shape, line, distance, height, position, angle, visual point, etc.	"Spoken" or "written" with words and/or sounds organized as phonology, the syntax and grammar of speech or writing, vocabulary, metaphors, ways of expressing oneself in discourse, etc.

The elements of knowledge and skills are sociocultural artifacts; therefore, they have been passed on to individuals under the influence of "socially shared knowledge" and "logics of modes," which are embedded in the environment. Personal interpretations from the individual's values and experiences in Okamoto's list are closely related to Vygotsky's concept of *perezhivanie*, that is, the source for constructing an agents' intentions and interests to represent their meanings in the orchestration of modes.

As described in Figure 5, the process of internalization or the agent's meaning-making activities from the perspective of multimodality can be viewed as the *redesigning* of knowledge and skills of modes in the environment—by the agent themselves—through the multilayered affordance that arises in the ZPD. The poetry-writing activity that required the

use of various modes playfully (Iwasaka et al., 2017) allowed college student M to *redesign* her native language resources of the similar sound of a German word into an artistic form, thereby learning new German vocabulary, word order, pronunciation, and so on. For an agent such as a younger learner, whose knowledge and skills are limited at the outset, "the wider range of available modes increase the possibilities and potentials of apt representation of the framed" (Kress, 2011, p. 47). Although the agent may be partly conscious of their personal beliefs or values and *perezhivanie*, they remain largely unconscious of such elements. Therefore, the more engaged the agent becomes through the act of designing, the more they can become conscious of the *available designs*.

The act of designing in the ecological learning context involves not only translation across modes but also multifaceted acts suggested in SCT. The process of designing, which Stein (2000) describes as "*re-sourcing resources:* taking invisible, taken-for-granted resources to a new context of situation to produce new meanings" (p. 336), enhances the creativity of the learner-as-designer to update "the learned or designed so far" into the *redesigned*. The entire process of these meaning-making activities is active, dynamic, and constantly in tension. The process of reconciling or regulating this tension can activate development. The more knowledge and skills the agent internalizes, the more they can utilize it for *designing* acts. Additionally, *redesigned* is the result of the agent's internalization, which, following Vygotsky and Holtzman's notion of tool-and-result methodology, is in a

dialectical relation with the *available designs* as a tool or mediational means. The rationale for setting the unit of analysis as "an individual operating with mediational means driven by *perezhivanie*" is rooted in the understanding of individual learning in relation to the environment, as described above.

Reorganization of the Person-environment Relationship Through Multimodal Engagement

In the previous section, I explained that meaning-making activities coincide with the process of internalization—which reorganizes the relationship between a person and their environment—in the process of *designing*. In the meaning-making activities in this study, pupils are required to redesign the *available designs* by combining two modes, namely image and language. The process of *designing* involves individuals operating multilayered mediational means in the environment, and most importantly, is driven by the agent's *perezhivanie.* What is noteworthy about meaning-making activities that combine the language and visual modes is that the latter, according to the notion of Yamada's (2018) "visual narratives" mentioned earlier in this chapter, plays a significant role in reorganizing the person-environment relationship. Applying Yamada's notion to the context of L2 learning, the combination of the conventional four skills with the visual mode (or the new skill of viewing) transforms the dichotomous power relationship between teacher and learner

to one of a group of peers exploring the learner's intentions together. In this process, the learner's *perezhivanie* is fully expressed in the *redesigned* to create meaning.

Naturally, teachers possess a wealth of knowledge and skills; however, they do not necessarily fully understand a learner's *perezhivanie* unless the learner expresses it. Accordingly, it is essential for the learner to activate their spontaneous attention, logical memory, concept formation, and development of will to generate personal meaning by using the available knowledge and skills. In so doing, a visual image allows for a transformation in the quality of the relationship between the teacher and learner. It transforms from a dichotomous relationship of a giver and receiver of information to "a triadic relationship of empathy" (Yamada, 2018, p. 6), in which people stand side by side looking at the same image. Multimodal affordance makes this possible. In the case of Giorgia's drawing introduced earlier in this chapter, the visual image opens up a dialog between Giorgia (the designer) and the viewer, which assists her in the recounting of her family story; at this time, Giorgia is also the viewer of her drawing and is involved in the creation of meaning with her interlocutor. In L2 learning, when the teacher tries to jointly "read" the visual image that is full of the learner's *perezhivanie*, the learner can understand the available resources in depth and transform them by uniting words and images.

Multimodal affordances in the environment thus link all acts of participants' interactions—people, places, objects, and processes—in the ZPD that occur in the context of

learning. Kress (2010) emphasizes the importance of this as a "linking of entities," which is understood as "a major resource for making meaning" (p. 119). For Kress, even if it were to originate in a single mode, such as "in play in the school yard, a meaning moves across to another mode—in a spoken recount of the game, for instance, in forms apt for that mode" (p. 120). In the integration of multimodality in SCT, "entities" are understood as the mediational means for development; they mediate each other and grow as a single learning community. Multimodality activates the learner's ecological process in an exploration of their *perezhivanie*, which offers affordances; that is, multilayered mediational means to search for their real intentions and interests for meaning-making activities. Based on the above, the following three research questions will be pursued to explore pupils' foreign language development in this study:

1) What *available designs,* including the agent's *perezhivanie*, are used in the *redesigned*?

2) What acts of *designing* are considered affordances to accelerate pupils' internalization?

3) What linguistic development is observed as a consequence of *designing* (i.e., *redesigned*)?

Chapter 5

Research Method

This study aims to examine Japanese elementary school pupils' foreign language development in the framework of integrating multimodality into SCT. In terms of analysis, I chose a qualitative research methodology because it is important to examine the complex processes in learners' inner development from an "emic" perspective (Firth & Wagner, 1997). Additionally, the analysis needs to consider the relationship between multiple factors as to "why" the results were achieved, rather than the quantifiable results from individual pedagogical operations. To promote a research design and evaluation that enhances the appreciation of complexity in qualitative research, the procedures need to be used with coherence to build a foundation for increased confidence in the claims made.

Research Design

This study followed a theoretical framework that integrated multimodality and SCT. The grand principle of multimodality is that any semiotic activity, including using language to produce or consume a multiplicity of texts, is a matter of design involving three elements: *available designs, designing, and redesigned*. Language learning does not take place in isolation, rather functions as part of the *redesigned* of the *available designs* in the process of learners' holistic mental development. Accordingly, to particularize the development of pupils' foreign language learning, it is necessary to examine the process of development

comprehensively using two relevant approaches: one concerns the use of mediation through multimodal affordance in multimodality theory, and the other, mediation between people and objects within the overall learning environment. To examine the image–language interplay of modes, I employed the methodology of MMDA; (Kress, 2011). Moreover, to examine learners' intended meaning across various learning contexts, I refer to the theoretical framework of SCT, partly employing discourse analysis (Wiggins, 2009) to elucidate learners' intentions, which are related to *perezhivanie* in their spoken dialogs.

The study was designed based on four rationales: 1) learners begin their process of *designing* (i.e., learning) from what they possess as *available designs*, which are distributed between the individual learner and the environment; 2) the process of *designing* is activated by the "meaningful ways of relating to the environment through perception-in-action" (i.e., "affordance"; van Lier, 2002, p. 147); 3) the *redesigned* or the meaning made by the learner is distributed across the modes; 4) learning or meaning-making is ultimately driven by *perezhivanie*. Accordingly, three general areas related to learners' individual *perezhivanie* were focused on: learners' *available designs*, the process of *designing*, and learners' meaning of the *redesigned*. Based on these rationales, two cases were tested. Data were collected during FLAs at two Japanese elementary schools.

Case One[22]

The first study was conducted at a public school in the Kansai area of Japan. The lessons were aimed at teaching/learning the meaning of the word "share," which was a new word for the pupils. Twenty-nine fifth graders participated in two lessons over two consecutive weeks. The lessons were taught by me and Adam (a pseudonym), a native English speaker from the United States as the co-teacher. In the lessons, a picture book titled *Four Feet, Two Sandals* (Williams & Mohammed, 2007) was used as the primary teaching material. When the story was read aloud, the pupils encountered a new word, namely "share," which represents an important message in the book. Conventionally, teachers typically present new vocabulary on flashcards, read them aloud, and translate them into their L1. In these lessons, however, pupils were encouraged to understand the meaning of the word, situating it within the context of the story. They were then provided a task in which they presented their personal understanding of the word's meaning in a multimodal way; they were instructed to draw pictures of something they had once shared with somebody. They were also asked to articulate their meanings to the other pupils. The drawings and

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[22] This series of lesson plans was supported by a Grant-in-Aid for Scientific Research (16K02921). Data from this case study were analyzed in Iwasaka (2018) in the SCT framework with mediation at the core. In this section, I re-analyze the same data in an expanded framework that integrates SCT with multimodality. The purpose and methods of this study were communicated to the teachers in advance through the principal of the elementary school, and written informed consent regarding the methods of research and protection of privacy was obtained from the school. The consent of the guardians was assumed to have been obtained through a written document signed at the beginning of the study. The guardians were already informed about the rights and relevant issues, and consent was obtained when their children entered primary school.

conversations that took place between the pupils and their teachers were analyzed to show how they multimodally represent their personal meaning of "share" and how their *perezhivanie* affects meaning-making. The analysis is based on two cases of seven children who volunteered to present their drawings to the class and who, in their interactions with their teachers and peers, showed considerable potential for foreign language development.

Case Two[23]

Case Two was conducted in a cross-curricular class at a different public elementary school in Kyushu, Japan. Thirty-six sixth-graders participated in three lessons provided on two consecutive days: arts and handicrafts were team-taught by myself and Ms. Kita (a pseudonym), the classroom teacher. Ms. Kita took the lead in teaching arts and handicrafts while I was in charge of the English section the next day. The FLAs[24] were held twice a week for 45 minutes each. A textbook titled, *We Can! 2* (MEXT, 2018) was provided by MEXT for the transitional period between 2018 and 2020. In the arts and handicrafts classes, the pupils were involved in an activity in which they described their favorite memories from

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[23] This series of research projects was supported by a Grant-in-Aid for Scientific Research (16K02921; 17K13503; 19K00760). The data presented here are part of a larger research project that was conducted as research on cross-curricular learning. Fujii et al. (2021) analyzed the data using the Content and Language Integrated Learning framework. In this section, I re-analyze the data using a framework that integrates SCT with multimodality. The purpose and methods of this study were communicated to the teachers in advance through the principal of the elementary school, and written informed consent regarding the methods of research and the protection of privacy was obtained from the school.

[24] Since the newly revised Course of Study was to be implemented in 2020, two years from the time when the research was conducted, most schools, including the target school, followed a transitional foreign language curriculum recommended by the MEXT.

elementary school in visual art and English. As a form of art to describe their favorite memories, the pupils learned Henri Matisse's "Cut-Out" technique (see the next chapter for details). The selection of works for analysis was carefully made by the members of this research project: Ms. Kita, the classroom teacher, Ms. Fujii, a researcher of art education, and me. The selection was based on the technical aspects of the children's cut-outs, their comments in the foreign language during the class, and Ms. Kita's information of the pupils' daily life, including their language abilities as well as the potential of the children's mental development. Consequently, six works were selected; some were expressive in abstract images, and others conveyed pupils' intentions and feelings well with words, although the technique of making cut-outs was still under development. The pupils' cut-out works were the *redesigned*, which they "transducted"[25] (Kress, 2010) or converted from visual art into language and *vice versa*. These were comprehensively analyzed. The analysis is based on a synthesis of both manifestations as a means of examining the artists' thoughts.

[25] Kress (2011) names the process of "moving meaning" as "translation" (p. 124). He uses this term to describe key shifts in meaning across modes and across any combination of them. He also uses the two other terms, "transduction" and "transformation," as subordinate to the process of translation; for him, "transduction" refers to "the process of moving meaning-material from one mode to another—from speech to image; from writing to film" (p. 125). "Transformation" refers to "re-ordering elements-within the same mode, for example, from [one's] tape-recorded account of a meeting to [his or her] telling about that meeting later" (p. 125) to one's writing of a report in a different language.

Data Collection

The research conducted in these studies was qualitative in nature. Data were collected from multiple resources. The data from Case One included 1) the pictures drawn by the pupils; 2) audio and video recordings of the lesson (50 minutes × 2), which were transcribed for analysis; 3) field notes made by the author and co-researchers; and 4) informal interviews with the school principal.

The data from Case Two included 1) the cut-out works made by the pupils, 2) the video-audio recordings of the lessons (50 minutes × 3), 3) the pupils' written reflection journals and their response letters to my letter, 4) the audio recording of the conversation among the teachers (the classroom teacher, the co-researcher, and myself) in pre- (185 minutes) and post-lesson (65 minutes) meetings, and 5) the email correspondences between the teachers and the author in the pre-and post-lesson periods.

Method of Analysis

Discourse analysis is an umbrella term encompassing a range of methodological approaches that analyze the use and functions of "talk and text" within social interactions (Wiggings, 2009). According to Wiggings, the roots of discourse analysis are varied; however, in any case, the discourse analysis approaches share the following perception on which SCT is based: as discourse constructs reality (or realities), the location of meaning-making is treated not as an individual product but a product of social interaction. The "talk

and text" of discourse analysis usually refers to an interaction in language represented in verbal or written forms. If audio or video data are used, a written transcript is produced; extracts from the transcribed data are used to evidence the analytical points, thereby allowing the reader to show the veracity of the claims made. However, since this study is grounded on the theory that integrates multiliteracies and multimodality into SCT, the "text" of analysis should include visual texts created by learners in addition to verbal and written text in language. An analytical approach that considers the interplay of multiple text modes (visual image and language in this study) was performed by the MMDA.

MMDA is a particular way of analyzing multimodal texts, aiming to elucidate the relationship between the meanings of a community and its semiotic manifestations (Kress, 2011). Multimodal texts were interwoven using an ensemble of multiple modes. In MMDA, the question of who the "weaver" (Kress, 2011, p. 36) is and in what designing process they make meaning is always the central issue. The design process involves creating the agent's original meanings based on the *available designs*, that is, resources for meaning. In this study, I examine how learners express their unique *perezhivanie*-derived intentions through the interaction of dual modes and how they realize their linguistic development using a combination of discourse analysis and MMDA.

The analysis procedure shall proceed as follows:

1) Examination of the *redesigned*: the modes of focus for the two cases in this study involve image and language. First, the meaning or intention of the pupils as the "weavers" or designers needs to be distinguished from their *redesigned*, that is, their artworks and oral performances in a foreign language—in this case, English. Since FLAs were conducted in the order of oral presentation or interaction in English from artworks in both cases, special attention is paid to the deepening of pupils' meaning-making activities through a "transduction" process across the modes (i.e., image to language). "Reading" the meaning or intention of the pupils is done by interpreting how it appears in the elements of each mode, shown in Figure 5 of Chapter 4.

2) Exploration of the relationship between the pupils' meanings or intentions and their *perezhivanie* in their *redesigned* work: at this stage, it is important to analyze the relationship between multimodal affordance and the pupils' emotions and thoughts that can be read from their works and performance. The study also considers whether there is consistency with their life experiences, which form the basis of "the weaver's" meaning and intention-making.

3) Consideration of the participants' acts of *designing* in the process of their meaning-making: according to SCT, all the *designing* acts presented in Figure 5 of Chapter 4 are not something that an individual learner can achieve by themselves; they are considered a co-constructed social product of all the people, objects, and processes involved in that activity. Therefore, it is important to identify the relevance and continuity of the participants' various

acts in the ZPD as to "why" and "how" they could express their meaning and intention in the *redesigned*.

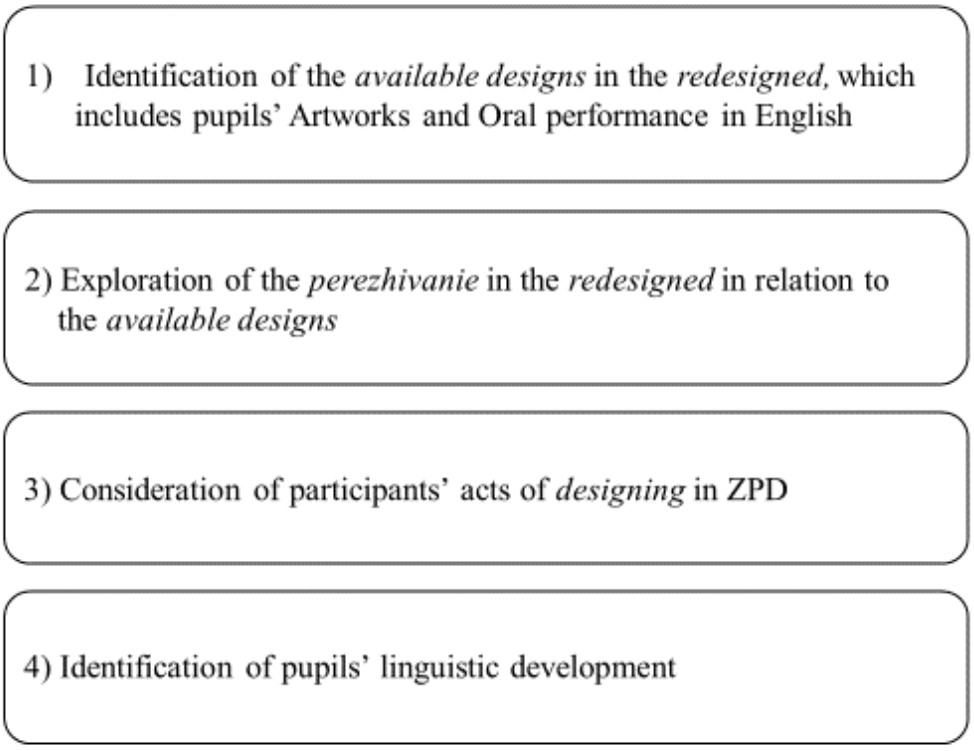
4) Identification of pupils' linguistic development as a consequence of *designing*: in multimodality, linguistic development is promoted in the context of multiple modes.

Following Newman and Holzman's (Holzman, 2018b) tool-and-result methodology, I examine the significance of pupils' linguistic development not only as an outcome but also as a tool to induce future development.

The procedures can be summarized in Figure 5 as follows.

Figure 6

Procedures of Analysis



MMDA thus allows one to examine the diverse and complex developmental processes in the "emic" or inner lives of learners who express themselves across various modes in a learning environment comprising participants from various backgrounds. It is suitable as a method for analyzing an individual operating with mediational means driven by *perezhivanie*, a unit of analysis for SCT (see Chapter 2). The analyses were conducted by myself alongside the researchers I worked with.

Chapter 6

Case Study One

We examined Japanese elementary school pupils' foreign language development in the framework of integrating multimodality into SCT. More specifically, we examined this notion by incorporating multimodal activities with other modes. The first case study analyzed pupils' word-learning practices in FLAs that were integrated with multiple modes—in this case, language and image.

Study Context and Participants

The research classes were conducted over two days: June 30 and July 7, 2017. The participants included 29 fifth graders and myself (hereafter "Japanese teacher" [JT]), mainly in charge of the English lessons with my co-teacher, Adam (a pseudonym), a native English speaker from the US. The lessons were open to observation for teachers as well as visitors from outside the school. The observers thus included their Japanese classroom teacher, an assistant foreign teacher from the region, and two researchers from a primary schoolteacher-training university. All the pupils spoke Japanese as their first language and had no experience of living abroad; a few had, however, taken English lessons at private institutions. According to the principal of the school, many pupils had lively and cheerful dispositions, although some had experienced academic difficulties not only in the FLAs but also in their

mother tongue subjects. Most pupils' oral skills were approximately equivalent to the Common European Framework of Reference Japan (CEFR-J)[26] pre-A1.

When the study was conducted, the elementary school was working on creating classes for "proactive, interactive, and authentic learning" (MEXT, 2017) in all subjects. As noted earlier, the pupils' proficiency level in English was at a complete beginner level. It was thus easy to predict that they would have difficulty in grasping a foreign language in sentence units; therefore, I proposed vocabulary learning. The vocabulary learning activity was designed from the viewpoint of SCT, which encourages pupils' comprehension by guessing, thereby using their spontaneous concepts based on their life experiences, rather than directly copying the lexical meanings presented by the teacher. In teaching vocabulary to young learners, multimodal approaches are considered to be effective. Butler (2019) lists the following means as effective multimodal strategies for children's vocabulary learning, including their L2/ FL learning: music, songs, pictures, physical activities, and gestures. In the activity proposed for this case study, it was planned that the pupils would learn the

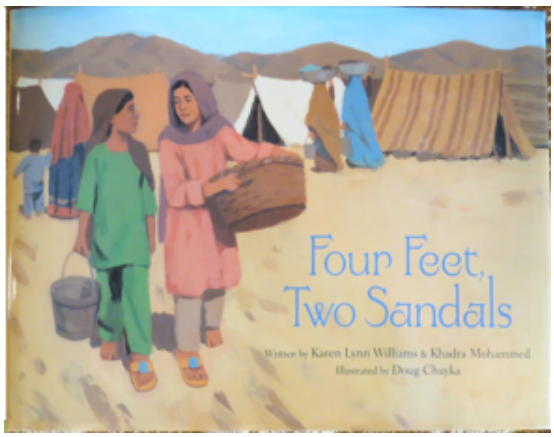
[26] The CEFR-J is an English proficiency index originally developed by Japanese researchers in English education under a national commission. It is based on the fact that 80% of Japanese native speakers have A-level proficiency in English (Tono, 2013). The CEFR-J team added the pre-A1 level prior to A1. Pre-A1 level involves the ability to recognize familiar or everyday words when spoken slowly and clearly in oral situations and to express oneself by pointing at real objects using basic formulas. These descriptors are consistent with the achievement goals in FLAs in primary education.

meaning of a newly introduced term in a distinct context in a multimodal way. This was inspired by the theory of multimodality, which states that the expression of learners' intentions can be enhanced by combining multiple modes.

The chosen word was the verb "share," which has multiple meanings depending on context. First, the pupils were exposed to the term "share" in the book *Four Feet, Two Sandals*[27]; they were then given the task of drawing a picture of something that they can "share" with somebody.

Figure 7

***Four Feet, Two Sandals* (Williams & Mohammed, 2007)**



[27] In the afterword, it is written that this story is based on the experiences of one of the writers, Khadra Mohammed, in a refugee camp in Peshawar. Peshawar is located on the border between Afghanistan and Pakistan, where relief workers provided clothes to a crowd of people. The main character of the story, 10-year-old Lina, manages to grab one sandal in the bustle. She had been barefoot for two years since she had come to the refugee camp. While looking for the matching sandal, she discovers that another girl, Feroza, had taken it. Like Lina, Feroza's feet were also cracked and swollen. On the following day, Feroza brought her sandal to Lina because her grandmother told her that it would be useless to have only one. Lina suggested taking turns wearing the pair of sandals by saying, "we can share." The two became friends and shared two sandals between four feet (hence the title).

Primary FLAs focus on oral activities (MEXT, 2017a); the pupils were thus not required to accumulate knowledge from the dictionary or the static meaning of the word "share." Therefore, the emphasis was not on pupils' static knowledge acquired as a result of the activity, rather their future potential based on the reality of how they are "re-sourcing" the currently available resources. I examined this process from the perspective of SCT with multimodality by analyzing the image and oral-related interactions that emerged from the lessons.

Lesson Implementation

Encountering Words in Multimodal Means

The objective of the lesson on day 1 (June 30, 2017) was to understand the term "share" used in the story *Four Feet, Two Sandals*, which describes life in a refugee camp. In the story, two girls, who each own half of a pair of sandals provided by an aid organization, develop a friendship. The activity started with English words for parts of the body with which the pupils were already familiar. The teacher observed the pupils' vocabulary knowledge while touching their body parts without saying their names (Asher, 2009). Next, the names of the items to be worn on each body part (e.g., a cap for head, gloves for hands, a shirt for the body, and sandals for feet) were reviewed in association with the verb "wear."

The differences in the meaning of the word "wear" between Japanese and English were interesting for the pupils. In Japanese, the act of wearing requires different verbs such as

"*kaburu*" (for things to put on one's head such as a cap or hat), "*kiru*" (for things to put on one's body such as clothes), and "*haku*" (for things to put on one's bottom half such as pants or shoes); in English, however, it is possible to use the verb "wear" regardless of the body part. The pupils also encountered an unfamiliar word, "perfume," by guessing the teacher's gestures of spraying something and sniffing the air.

After building a rapport with the pupils through these physical activities, we moved on to *Four Feet, Two Sandals.* Instead of reading out every line of the story in the book, the teacher showed the pictures to the pupils and gave them the outline of the story as simply as possible by asking questions using words that the students could understand.

To assess the situation, the pupils relied on the image on the page, the one in which the girls happened to each grab a sandal from a refugee camp ration. The first day ended with the pupils discussing what they would do if they were either of these girls. One of them suggested the idea of determining the age of the other person and that the sandals should be given to the younger one. On day one, the pupils were told only the line that one of the girls said to the other ("We can share") but not what it means to "share" a pair of sandals. However, at the end of day one, none of the pupils had produced the solution of using the pair of sandals together.

Figure 8

A Scene from Four Feet, Two Sandals **(William & Mohammed, 2007)**

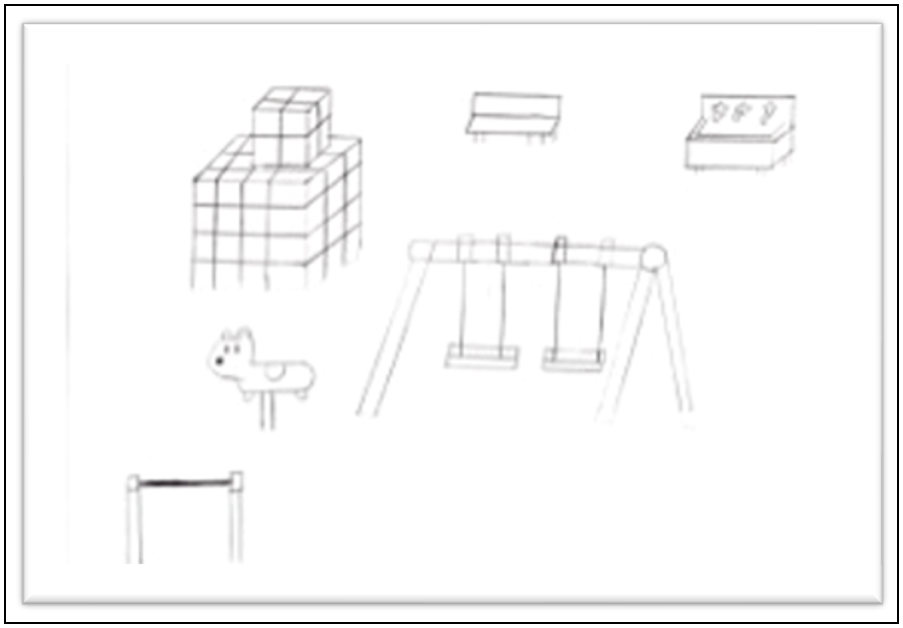
Understanding the Meaning of "Share" by Expressing Perezhivanie in Images

In the following lesson (45 minutes) conducted on day two (July 7, 2017), the pupils got to know the meaning of the verb "share," which was new to them, using the story images. Lina's solution of sharing the sandals was explained to the students, which they discussed in Japanese. Next, several other contexts, where the word "share" can be used, were introduced by the teacher to the pupils, for example, "I share my basketball ball with my brother" and "I share my study room with my sister." This was done while interacting with the pupils by asking questions, such as "Do you like basketball?" and "Do you have any brothers and sisters?". Next, the pupils were given the task of expressing what they shared in their daily lives by producing a drawing. When the pupils finished the drawing, volunteers were asked to come up to the front and introduce their drawings to other pupils.

The drawings that the pupils created considering their own life experiences could be categorized into two types: those in which they share something concrete with someone, such as a pizza, cake, or apple, and those in which they share a physical space with someone, such as a park or kitchen. This indicates that the word "share," a foreign word that is difficult for pupils to explain in a single word in their native Japanese, such as *wakeau*, *issho ni tsukau,* or *tomo ni suru*, is perceived by them as having various meanings depending on the context. Among the pupils' drawings, Ken's (a pseudonym) park (Figure 9) and Naomi's (a pseudonym) kitchen (Figure 10) conveyed the same meaning as the context of the sandals that Lina shares with Feroza. Along with the drawings the two pupils presented, transcripts of the conversations between the Japanese teacher and the students are shown below (Excerpts 1 and 2).

Figure 9

Ken's Drawing



Excerpt 1

Conversation between the teacher (JT) and Ken[28] (cited from Iwasaka, 2018)

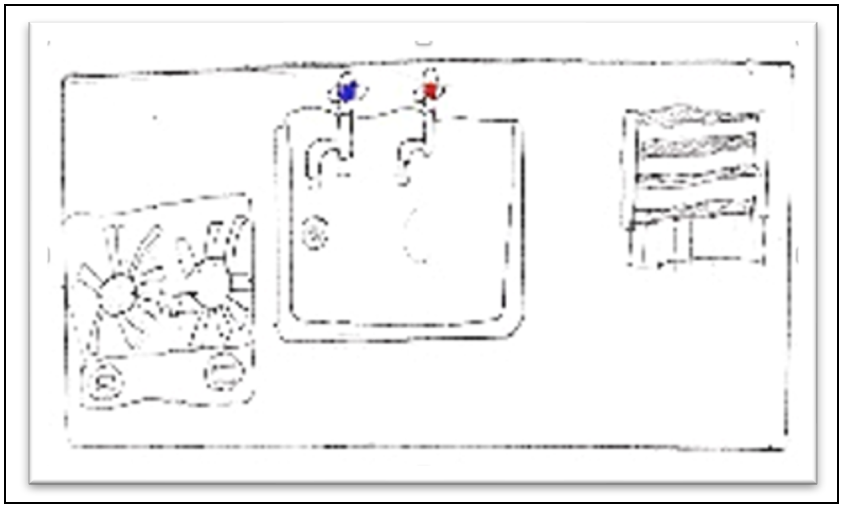
01 JT	Hai (OK)
02 Ken	*E::tto:: (well)*
03 JT	*Nanigamieru*? (What do you see?)
04 Pupils (Ps)	Park
05 JT	So, this is a park. Why? *Nanndewakaru*? (How do you know?)
06 Ps	*E::tto (well)*
07 Ken	*Buranko*? (Swing)
08 JT	*O, oboeta!* (Oh, you remember that!) What's this?
09 Ken	Swing
10 JT	Swing
11 Ps	Swing
12 JT	What's this?
13 Ken	Jungle gym
14 JT	Jungle gym
15 Adam	Jungle gym
16 JT	Do you call this a jungle gym?
17 Adam	Yeah
18 JT	Yeah
19 Adam	Jungle gym
20 JT	What's this?
21 JT	*Korenani*? (What's this?)
22 Ken	*U::n (.) Animaru:: animaru* (Animal swing)
23 JT	Hahaha
24 Ps	(Laugh)
25 JT	Do you call this an animal swing? Have you seen this before?
26 Adam	No, I haven't seen this before. I don't know what we call it.
27 JT	Animal swing. I think an animal swing is a good name.
28 Adam	OK (.) animal swing

[28] The following conventions for transcribing spoken interaction have been used throughout this paper:
(.) Micropause
(2.0) Timed pause
Wo::rd Sound lengthening; multiple colons indicate a longer prolongation.
See Antaki, C. (2017). An introduction to conversation analysis. Loughborough University. https://learn.lboro.ac.uk/ludata/cx/ca-tutorials/

29 JT	Ahh
30 JT	What's this?
31 Ken	*Aianbah* (Iron bar)
32 JT	Iron bar?
33 Ps	(Laugh)
34 Ken	*Tetsubo:: Aianbah::*
35 Adam	*Ah::*
36 Adam	You know what we call this?
37 P2	*Tetsu o eigode nannteyun*? (How do you say *Tetsu* in English?)
38 JT	Iron
39 S2	*Aian (2.5) stikku*?
40 JT	Ahah, iron stick? (laugh)
41 S2	*Aian stikku jyanaino*? (Isn't it iron stick?)
42 S3	*Aian stikku yattara (2) Tetsu no bo yan* (if it is an iron stick, it should be *tetsu-no* (iron's) *bo* (stick)).
43 JT	*Gomen, gomen* (,) (Excuse me) kite. (Listen) *Sensei* (Assistant Language Teacher (ALT) at the back) *ga ittekureta* (the ALT teacher has just offered an answer). *Sh::hh*. *Sensei no Kiitatte* (Listen to the teacher)
44 ALT	Yes (.) we call it balance
45 JT	balance (.) balance (.) balance

Figure 10

Naomi's Drawing



Excerpt 2

Conversation between the teacher (JT) and Naomi (cited from Iwasaka, 2018)

46 JT	*Hai, what's this? Nandatoomou*? (What do you think it is?)
47 Naomi	Kitchen
48 JT	Kitchen
49 Adam	Kitchen
50 JT	Kitchen
51 Naomi	*Etto::,(.)E::to::oo(.)maza:: a::n(.)ma(.)maza: :fren* *(Umm::,(.)well::um::m(.)moth:: a::n(.)mo(.)mother: :fren)*
52 JT	Mother friend?
53 JT	You share (.) your kitchen (.) with
54 Naomi	My
55 JT	My
56 Naomi	Mother and
57 Naomi	And (.) mother friend (.) friend
58 JT	*U::n(.)hah :* (Oh, wow!). *naga:ibunnsho:iemashita ne::minna(.)kikoeta*? (You made a long sentence. Did you all hear it?)
59 Ps	*Un* (Yeah)
60 JT	*Hai (.) ierukana :* ? (OK, can you say it?)
61 JT	I
62 Ps	I share
63 Ps	Kitchen (.) with (.) my (.) mother (.) and (.) mother's friend
64 Adam	My mother's friend
65 JT	Wow!
66 Adam	Wow!
67 JT	*sugo::I* (Amazing!)
68 Adam	That's a nice picture. Oh, good job. Thank you.

Pupils' Perezhivanie

Meaning was assessed across various modes; therefore, the pupils' meaning should be understood in relation to their drawings and recounts. The objects in all the pupils' drawings, not only those of Ken and Naomi, were inspired by their own life experiences. These emotional experiences (or *perezhivanie*) are one of the most important *available designs* for pupils to make meaning.

Let us consider Ken and Naomi's *perezhivanie*. Ken's park, drawn from an angle that pulls the "camera" back, features typical playground equipment placed in a familiar layout. The forms of the objects, accurately drawn without a reference, indicate that for Ken, such a park is alive in his life experience. What is interesting is the term "*animal swing*"[29] (L45), which he coined in the oral exchange with the teacher. The name was coined from the idea of swinging a swing set, which he had just learned from Adam while drawing. He created it to express the movement of the animal-shaped device. Ken used his *perezhivanie*, that is, the joy of playing with friends in the neighborhood and his knowledge of the English language, particularly the concept of the word "swing," as something "moving back and forth." This is, in his worldview, something to "share."

In line with Holzman's concept of tool-and-result, the term "animal swing," which Ken coined from the freshly learned word "swing," using his *perezhivanie* as a tool to capture the function of unique playground equipment, has now become a new tool for Ken's further linguistic development. Through the process of Ken's mental development within the framework of the integration theory of SCT and multimodality in this study, we consider that Ken's actual experience in the park and the chain of words that he used are all meditational tools, that is, the *available designs* for further mental development. However, most

[29] The equipment that Ken referred to as an "animal swing" is more commonly known as a "spring rider" in English (https://eigogoblog.com/playground/#toc11).

importantly, Ken's naming of the special playground equipment might not have led to the unique idea without his *perezhivanie* in the park.

As Ken did with his park, Naomi depicted common elements in her kitchen, including the stove, sink, and cutting board. She colored the hot water faucet red and the cold water faucet blue. In the image, the kitchen is drawn largely in the center. Her perspective is that of herself standing in the kitchen, perhaps cooking or washing dishes. I consider her "emotional attachment" to this place as her *perezhivanie*.

Furthermore, the fact that she shares the "kitchen" with "her mother and her mother's friend" (L6–12) helped us identify a clearer vision of her attachment to the kitchen. Naomi's engagement and spontaneous remarks surprised me, the other teachers, and the principal, as she was usually very quiet in class. After learning about Naomi's background, which had certain complexities in a single-parent family, her drawing and description left a lasting impact. The "meaning" that she portrayed in the *redesigned* was conveyed by the integration of varying *available designs,* such as her affection for her life with her "family," the description of the kitchen that represents her *perezhivanie,* and her words and attitude in her oral interaction with the teacher.

Emotiveness Embedded in the Word "Share"

Why is it that we can sense so much of the students' *perezhivanie* in their work and oral exchanges? I argue that the clue lies in the emotiveness embedded in the word "share."

The pupils' *perezhivanie* is drawn out in a simple sentence structure in English: "I share (object)." These elements of linguistic knowledge, including the word sense or meaning embedded in a word and sentence structure, are important *available designs*. I discuss this with reference to Maynard's (2005) notion of linguistic emotionality.

In the Japanese version of *Four Feet, Two Sandals* (translated by Kobayashi, 2009), the phrase "We can share," which Lina says to Feroza, is translated as "*futari no monoda yo*" (it's for the two of us) and "*isshoni hako ne*" (why don't we wear it by taking turns).

Figure 11

Translation of "We Can Share" in the Japanese Version (1)

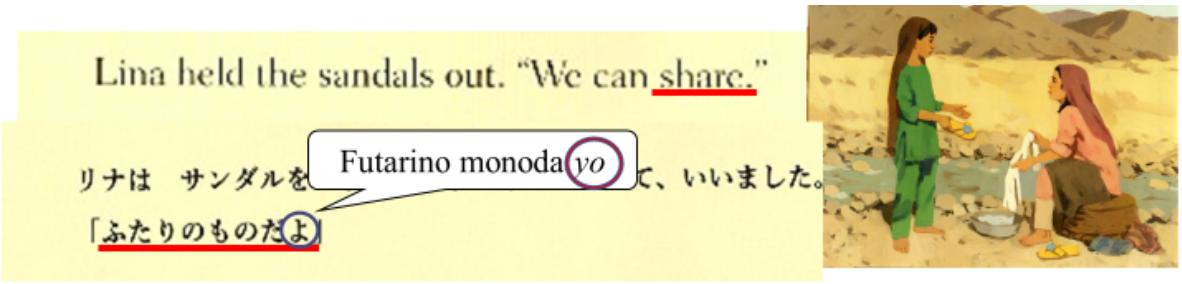
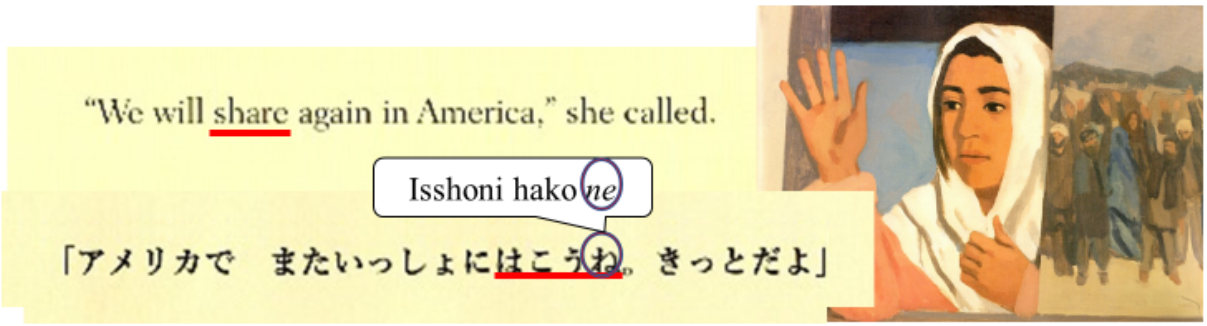


Figure 12

Translation of "We Can Share" in the Japanese Version (2)



Maynard (2005) argues that *yo* and *ne* express emotion and empathy depending on how and where the speaker uses it in context. Considering the English word "share" and its translated form in Japanese, the word "share" involves togetherness or intersubjectivity that is intensified by the particle *yo* or *ne* at the end of the sentences. Maynard (2005) explains that "the particle *ne* appearing at the end of the conversation expresses the speaker's desire to be in empathetic relationship with the person who is spoken with" (p. 299). The word "share" is an emotive verb; the two girls in the story share not only a single pair of shoes but also feelings of compassion and empathy in a difficult situation; in this case, the refugee camp. Thus, meaning-making by translation across languages is an important sign process in multimodality. Although the translation from English to Japanese was not explicitly done in the lessons, the emotiveness embedded in the word "share" played a crucial role in the pupils' designing process and may have functioned as an affordance to evoke the pupils' *perezhivanie*, which possibly paved the way for their drawings.

Linking Entities in the Process of Designing or Internalization

As I argued in Chapter 4, internalization, originally a concept of SCT, can be drawn on in the meaning-making process in multimodality. The acts of *designing* that promote internalization are wide-ranging, as shown in Figure 5 in Chapter 4. Let us now consider what entities are linked to achieving pupils' conceptual development or, in this case, their self-regulating performances.

The meaningful performances that are likely to lead to the pupils' future learning involve Ken's creation of the term "animal swing" and Naomi's spontaneous contribution to the class. The crucial element that elicited such performances from the pupils was the role that their drawings or visual images played in their internalization of the word "share." As I argued in Chapter 4, a visual image creates a triadic relationship in which *you* and *I* stand side-by-side *viewing* something together, while a verbal dialog is a relationship in which *you* and *I* face each other. According to Yamada (2017), the visual image transforms the relationship between *you* and *I* into that of "joint attention" and "empathy" (p. 84). The drawing activity transformed the teacher-learner relationship into a triadic one, making the learning "zone" safer and more open-minded.

The goal of the activity was to understand the meaning of the word "share." Drawing pictures of something to be shared allowed the pupils to personalize the meaning of the word. Further, the visual images filled with the individual's *perezhivanie* provided the pupils the opportunity to express the meaning of the word for themselves in a multimodal manner; the teacher was not allowed to transmit their knowledge of its meaning but had to explore the value of the word for the individual by exploring it together. It is, in this case, the learner who can decide what to "share." It was impossible for Adam, who is unfamiliar with Japanese parks, as is observed in line 26 in Excerpt 1, to "teach" Ken the name of that specific piece of playground equipment. The teachers' praise for Naomi in the discourse lines 65–68 in

Excerpt 2 is not just a conventional confirmation[30] of her "response" that met the teachers' expectations, but their heartfelt surprise and applause for her unwavering and confident performance. The fact that the teacher did not have all the "correct answers" allowed Ken and Naomi to exercise their imagination and creativity in *redesigning* their own *available designs*.

The constructive exchange about the "animal swing" developed into a subsequent word-searching activity of "interthinking" (Mercer, 2000), in which other pupils in the class named the specific bar (*tetsubo*). Since the teachers did not have the "correct answer" for the official name of *tetsubo*, as in the case of "animal swing," the interaction extended from Ken to a pupil who was sitting in the front row as well as other pupils. The entire class ended up engaging in the act of naming something (L37–42). This can be considered an act of interthinking or "thinking together" (Johnson & Golombek, 2016), which allows the participants "to combine their intellectual resources, via language, to achieve more than they would be able to do on their own" (p. 48). The pupils enjoyed this process of collaborative interthinking wherein they were playing with words by substituting prefixes, creatively combining words to make meanings while translating English into Japanese, and trying to judge whether the words they created were appropriate based on their sound (L39–42). The

[30] A teacher's praise of a learner's answer, such as by saying "very good," can sometimes signal the end of an interaction (e.g., Wong & Waring, 2009). A compliment with such meanings may, conversely, block the learner from eliciting further exploratory questions.

process of pupils' internalization of the word "share" was thus accelerated by the multimodal activities, including the visual mode, which reorganized the teacher-learner relationship into an empathic one, thereby linking the entities of meaning-making rooted in the individual *perezhivanie.*

L2 Development from the Activity

The pupils' *perezhivanie* was evoked and drawn out by the emotive word "share." For example, they learned the meaning of the word as "to use together" for spaces like a kitchen or park in addition to the conventional meaning of "to divide" for things, such as an apple, cake, or pizza through an interplay with their drawings, which were intimately related to their own *perezhivanie.* The significance is that the words that they talked about in L2 arose from their mind and were "assimilated in the concrete structure of utterance" (Volosinov, 1973, p. 69), not picked mindlessly from the list of given expressions in repetitive exercises. The apples and cakes that were drawn by the pupils were much more valuable than those printed on picture cards used in typical foreign language classrooms with no stories behind them. This interplay provided a learning opportunity that led to ZPD and catered to pupils' social and emotional backgrounds. Thus, the pupils regained their autonomy for learning and enhanced their intrinsic motivation for further development in the acts of *designing*, which was co-constructed with participants in the ZPD.

Chapter 7

Case Study Two

Case Two comprised Matisse's "Cut-Out" technique activity; the pupils expressed their favorite memories from their elementary school years in a multimodal way.

Study Context and Participants

The research classes were conducted over two days, February 12 (two consecutive lessons) and February 13 (one lesson) in 2019. The participants were 36 sixth graders at a public elementary school in Japan. Ms. Kita (a pseudonym), the classroom teacher, taught the lessons, and two visiting researchers joined to support the activities. I, as one of the researchers, was in charge of the English lesson on the second day; the other researcher was an expert in art education. The reason for having outside researchers in the classroom was that this initiative is part of a study on cross-disciplinary practices in arts, crafts, and foreign languages, as described in Chapter 5. All the pupils spoke Japanese as their first language and had no experience of living abroad; a few had, however, taken English lessons at private institutions. According to Ms. Kita, her pupils had a reserved attitude toward speaking English; most pupils' oral skills were approximately equivalent to CEFR pre-A1 (for details of this level, see Chapter 6).

The pupils, who graduated from the elementary school several months after these lessons, were asked to choose and describe their "best memory" from their elementary school

years and make a presentation using a model passage contained in *We Can! 2* (MEXT, 2018, pp. 50–57). We assumed that the activity would allow them to capture their emotional experiences in the events they chose and would thus provide a good opportunity to practice multimodality.

To help the pupils develop ideas of their favorite memories in multimodal ways, we planned to use the "harmony of the scissors and paper" art activity from an arts and crafts textbook authorized by the MEXT (2015), which is a collage activity that combines multiple shapes and colors. In the language activity, the pupils learned words and expressions related to the various school events they had experienced. The aim was to have the art and craft activities facilitate their creativity and initiative in visually expressing their feelings alongside their limited knowledge of English.

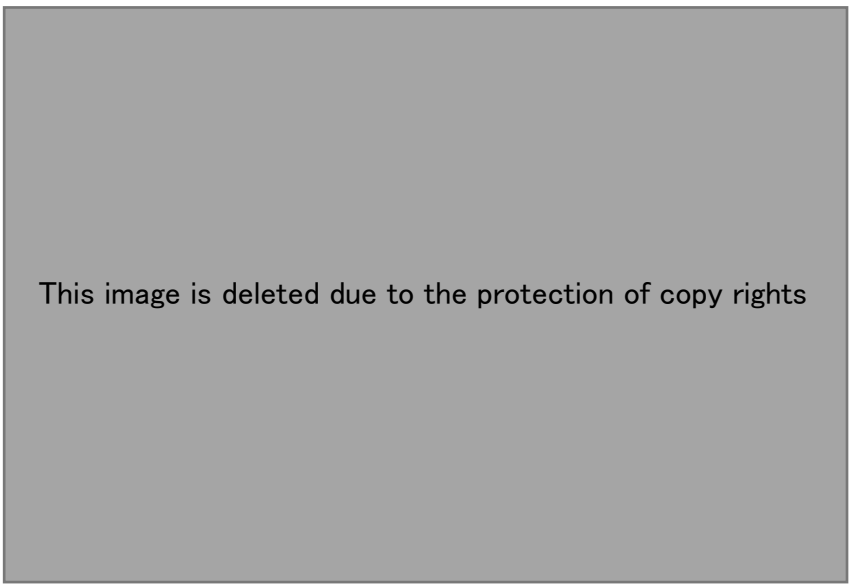
Henri Matisse's technique of *kirigamie* (paper cut-outs), which appeared in the textbook, was chosen because it was relatively easy for younger children to manage and also

met the requirements of having an educational effect.[31] Matisse's works were carefully selected by the teachers by considering the appropriateness of the learners' age, interests, and psychological maturity. The selected works were as follows: *The Codomas* (1947), *Destiny* (1947), *The Sorrow of the King* (1952) , and *The Snail* (1953).

Figure 13

***The Codomas* (Mattise, 1947)**

https://www.centrepompidou.fr/en/ressources/oeuvre/cyb4Ax



[31] Henri Matisse, who is well known for his liberation of color, created a unique expression technique named *kirigamie* (paper cut-out collages) in the last decade of his life. He was forced to change his techniques owing to the deterioration of his health. He had long sought after specific colors and lines, but his physical decline prompted him to find an alternative method or technique of drawing in color instead of "putting in" color after drawing an outline. The impromptu expression of color with scissors and cutting out pictures released him from the restrictions and constraints of painting and brought him a new, lively, dynamic sense of rhythm and color that is more simplified and refined than had hitherto been seen in his work. He used colors according to his own sensibility, without being bound by any intrinsic color of the object itself, for example, the green of spinach or the yellow of a lemon. He continued to consider the effects of color combinations in his compositions (see https://www.henrimatisse.org/). The activity of making cut-outs is relatively manageable for younger children; nevertheless, it results in unexpected surprises and discoveries in the process.

Figure 14

***Destiny* (Mattise, 1947)**

https://www.centrepompidou.fr/en/ressources/oeuvre/cyb4Ax

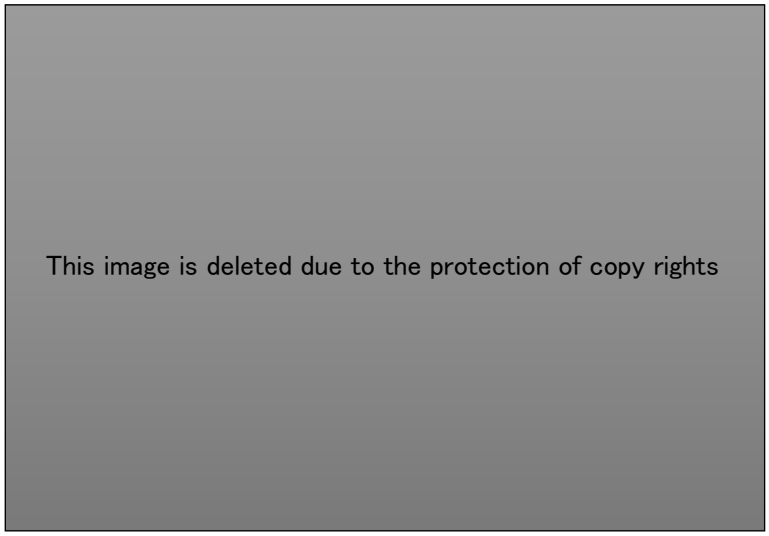


Figure 15

***The Sorrow of the King* (Mattise, 1952)**

https://www.centrepompidou.fr/en/ressources/oeuvre/cyb4Ax

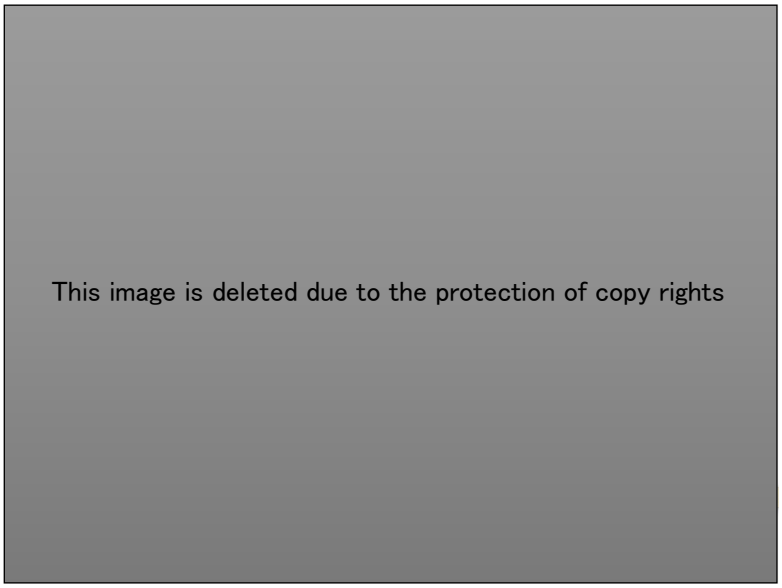
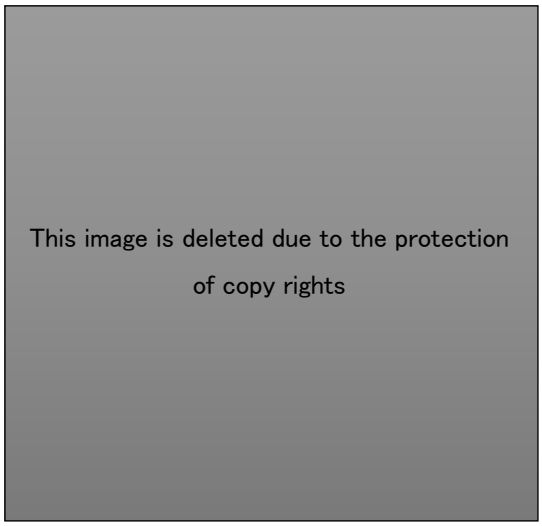


Figure 16

The Snail **(Mattise, 1953)**

https://www.tate.org.uk/whats-on/tate-liverpool/display/works-know-heart-matisse-focus



The entire plan of this integrated study is presented in Appendix 1. Day one covered the cut-out activity and a few hours of preparatory lessons before the art and craft activities. During the preparation period, the pupils learned how Matisse had produced paper cut-out techniques while his health was declining. They also reviewed English terms such as "colors," "shapes," "emotions," and "school events." Ms. Kita instructed them to choose a theme that they wanted to express in their individual work. Additionally, they also went on a school excursion to a museum and received more useful information concerning Matisse's works from the curator.

Lesson Implementation

The objective of the project was to enable pupils to express their "best memory" in English by presenting images created using Matisse's "Cut-Outs" technique. This method,

which he called “drawing with scissors,” are collages arranged through the lively compositions of painted sheets cut out into various shapes and sizes. In the art and craft lessons (StageⅢ in Appendix 1), which were separately given before the foreign language class, Ms. Kita explained Matisse’s ideas and the meanings of the shapes, lines, colors, abstract/figurative painting, depth, balance, harmony, and negative/positive conversion in expressing visual representations of their experiences. In StageⅣ, Ms. Kita presented to the pupils an art piece of Matisse’s titled “The Codomas.” She asked them several questions in English about the picture to remind them of what they had learned in the arts and craft lessons, such as what the shapes or lines reminded them of, how they felt about the work, and so on. They then cut the colored paper into small pieces using scissors, and the fragments of paper were sorted into small boxes according to the colors.

Figure 17

Model Expression Written on the Blackboard

(Model passage)

How to make a presentation

I am ( ).

My best memory is ( ).

I enjoyed ( ).

It was ( ).

Teacher: What is your favorite part of your picture?

Pupil: I like (noting the part they like) because I like (the color, the shape, the line, the harmony, the balance, etc.)

Teacher: That’s wonderful. Thank you.

When the materials were ready, the pupils began to depict their own experiences with the cut-outs for thirty minutes. The teachers walked around in the classroom and offered advice to pupils when necessary. The pupils were engaged in the activity and tried to physically manifest what they imagined with the fragments of paper. When they finished their works, they were told to take photos of them so that they could later be shared with the class. Finally, the pupils were asked to discuss their cut-outs in pairs by filling in the blanks on the blackboard (Figure 17). A few pupils were then invited to the front by Ms. Kita, who presented their work to the class. Although they could complete the first four blanks successfully, they could not skillfully answer the teacher's question. For example, one of the pupils could not respond to the teacher's question, "What's your name?" This was probably because the provided model passage instructed them to answer with "I am…" instead of "My name is…" Similarly, for the other sentences, the pupils could not explain an event in their own words, although they could choose from the vocabulary words provided. She might have been able to say it by memorizing the sentences if it had been in the form of an individual presentation rather than an on-the-spot oral response to the teacher. When she was unexpectedly asked what emotions she wanted to express through this work, she failed to articulate her ideas in words.

To overcome this problem, the model sentences were slightly changed for the foreign language lesson, which was conducted on the second day; a new sentence starting with "I

shared …" was added. As was discussed in Chapter 6, the word "share" means not only having or using something with others but also experiencing or enjoying something with others. We thus assumed that the word could allow the pupils to pay more attention to emotional aspects that were experienced with others in the class.

In the following lesson on day two, the word "share" was introduced to the pupils with some Japanese translations. After the entire class discussed the meaning of the word, the teacher summarized that they could also share memories, feelings, or experiences instead of only food or physical materials. They came to understand the multilayered meanings of the word "share" and were very much engaged in revising their worksheet; they added varying items for something they shared in their "best memories" such as "oranges," "french fries," "fun times," "excitement," "campfire at summer camp," and "the Codomas." The word "share" was thus understood by the pupils to mean something they wanted to treasure; they expanded its meanings and referred to an individual sense of the word. This was clearly indicated in the pupils' reflections written in Japanese; for example, they wrote, "Today's lesson helped me become fond of English," "I want to share my feelings when I feel sad or happy," and "I now understand there are many different meanings for 'share.'" Thus, the addition of the objects, such as "french fries" and "campfire," which the pupils responded to with the introduction of the emotive word (Maynard, 2005), made their "best memories" more emotive and descriptive. Ms. Kita and I confirmed from our observations that almost all

the pupils reached the above common understanding of the word's meaning, although there may have been differences in degree.

Available Designs Used in the Pupils' *Redesign*

The figures below are the pupils' cut-out works and their English expressions.

Figure 18

Yuto's Cut-Out Work: "Feelings of the Sports Day"

Figure 19

Aya's Cut-Out Work: "Sports Day"

Figure 20

Taku's Cut-Out Work: "The Zoo"

Figure 21

Miki's Cut-Out Work: "Sports Day"

Figure 22

Luna's Cut-Out Work: "Camp Fire"

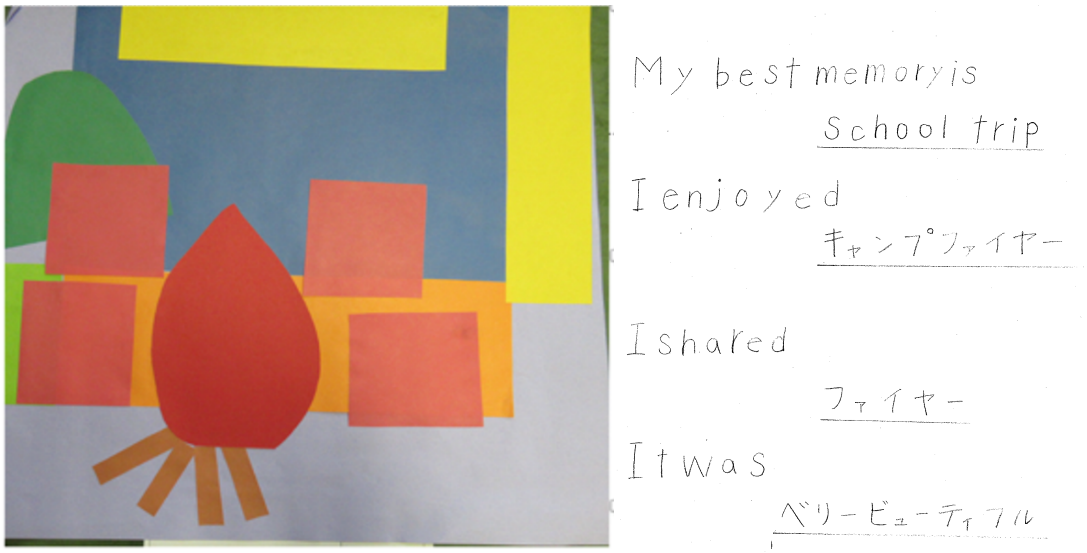


Figure 23

Masa's *Cut-Out Work: "Sunset at Huis Ten Bosch"*

Masa's worksheet was not handed in.

Matisse's Cut-outs: Techniques of Abstraction

The most important aspect of Matisse's "Cut-Outs" technique that the pupils learned in the art and craft lessons was to express their meanings and intentions through abstract elements such as colors, lines, shapes, sizes, angles, layout, and visual points. Matisse's techniques of abstraction were used as the *available designs* in the pupils' works. For example, his technique of representing people and events as abstract figures, as seen in his "Destiny," (Figure 14) was used in Yuto's (Figure 18) depiction of three players standing on a podium as well as the lines of people in a relay race in Aya's (Figure 19) *Sports Day*. Although some of the figures were not fully abstracted, we can see the pupil's intention to abstract them in their own way. Moreover, the finely-cut papers scattered all over the surface

of Taku (Figure 20) and Miki's (Figure 21) works were used to express such emotions as those seen in Matisse's "The Sorrow of the King." (Figure 15)

English Vocabulary in the Fixed Sentence Pattern

How did the pupils engage in the *available designs* of language in their expressions of meaning? As can be seen with Matisse, the artworks' titles both help and limit the viewer's understanding of the work. For example, the title "Destiny" (Figure 14) greatly expands and liberates the viewer's image of destiny, while the title "The Sorrow of the King" (Figure 15) serves to convey the message more directly by limiting the work to melancholic music and emotions, despite the brightly colored leaves.

The pupils' English vocabulary was limited, and some words are thus spelled as they sound or are written in the Japanese *kana* and *kanji*, which is allowed in elementary school FLAs because pupils are not yet at the stage of learning the "correct" spelling of words. However, what is noteworthy is the vocabulary chosen by the students. The words they chose provide clues of what Vygotsky called "sense," and the cut-out works enable them to materialize their meaning. In particular, the pupils' personal experiences and emotional expressions elicited by the word "share" convey their intentions to the viewers more clearly by expressing the transducted images into the mode of language (see Figure 5). The pupils' grasp of English vocabulary and sentence structure are fixed and limited; however, just like

in a *haiku*[32], their simple English expressions such as "a baton shared by a relay team" (see Figure 19) or the "fire in the camp" that Luna found "beautiful" are poetic and powerful enough to make the viewers imagine the fun-filled time they had with their friends during those school events (see Figure 22).

Socially Shared Knowledge and the Personal Interpretation of Colors Related to *Perezhivanie*

As noted earlier, socially shared knowledge and personal beliefs or values are a part of the *available designs*. Furthermore, *perezhivanie,* which is closely related to individuals' values and experiences, is also a part of the *available designs*, that is, the source for constructing the agents' intentions and meanings. Viewed through the lens of multimodality, the pupils creatively expressed their intentions and interests in the *redesigned* by utilizing preconceived cultural ideas behind certain colors and shapes; for example, what color or shape represents what emotion is sometimes different for each person since it reflects an individual's interpretation despite being culturally defined.

In every cut-out (Figures 18–23), the parts that the pupils wanted to emphasize were placed in the center, and their thoughts and feelings toward the event were expressed through colors, lines, shapes, and words. For Yuto (Figure 18), happiness or joyfulness was expressed

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[32] *Haiku* is a literary art form consisting of only seventeen syllables. Accordingly, it is important to avoid detailed descriptions and state iconic objects or events that the reader can relate to. For example, there is a famous *haiku* by Basho that goes as follows: "Old pond / A frog jumps in / Water's sound" (English translation). The reader can be at peace with the world in silence because of Basho's description of the scene using simple vocabulary.

through decorative zigzag lines that symbolize the shining light coming out of the trophy. This emotion was also expressed through the assorted colors of Aya's lines of people (Figure 19) and in Miki's scattered pieces on the ground (Figure 21). Taku (Figure 20) also expressed his joy with shredded paper, although they are in rather dark colors in his "sense" of *tanoshisa* (joy), while Luna (Figure 22) placed a bright red flame at the center, symbolizing her feelings of contentment and upliftment at a campfire with her classmates. The pupils' intentions behind their artworks came from their own emotions and thoughts grounded on their own experiences, not anyone else's. They are familiar with their own emotions and experiences, which is why they can develop subjective intentions. Thus, pupils' emotional experiences or *perezhivanie* as the *available design* are the most powerful driving force for self-expression or meaning generation.

Participants' Acts of Designing as Affordance in the ZPD

In the previous section, the *available resources* used in the pupils' *redesign* were examined. This section addresses the participants' engagement or acts of *designing.* The pupils could not have generated the *redesigned* on their own without the various affordances of their learning community in the design process. Therefore, in this section I discuss acts of *designing*, that is, how they accelerate the pupils' process of *designing* by referring to van Lier's (2004) affordances in his ecological view. I focus on the following concepts: imitation, play, and linking entities.

Imitation

Matisse's techniques, which were originally the *redesigned* of colors and shapes of natural objects paired with his own sensibilities, were seen in all the pupils' works (the *available designs*), although completed at varying degrees of skill. The act of transforming Matisse's techniques and positioning them in their own works can be explained through the concept of *imitation* in Vygotsky's SCT. As co-researcher in art education on this project commented, the cut-out technique seen in the pupils' work is not something that can be done simply by learning how to do it from a teacher; it requires a strong desire from the pupils themselves to do it (see Fujii et al., 2021 for details).

In Vygotsky's theory, *imitation* is a crucial concept in understanding the process of human mental development. For him, "a person's ability to imitate is the basis for a subjective ZPD, while the objective zone exists through the social situation of development" (Chaiklin, 2003, p. 51), as noted in Chapter 2. It is not "a mindless copying of actions" (Vygotsky, 1997, p. 95; 1998, p. 202), rather something "that the child cannot do independently, but which he can be taught or which he can do with direction or cooperation or with the help of leading questions" (Vygotsky, 1998, p. 202). Holzman (2018a) observed a phenomenon in which the ZPD was created. Although Vygotsky discussed it primarily with regard to a child's language development, the pupils' imitation of Matisse's techniques can be witnessed in many of their cut-outs; in fact, it is a key factor that stimulated the pupils'

autonomy and self-motivation to discover their *perezhivanie*.

The pupils were fascinated by the techniques used in Matisse's works and found them "so cool" that they really wanted to incorporate them into their own works. Becoming fascinated by someone or something allows a person to desire to know more. These desires open up a dialog with others, including the artist himself and his works, and build a circuit of learning. Ms. Kita received the following written feedback from a pupil: "Until now, I hadn't really asked the teacher anything, because I thought, 'I don't need to ask the teacher.' But when I did, I understood what I had not previously understood. I thought, 'Oh, it's better to ask the teacher'" (Masa; February 13, 2019). I learned from Ms. Kita that Masa had asked her how to make his cut-out work more abstract like Matisse's. After consulting with her, Masa represented the setting sun as a square (Figure 22); this is very similar to Matisse's composition of the square shells of snails. As Yamada (2018) points out, visual images transform the relationship quality between the teacher and learner. Ms. Kita and Masa used Matisse's art as a mediation tool to reconstruct their relationship with each other, moving from a dichotomous relationship of givers and receivers of information to a triadic relationship grounded on empathy. The activation of Matisse's own spontaneous attention, logical memory, concept formation, and willpower allowed them to realize a system of mutual appreciation of Matisse's works.

When asked why she thought Masa, who does not usually ask the teacher questions,

requested her opinion this time, Ms. Kita replied that it was because the subject at hand was Matisse's cut-outs. My interpretation behind Masa's words and actions was that the technique of paper cutting, in which he was asked to transform the concrete into the abstract, inspired his curiosity, and this excitement ignited his desire for intellectual activities. This example demonstrates how important it is for one to interact with others who are more capable than oneself in order to bring out the act of *imitation* that will foster development. However, in this exchange of dialog, the "others" are required to observe carefully and "read" the learner's emotions. I believe that Ms. Kita was able to respond to Masa's emotions appropriately.

There is also something quite remarkable happening from a sociocultural aspect. What is interesting about the pupils' use of color is that their feelings of "fun" while having a "great time" were expressed in different colors by different pupils; for example, it is expressed through bright and warm colors in Miki's (Figure 21) work and dark gray colors in Taku's (Figure 20). Generally, happy or joyful feelings are often expressed with bright colors rather than dark ones. However, Matisse was not bound by such stereotypes of color and used them according to his sensibilities. In fact, in Matisse's "The Sorrow of the King," (Figure 15) the bright yellow leaves spread all over the base of contrasting pink and indigo, which catches the viewer's eye. Taku's (Figure 20) use of dark colors to express his joy, which is an interesting act of *designing*, can be interpreted as an imitation of Matisse's unique

understanding of color. Notably, what made us understand the pupils' act of *imitation* from a multimodality perspective was the gap between the cultural image engendered by the words "sadness" and "joy," which describe the designers' feelings and colors depicted in their visual works. The words and images of the work integrated into a single *gestalt* allow the designer to assert their intentions and creativity.

A possible reason for the activation of such an act of *imitation* by the pupils, in my observation, is the contradictory characteristics entailed in the cut-out activity known as *play*.

Play

Vygotsky emphasizes the significance of play as "an important vital necessity" (Vygotsky, 1997, p. 88) as it creates the learning-leading development called the "zone." Moreover, Vygotsky (1978) noted that children can behave as though they are "a head taller" (p. 102) in play. What he means is that children act "older" or "more mature" during play. Concerning this "head taller" metaphor, Holtzman (2018a) notes the importance of the interplay between imagination and the rules that mediate it: "Imagination frees us; rules constrain us. Creating an imaginary situation frees the players from situational constraints and, at the same time, imposes constraints (rules) of its own" (p. 46). The constraints imposed by rules may seem to disturb the sense of having fun; however, this conflicting relationship assists the child in forming voluntary intentions and motives to develop their imagination and creativity in the process of accommodating such conflicts. In the case of this activity, the

constraints or rules imposed by abstract expression with cut-out paper allowed the pupils to revisit memorable events and reconstruct their thoughts and feelings in the process of translating them into various colors, shapes, sizes, layouts, and so on. Indeed, the rules played the role of affordance, allowing pupils to demonstrate their abilities in a creative way and enjoy themselves. Rules both constrain and help one become engaged in an activity.

Concerning multimodality, Vygotsky's "rules in play" can be replaced with the "logic of the mode." The special logic of each mode assists and simultaneously constrains the agent in expressing their meaning; multimodal affordance requires the agent's creative act of overcoming the constraints in the logic of that particular mode. The pupils named their *perezhivanie* in words; however, their rich and inexpressible emotions were stripped away by reducing them into the limited number of words available to them. Further, the pupils were required to actively think about how their meanings could be translated across the modes, that is, between abstract images and verbal language. Moving across the different logics (see Table 1) that involve contrasted rules allowed the agents to understand their *perezhivanie* more deeply. This is made possible by art–language activities that have a playful quality to them, in which the pupils explore the meaning of their personal *perezhivanie* within the rules of translation across the modes rather than using the simple rule of mindlessly copying words or choosing among several words given to them by a teacher.

Consequently, this contradictory interplay, as a challenging but fulfilling act of

designing, made the pupils engage in the activity and motivated them to move toward more in-depth learning. Miki reported the following in her response letter[33]: "The paper I cut turned into a strange shape, but I found that that made it possible for me to use it to express what I wanted to say. It was fun to see it happen" (February 20, 2019). Another pupil, Yuto, reported, "I was worried at first, but as I went along, I came up with more ideas, and I felt like I understood how Matisse felt. It was very fun" (reflection paper; February 14, 2019). The engagement exhibited by the pupils, assisted by multimodal affordance, enabled them to transform their *perezhivanie* into the *redesigned*, which expressed their meanings distributed across two different modes.

Linking of Entities

All the participants' abilities—including physical, social, symbolic, and conceptual knowledge—that provide affordances for activity in van Lier's (2004) ecological view, are the *available resources* represented in multimodality, waiting to be *redesigned* in the learning system according to the learner's intent and interests. Ms. Kita's ability to "read" and articulate the meaning of pupils' *perezhivanie* in words played a crucial role in their growth as a learning community through the linking of entities. It was largely because of Ms. Kita's affordance that the pupils produced the word "jubilation," a feeling that was deemed quite

[33] After the class, I sent a letter to the pupils, suggesting a word that I expected would be meaningful for them, and later received a response. This is discussed in detail later in this chapter.

relevant to them. When the pupils expressed themselves with their limited English vocabulary, they inevitably ended up using simplified words. For example, Aya, whose best memory was “Sports Day” (see Figure 19), wrote that she liked the center goal shaped like a butterfly in her reflection sheet; however, when placed on the spot in the lesson, she responded to the teacher’s question about her favorite part as follows:

T: What is your favorite part? (pointing to several parts of the picture).

Aya: (4.0 seconds) *Mada nai* (I have not found it yet.)

Mada kimetenai (I have not decided yet).

T: Ok, what’s your feeling?

Aya: (6.0) *Ganbatteru* (I was working hard at the time).

(Conversation recorded on February 12, 2019).

Aya’s limited response in a foreign language was common among the pupils. However, although she could not respond skillfully in English on the spot to anything other than the fixed questions in the model sentence forms, her *perezhivanie* seemed too complex to express. Therefore, it was not surprising that she could not find the right words.

Ms. Kita “translated” Aya’s feelings on her behalf. According to Ms. Kita’s deep understanding of Aya’s feelings about the sports day, they were not “simple” happy feelings of having done well without enduring any hardship. Rather, Aya experienced the kind of blissful joy that comes from hard work. Aya’s complex feelings were translated as *yorokobi*

no jikan (“time of joy”) by Ms. Kita, who had been the advisor to the cheerleading squad for the sports day; she shared the hard work with Aya, who was one of the members of the squad.

Ms. Kita’s interpretation of Aya’s *perezhivanie* was critical because it made me realize that pupils’ thoughts and feelings are hidden in their unheard voices, which helped me relate this episode to my own experience as a learner of a foreign language. Ms. Kita interpreted the pupils’ complex emotional experiences thoughtfully and vicariously (Appendix 2). Her interpretation was juxtaposed with her own *perezhivanie* as an advisor who had gone through challenging times, allowing her to use her imagination to verbalize Aya’s *perezhivanie.* Furthermore, her recount from the interview made me decide to write a letter (Appendix 3) to the pupils. The word that I had suggested, “jubilation,” turned out to be meaningful for all the pupils in their attempt to relate it to their own emotional experiences. This was a result of the excellent linkage between Ms. Kita’s and my *available designs* in the ZPD, both of which were involved with that of *perezhivanie* of the pupils from different viewpoints.

Let us recall Vygotsky’s notion of word “meaning” and “sense.” If word meaning is understood as an academic concept, then word sense is an individuals’ empirical knowledge gained from their rich life experiences. To value information as more than a mere symbol of word meaning, a “true concept,” it needs to be integrated with word sense. Just like when Barrett (2018) encountered the unfamiliar foreign word *gazellig*, she was able to take the foreign word in as her own because she could resonate the word meaning with her own

perezhivanie from her rich life experience, thereby understanding its lexical meaning. Thus, *gazellig* became a "true" word meaning for her that integrated her word sense. The same can be said for the pupils' understanding of the meaning of the word "jubilation." A hitherto unknown word was brought to life when the pupils could resonate it with their own *perezhivanie.* The word "jubilation" as a "true concept" thus clarified their vague thoughts. This moment promoted their mental development. Therefore, what brought them to the word was the result of all their fellow participants' linking of entities while fulfilling their respective positions in the ZPD. Therefore, the meaning of the word "jubilation" ("joy or happiness as a consequence of hardship") functioned as a tool to relate to many of the pupils' individual life experiences (Appendix 3).

Meaning emerges from specific acts and the process of building relationships with people, material objects, and concepts. By putting all the relationships between the entities into perspective, the result was that, through the collaborative efforts of all the participants, the pupils could discover the word "jubilation" in a more holistic and meaningful way. Meaning was made by varying the pupils' acts (such as those of imagination, imitation, translation, and interpretation of *perezhivanie*) and creations into two distinct modes, namely image and language. The objects for these modes involve spoken and written words (in both English and Japanese) in language and visual forms, such as colors, shapes, lines, and layouts. What can be observed about the phenomena of the pupils' *perezhivanie* in these two

modes of expression is that when presented in words, they appeared in reduced forms with a small vocabulary; in contrast, as images in the cut-out works, their visualized thoughts and feelings were richly expressed. The very limited foreign language vocabulary of the pupils was not a hindrance to the viewer's interpretation of the rich images, rather served as affordances or clues to engage in dialog with "more-capable others"[34]. What facilitated the pupils' encounter with the word "jubilation" was the collaboration between their act of meaning-making and the teacher who was actively thinking, feeling, and trying to understand their *perezhivanie* by overlapping it with her own experiences. Overall, in this "learning community," the pupils and the teachers are colleagues in that the pupils are the informant—the knower of their own *perezhivanie*—while the teachers are the interpreters or the translators for the learner's attempt at visualizing their internal meaning.

L2 Development Emerged in the Interplay with Image as a Joint Activity

Reading the pupils' response letters, I found that they understood the meaning of the word "jubilation" through their various life experiences, such as dancing, ballet, piano lessons, Japanese calligraphy, Judo, Karate, baseball, soccer, dodgeball, entrance examinations, and many others. Some described their understanding of the word through their own expressions; one pupil identified the word "jubilation" as the feeling of "deep

[34] See, for example, Morimoto (2020), Sano (2018), and Carroll (2005) for research showing that the learner's errors or silence in an L2 learning context are not a barrier, rather facilitate interaction and thus learning.

pleasure after the irritation and pain of a piano lesson." For another, it involved a bitter experience in which her instructor had been mad at her and made her cry in a ballet class. It is noteworthy that most of the pupils tried to identify the meaning of the word in association with their own emotional experiences. Their respective emotional experience or *perezhivanie* is important because it renders such words ("share" and "jubilation") as distinct as "the concrete structure of utterance," as per Volsinov's (1973) assertion. Consequently, "through involving the interplay between image and language, 'foreign' words to the pupils were transformed into the ones that were rooted in the pupils' life experiences with rich meaning-sense" (Fujii et al., 2021, p. 214).

The discovery of the word "jubilation" was, therefore, a result of the pupils' L2 development and, concurrently, a tool for further development. It was accomplished through affordances or relationships in the learning community fostered in the dynamic process of building the ZPD. Language-learning involves myriad connections that emerge in the process of generating the circulatory system; new meanings will generate the system so that they ecologically activate affordance. The interplay of image and language enables the pupils to face themselves to discover their own *perezhivanie,* further motivating them to be creative in their own mode of expression. Specifically, words such as "share" and "jubilation" are powerful psychological tools through which pupils could perceive future life events.

Chapter 8

Pedagogical Significance and Implications

In this final chapter, I conclude by discussing various educational suggestions for those who are responsible for teaching a foreign language at the schooling level.

Study Novelty

The novelty of this study lies in its theoretical framework. It was noted at the beginning that traditional SLA research has been predominantly cognocentric. However, a sociocultural approach, based on the recognition that intellectual activities are not confined to the mind of the individual but are social acts that emerge from a dialectic relationship with the environment surrounding them, has been expanding its scope. This study particularly relies on Vygotsky's emotion theory, which states that emotions—hitherto marginalized and recognized as inferior to human cognition—are in fact inseparably related to the functioning of cognition; that is, cognition and emotions are in unity. Further, it clarifies the mechanism underlying how emotions play a role in psychological functioning through Vygotsky's concept of *perezhivanie* (Chapter 3).

Vygotsky identified language as an important mediational tool in the psychological development of human beings. For him, language and words activate and are also activated by *perezhivanie*, which further drives the process of psychological development. However, people cannot always immediately express what they feel or think in words. At any time,

there may be a bewildering number of feelings and thoughts that have not yet risen to our consciousness, while others that we are clearly aware of but do not want to put into words. Whether you wish to but cannot, or whether you want to but do not, will vary by occasion.

Essentially, language is not the only means of expressing feelings and thoughts, that is, promoting mental development. While there are times when people want to express their feelings and thoughts with words, they may also want to express themselves through non-verbal means, such as images, music, or dance. It is important for teachers of younger learners to be fully aware of this fact and open to as many channels as possible to access their intentions and thoughts, even when they cannot verbalize them. As noted earlier, it is not as easy for young learners to verbalize their thoughts and feelings as it is for adults, especially since they are still undergoing physical and mental development. Thus, the use of "supplementary materials," such as visuals and audio to help students express themselves through language, is suggested in elementary school FLAs. In fact, many existing educational activities use multimodal means of expression such as picture books and gestures in language education. However, what is most emphasized and encouraged in language education generally boils down to what can be done "with language," since the non-verbal means mentioned above in language education are complementary to language. In this regard, multimodality considers both language and non-language as means of expression, existing with equal value rather than a principal–subordinate relationship. Multimodality is based on

the principle that people can express their emotions and thoughts in a deeper and richer way by combining multiple modes of expression with different logics instead of a single mode with a specific logic, such as in language or image only.

The unique feature of this study framework is that it integrates the theory of multimodality with SCT theory, which states that human mental development is achieved by building relationships with the environment surrounding the individual. Learning, which leads to development, in multimodality refers to the entire process of meaning-making activities that utilize *available designs*. The key principle of the integrated theory is to understand that the *available designs*—the source materials out of which the meaning-making activities are constructed—are distributed between the individual and their environment (see Figure 5 in Chapter 4). I have presented the integration of SCT and multimodality within the ecological model of van Lier's language-learning theory.

In SCT, learning is the process of incorporating knowledge and skills—the original sources of development—within an environment into an individual; the process of meaning-making activities in multimodality creates synergies through a reconciliation of the dissonance in the semantic linkages in a particular learning context. Both theories have in common the notion that development is sociocultural, that is, it occurs in the context of social interactions between the self and others. The most important principle in the integrated model is that the *available designs* for meaning-making are distributed between the individual and

the environment. However, they are not equally distributed in where they exist, depending on the content of the *available designs*. For example, the knowledge and skills that need to be taken in are not as much within the individual learner at the beginning; instead, the learner digests them through imitation, play, and other activities from the teacher and materials existing in the environment. In contrast, *perezhivanie*—the *available designs* that are socially and culturally created through a dialectic relationship with the environment—belongs more to the individual learner. The key to enhancing learning that leads to further development in such a structure is to fully activate the *perezhivanie* within the individual. I conclude that this is made possible by the affordance in the ZPD constructed by all participants who constitute the learning space, as proposed by van Lier. (see Figure 4).

Individual development thus occurs through everlasting learning practices that link people, places, objects, processes, and actions. The most significant achievement of this study is that the mechanism of sociocultural development is hereby updated by the integrated theory of SCT and multimodality. The research questions that specify the perspectives for the analysis of the case studies in this study were formulated based on this framework. Holtzman (2018b) regards Vygotsky's psychology as "a psychology of possibility (not prediction), of development (not diagnosis), of hope (not hype), and of the human *becoming* activity of human 'be'ings" (p. 26). From my understanding, Holzman's point is not that knowing buries the individuals in facts (thereby losing creativity and artistry) but that it allows us to find a

way out of our load that surrounds us. To make this possible, she notes that it is important to perform (i.e., to pretend and play "in-between" with others to gain the development of "*becoming who you are by performing who you are not*" (sic; p. 8). This is why development is tied to potential and is full of hope. The notion of "becoming" captures the "never-ending and dynamic" nature of what Vygotsky's ZPD aims to be. The theoretical framework of this study, which integrates the ecological principle of development based on SCT with the synergy theory of multiple modes, including language, will contribute to providing a perspective on learning activities and assessments that will extend the developmental potential of learners.

Implications for Education

The most important thing for effective L2 learning activities is for learners to have a deep sense of conviction that echoes their *perezhivanie.* To realize this, it is desirable to implement learning activities that combine non-verbal and verbal-only activities. The two case studies in this research were planned according to the suggestions of the integrated theory of this study. A word or language that does not have any resonance with the learner's own *perezhivanie* is one that is personally meaningless to the learner, and therefore, irrelevant. Others' words, no matter how many are accumulated, do not play a mediating role in achieving what is referred to as a "true concept." In contrast, a word that resonates with one's *perezhivanie*, such as Barrett's Dutch word *gazellig*, can play an essential role in

enriching one's sensitivity to language and relationships with others. It depends on how one's *perezhivanie* can be activated within the learning community and whether learners want to realize L2 learning as a "true concept." This is because the key to opening up a dialog with others and fostering development in meaning-making activities is *perezhivanie,* a phenomenon that lies in abundance in the mind of the individual.

Let me revisit the episode I addressed in the introduction. What compelled me to pursue this research was my own feelings of dissatisfaction and discomfort with what was happening in the field of FLAs in elementary schools. Considering the episode that symbolically illustrates this dissatisfaction in light of the theoretical framework developed in this study, the issue that emerges is that the particular activity conducted in my son's class kept the learners' *perezhivanie* inactivated. *Perezhivanie,* which entails a personal "message" from the learner's private sphere*,* is the most powerful driving force to activate human consciousness or will; therefore, when it lies dormant, it is not surprising that ineffective activities do not help learners think proactively and creatively. When the *perezhivanie* is inactive, the child may appear to be performing the task presented by the teacher in a superficially energetic manner; however, on the inside, the child does not develop a sense of hunger for something they do not know, cannot do, or do not understand.

In both cases in this study, the pupils' English vocabulary was quite limited. However, the pupils had access to a wide range of emotions based on their experiences that

were complex and authentic, such as feelings of enjoyment, attachment, happiness, and a sense of achievement after experiencing frustration or pain. Therefore, the pupils found that their emotions could not easily be expressed using simple linguistic formulas. Nevertheless, the pupils were able to discover a new word that was relevant to them owing to the presence of their own *perezhivanie.* Thus, if their emotions are not activated and brought into the classroom setting, the latent seeds of development in the learner's mind will not grow. Considering this, the fact that the pupils' spontaneous wills were activated in the two cases of this study, and language development was verified, as a result, can only be attributed to the fact that *perezhivanie* is activated by language activities that are combined with a visual mode. Moreover, affordance in the ZPD, such as the instructor's careful observation and vicarious verbal communication skills, cannot be overlooked. Thus, to invite children to learn in a proactive, interactive, and authentic manner, it is important that the teaching methods and materials are used to foster learners' *perezhivanie*.

Vygotsky often used metaphors to describe the process of development; one of his more famous ones involves "buds," "flowers," and "fruits" to argue that there are several levels and functions within mental development (Vygotsky, 1978, p. 86). Specifically, the "buds" and "flowers" involve the functions of potential development that are in the process of maturation, the "flowers" are functions that are currently in an embryonic state but will mature tomorrow, and the "fruits" are developed functions. For Vygotsky, the ZPD defines

the functions of the "buds" and "flowers." However, this suggests that the "fruits" obtained by attaining developed functions are not useless or worthless; rather, they function as a tool to mediate the elevation to a higher level of mental development. This never-ending and dynamic loop of learning for further development allowed Newman and Holzman (1993) to discover the tool-and-result methodology.

Consequently, the processes, functions, and stages to be researched are related to the "buds" and "flowers" of development. However, its value must be evaluated based on how much potential and hope can be recognized in the "results" obtained from the practice—viewed as a series of stages—including before and after the ZPD. In both cases in this study, the pupils understood the meaning of the word "share" in the context of their own life experiences. In doing so, they could fully utilize the spontaneous concepts and understand the meaning of a foreign word realistically. Similarly, Barrett (2018) understood the definition of an unknown word by superimposing her own spontaneous concepts, such as "close friend," "love," "joy," "comfort," and "happiness," which she employed from her own *perezhivanie.*

Regarding Vygotsky's principle of the "buds of development," Veresov (2014) argues that it makes no sense to study learners whose mental functions are already developed or at the "fruiting" stage. He also notes that it is unlikely that one will study the development of functions that do not yet exist. This argument may sound rather convincing; however, continuing Vygotsky's metaphor, buds spring out from seeds that lie underneath the soil.

Thus, although we cannot see them, they certainly exist. Particularly in the early stages of language development before they grow to become buds, particular attention needs to be paid to how learners express their intentions during the syncretic phase, as described in Chapter 3. The environment is the "source of development" (Vygotsky, 1994, p. 351), while, in my understanding, the *perezhivanie* in the self stores the seeds that are to become "buds" in abundance. Mental development occurs in a dialectic interaction between the environment and the *perezhivanie*. Further, a multimodal approach, based on the principle that an individual's meaning is distributed across modes, has worked well for finding these seeds. What this study suggests for future language education is to set up materials and activities that allow the emotions generated by an individual's life experiences to become activated in the intellect and guide the cognitive activities necessary for the development of the mind. Accordingly, for one's cognitive activities to be effective in learning activities, the environment must be established in such a way that, above all, the learner or designer's *perezhivanie* is easily revealed.

Lastly, I believe that the findings of this study provide a framework that other teachers or researchers can apply to their own contexts outside of Japan with students of a different age group and multiple linguistic and/or cultural backgrounds. I consider this so strongly because although young learners with underdeveloped language abilities may substitute non-verbal modes for language to a greater extent than adults, Inözü (2018) argues

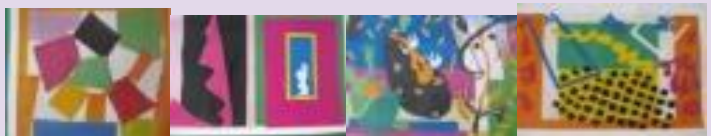
that “drawings are talking.” The primary principle of multimodality theory—that people do not express themselves through only a single mode—is essentially universal, regardless of one’s age or cultural background. Nevertheless, it is expected that the process of building relationships will differ for groups of different ages and cultural backgrounds. Therefore, it is necessary for instructors to become careful observants of both learners and skilled facilitators.

Future Research Directions

Multimodality is grounded in the fundamental idea that people represent their intentions by orchestrating multiple means of expression. According to Kress (2010), the modes include image, writing, music, gesture, movement, soundtrack, and 3D projects. In this study, I only focused on the bimodal relationship between language and image; the children were asked to express their intentions in language in combination with images for this purpose. However, in their daily interactions, children use various facial expressions, gestures, and complex physical expressions. Since physical movement such as gesture is one of the modes, it is possible that the socio-cognitive approach of Atkinson (2007, 2011, 2014) can be used in conjunction with verbal and written language and images. Another possible approach is to analyze learners’ self-expression through practicing activities that combine language with other modal texts, such as audio and/or music. It would be interesting to explore how the resonance of learners’ *perezhivanie* differs when combined with other modal

texts and how such activities will open up further possibilities for L2 learning, which will be the focus of future research.

Appendix 1. Curriculum translated from Fujii et al. (2021)

Stage	Foreign language activities	Art activities	Relevant other activities
1	◆ Reflect on past school events (dates and names) ○ Think about each school event (1 hour) ○ Discuss your favorite school events (1 hour)	♦ Art game using a calendar	♦ Integrated studies ♦ School trip
2	◆ Reflect on school events (content) ○ Think about a particular school event (school trip, sports day, etc.) ○ Discuss your favorite school events	♦ Visit Kumamoto municipal museum (2 hours) ○ Appreciation of Matisse's works guided by the museum's curator	♦ Integrated studies
3	◆ Understand the school events of other countries (2 hours) ○ Think about the school events of other countries	♦ Art game (2 hours) using Matisse's works (1 hour) ○ The Snail/Destiny/The Sorrow of the King/ The Codomas 	♦ Moral education ♦ Appreciation of the picture book *Henri Matisse* ♦ Social studies
4	◆ Express your favorite school memory using the model expression (2 hours) ○ Express emotions using colors and shapes	♦ Make a cut-out project called "My Best Memory" (2 hours)	♦ Integrated studies ♦ Graduation project
5	◆ Present your best school memory (1 hour) ○ Present your cut-out project using the model expression with another sentence "I share …" added.	♦ Appreciate your friends' cut-out projects (1 hour)	

Appendix 2. Ms. Kita's statement translated by the author from the recorded data

If I were to describe it [Aya's *perezhivanie*] in words, it would be "*yorokobiau-jikan*." This expression includes within it all the processes of her most challenging times as well as the good times working with her peers. Precisely because she had had such a demanding time, she felt happy and thoroughly enjoyed her accomplishment. This process, which entailed hardship, was meaningful for her. She remained silent, but this does not mean that she had forgotten her memories or that she did not have things to say. Rather, she had so much to say that she felt unable to say a word. If she had been a first-year pupil, she would have simply said, "I had fun running at Sports Day." For sixth-graders, however, words and thoughts do not always come together. In the *You Can!* textbook, the sentences "I enjoyed ( ). It was ( )." were the only ones they had to learn; however, there are many complex thoughts and feelings hidden behind these simple lines. She did not want her thoughts to be confined into such simple phrases as "happy time" or "fun time." I believe there are many more pupils who are thinking along the same lines.

Appendix 3. My letter to the pupils

Dear Ms. Kita's class,

Hello. I learned a lot from our lessons these last two days—collaborative art and English. Why art and English, you may ask? We thought that you may be better able to express the thoughts or ideas that you cannot express in English, which is a foreign language for you, through drawing or molding activities. After studying the works of Matisse, we asked you to express your "best memory" using Matisse's method of cut-outs. I hope that you had a good time. I think it would be nice if you could treasure this memory in your mind.

In today's English class, we learned that the word "share" has multiple meanings. You tried to use the word "share" when describing your best memory. When Ms. Kita and I reflected on the lessons, she let me know some of your ideas. They are very important to me. Some of you didn't feel "right" with the English words of "happiness" and "joy" for the Japanese words of *uresisa* and *kando* because they did not sufficiently express the thoughts and feelings you had from your intense experiences. You didn't think you could confine them to such simple words.

I teach English but I am also a learner of English so I can relate to what you are going through. I sometimes feel frustrated when I cannot express myself well enough while talking with native English speakers. What I try to do then is to tell them what I *mean* to say and to search for the "right" words. I once asked my friend, who lives in America and whose native language is English, if she can think of any words that mean not just "joy" or "happy" ("happiness") but one that implies that you've worked hard and endured tough times to get to that point.

She pondered this for a while and said, "How about 'jubilation'?" I had heard of that word before but did not thoroughly know its *sense*. I asked her to explain her understanding of the word. She told me that, to her, "jubilation" was "a feeling of an elevated and intense sense of joy, and that intense joy can include a feeling of relief from pain or a sense of freedom from trouble or a satisfaction of having struggled or simply having survived adversity." She gave me an example of how you would use this word: "The New England Patriots (the name of an American football team) shared their jubilation after their Super Bowl victory." It is extremely difficult to win a football championship; thus, you share in your teammate's jubilation when you win the Super Bowl. I thereby learned that jubilation is a type of joy and happiness. You can *taste* it because you had a hard time achieving it. It is a juicy word.

Can you relate to the same kind of feeling? To me, the word “jubilation” was merely one of many words in the dictionary; however, thanks to our interaction on the meaning of joy and happiness, “jubilation” has been brought to life. You also commented the following on the word “share” in your reflection: “I knew it was something I had heard before, but now I have understood the meaning of the word more in depth and also what it means to another person.” I am very happy to “share” my thoughts on foreign languages with you through this class. I think that studying a foreign language is to build up our experience of sharing, understanding, and acknowledging the feelings that each of us has individually. I hope you will come across many wonderful words in your long life. Thank you for sharing your wonderful experiences with me related to the word “share.”

Farewell!
Iwasaka Yasuko
February 13, 2019

Appendix 4. Excerpts from the pupils' response letters (translated by the author; all pupils' names are anonymous)

Yuto) I learned two things. First, there is a wide range of meanings to any English word. For example, we can "share" laughter or happiness. I usually don't use English in my daily life, but this interested me. Second, I learned that colors convey the meanings of feelings; for example, red seems dangerous, yellow seems happy, etc. (the pupil who created Figure 18)

Aya) I can relate to the word "jubilation." What impressed me most was the instruction "to tell them what I mean to say and to ask by searching for the 'right' words together." I'm not good at speaking English, and I often don't know how to say things correctly. I will try to refer to this thing (Telling someone what I *mean* to say in searching for the "right" words). The feeling of "jubilation" comes to me when I perform well in a piano recital. I'd like to keep trying hard (the pupil of Figure 19).

Luna) I am a cheerleader. Jubilation, as I understand it, is a feeling of no matter how hard I try, there are things I can't do, so all I can do is to keep trying to wish for a miracle. I believe that this amount of effort will be returned. It's the feeling of accomplishment and growth. (the pupil of Figure 22)

Ryo) “Share” is a very good word, and it is very important. It’s nice to “share” our opinions in our daily lives. I thought about what “jubilation” and “joy” meant to me. I am a dancer. “Joy” to me is when I am just dancing or watching my favorite things. “Jubilation” is something like my pleasure when I cleared the audition for the live event called “Rex the Live” that was held in Osaka after a lot of hard work. Dancing itself is, of course, difficult, and we only had two days for rehearsals. Therefore, I would say that “jubilation” means success after overcoming various kinds of hardships.

Noriko) My favorite memory is from the sports day. I didn’t know what I shared in English; however, I thought “jubilation” was just right when I read Iwasaka-sensei’s letter. I think this comes from my experience with cheerleading. As the vice chief, it was difficult to organize people, but I was very pleased when our group won the championship. I’d like to search for other suitable words besides “jubilation.”

Machiko) I think “jubilation” is (studying) English. I couldn’t perform well but a lot of practice helped me improve my speaking. It convinced me that making an effort will surely bring results.

Mao) “Jubilation” [to me] is winning the game after hard practice.

Toru) I thought that the meaning of “jubilation,” “a feeling of relief from pain or a sense of freedom from trouble or a satisfaction of having struggled or simply survived adversity” is similar to my own experience. It aligns perfectly with the time when I was a part of the badminton club. I thought I could use it for expressing my experience of that time.

Shinji) I’m not good at English, but I liked it a little because it was fun to say the names of shapes such as “triangles” and “squares” in English in collaboration in the art lesson. “Jubilation” to me is [winning] the championship in the dodgeball games that I have played for a long time.

Takuro) My “jubilation” refers to the sense of accomplishment that I feel when I win a dodgeball game after training hard.

Lisa) I feel “jubilation” when I can manage to play the hard parts on the piano. I get irritated and feel pain when I can’t play well in practice. However, I can enjoy authentic pleasure when I can.

Ryoma) I think “jubilation” is to undergo hard training and practice for my club or Karate activities.

Kayo) “Jubilation” to me is ballet. I was scolded by the teacher many times and I cried while practicing but I was able to overcome this feeling.

Reina) “Jubilation” to me is tennis. I couldn’t hit the balls at all at the beginning; however, I practiced hard every week and I won third place.

Riko) Since I [had fun] learning a foreign language, it helped [make] it easier to remember.

Honoka) The most impressive word is “share.” First of all, I am very surprised to know that there is a wide range of meanings to this word. Secondly, I realize that I have raised my awareness of my communicative competence in relation to others. It’s going to be the greatest weapon [strength] for me. “Jubilation” to me is the entrance examination. If I pass the entrance examination after I study hard, I will get the greatest sense of satisfaction.

Michiko) “Jubilation” to me is the Japanese calligraphy that I have learned. Developing my skill would give me a mixed sense of relief and satisfaction like the feelings when I earn a higher grade.

Sota) “Jubilation” to me is when I won the championship in the baseball tournament. The training is sometimes hard but I felt a sense of accomplishment when I got over it.

Shu) I felt “jubilation” when I participated in a Judo competition and made it to the finals in the team match and to the quarter-finals [after] hard practice.

Hikaru) “Jubilation” to me is when a drawing that has taken me a very long time to finish is complimented.

Satomi) “Jubilation” to me is when I won the championship at a swimming competition after training hard.

Koki) I thought I wasn’t good at English. I learned through today’s lesson that I could use gestures and drawings to convey my intentions. I will try to use them when I don’t know how to say things.

Narumi) I knew the word “share” from (the commercial film of chocolate) the *Pocky*’s CM “Share happiness,” but I didn’t know there were so many other different meanings. I was surprised at first but I feel something good about the word “share.” I enjoyed it.

Saya) I was a little nervous because I had heard that university teachers were coming, but it was absolutely different from what I imagined. Both teachers were kind, and I felt relieved. The English lesson was very fun and it made me hooked.

Yukari) Both lessons were fun and refreshing to me although I couldn’t respond well enough because there were many difficult expressions. When I looked at the Codomas after the lessons again, I thought it was interesting; I had never noticed it before.

Sho) I thought it was difficult expressing my best memory abstractly, but it is more difficult to explain. However, I have realized that it might be important to try to communicate with gestures even if I don’t understand what is said in English.

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