An Ecology of Literacy:
A Context-based Inter-disciplinary Curriculum for Chinese as a Foreign Language

DISSERTATION

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By
Jianfen Wang, M.A.

Graduate Program in East Asian Languages and Literatures

The Ohio State University
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Dissertation Committee:
Professor Galal Walker, Advisor
Professor Charles Quinn
Professor Mari Noda
Professor Xiaobin Jian
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Abstract

Traditional approaches to teaching Chinese as a Foreign Language (CFL) are based on a reductionist view of communication. In the reductionist view, communication is construed as a matter of arriving at understanding through the use of semiotics (verbal and non-verbal behavior). The semiotics is seen as the means to understanding instead of the consequences of understanding. Literacy is construed as an endpoint ability achieved through reading and writing. Constrained by the reductionist view of communication, the constructive nature of conversation has not been appropriately taken advantage of by CFL programs. This dissertation proposes a conversation-driven approach based on a complex, systemic view of communication, which has been informed by an extensive literature in related disciplines, such as biology, developmental psychology, linguistic anthropology, sociolinguistics, neuroscience, information theory, systems theory, media studies, phenomenology, and philosophy of mind.

In the systemic view, communication is construed as complex and dynamic processes that are embodied as coordinated behaviors among the participants. Behavior is not something a person does by himself. Rather, it is constituted by the changes of a participant’s position or attitude, which an observer describes as movements or actions in relation to a certain environment. Therefore, communication is irreducible to the physical
sum of verbal and non-verbal behaviors that we observe. We conclude that learning to communicate in Chinese is not reducible to “mastering” isolated verbal and non-verbal behaviors we observe from acts of communication. Rather, learning to communicate is to orient one’s behavior toward Chinese-speaking contexts. This can only be done through personally enacting processes of communication over a sufficient period of time.

Complex, dynamic processes of communication constitute an ecology of literacy (EOL) – a system that sustains itself by the diverse and interrelated communication processes that bring texts into being. The construal of “literacy as communication-related processes” has been promoted by scholars of Multiple Literacies Theory (MLT) and applied to educational research on literacy development of children in multilingual societies and on principles of curriculum formation. The construal of literacy as processes shifts our understanding of the relationships between literacy, texts, and the reader. Literacy is no longer viewed as a matter of endpoint abilities. Instead, it is seen as a system of ongoing processes that produce texts in a broad sense. The readers are essentially ever-evolving products of the texts that they embody. Indeed, they are living texts constituted by the processes of communication in which they are engaged.

Conversation is identified as the most fundamental and productive process of communication in an EOL. It drives the evolution of literacy. The second half of this dissertation discusses how we may employ “conversation-driven” as a guiding principle for designing CFL curricula that can effectively accommodate the ever-growing involvement of multimedia in communication and lead to the construction of self-sustainable structures of the Chinese language in the learners’ systems.
Dedicated to my husband Feng Pan
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Vita

March 1981 ........................................Born, Hunan, P. R. China

2003................................................B. A. English Language and Literature,
Beijing Language and Culture University,
Beijing, China

2003-2009 ........................................EFL teacher, Beijing No.1 Middle School,
Beijing, China

2010..................................................Adjunct Chinese Instructor, the College of
Wooster, Wooster, OH

2011 ...................................................M.A. Foreign, Second & Multilingual
Language Education, Department of
Teaching and Learning, the Ohio State
University, Columbus, OH

2011-2014..........................................Graduate Research Associate, Department of
East Asian Languages and Literatures, the
Ohio State University, Columbus, OH

2015 to present..................................Visiting Instructor, Department of East Asian
Languages and Literatures, Washington and
Lee University, Lexington, VA
Publications


Fields of Study

Major Field: East Asian Languages and Literatures, Chinese language pedagogy track
Minor Field: Chinese linguistics
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Chapter 1 The need for an alternative model for foreign language curriculum design

Although it is not always immediately apparent, everything we do in the language classroom is based on our understanding of the challenge of foreign language teaching, which is underpinned by assumptions about the nature of language and how it plays its role in communication. A major challenge for foreign language teaching today is widely understood to be how to teach culture in a language curriculum.¹ This definition assumes that language and culture are neatly separable and they are the prerequisites for communication to arrive at understanding, without an agreement on what language and culture refer to. This definition entails a reductionist view of communication. In the reductionist view, the dynamic, complex processes of communication are reduced to its static products, such as categories of verbal and non-verbal behaviors and post-hoc descriptions of the relationships that are involved in communication. Accordingly, language is reduced to a static system of words and post-hoc descriptions of how to use the words, and culture to the cultural products, such as customs, beliefs and art works.

¹ For example, a major topic at the 13th International Conference on Chinese Language Pedagogy in 2015 was “Contents and methods of teaching culture in Chinese language curricula.” http://www.uvm.edu/~chinese/conference2015/announcement.html
In the reductionist view of communication, language and culture are only superficially connected: “language” talks/writes about “culture.” Consequently, some language teachers assume that one has to learn enough “language” before he is able to learn “culture.” Others assume that “culture” is automatically learned as one learns “language” since “language” is all about “culture.” There has been growing discontent with the superficial connection between language and culture. For example, the “performed culture approach” (Walker and Noda, 2000) proposes to unite language and culture in a performance, a situated act of communication which is defined by specified time, specified place, specified roles, specified scripts and specified audience.

This controversy concerning the roles of language and culture in communication points to a need to explore more fundamental connections between language and culture and a more comprehensive view of communication. In this chapter, I first scrutinize the current definition of the challenge for foreign language teaching. Then I propose a complex, systemic view of communication, taking into consideration an *emic* account of communication from the perspectives of biology (Bateson, 1972; Maturana and Varela, 1992), systems theory (Luhmann, 2002; Thompson, 2007; 2009; Clarke, 2010), information theory (Gleick, 2011), cognitive science (Turner, 1990; 2009; Hutchins, 2006; Menary, 2007) and phenomenology (Heidegger, 1953; Merleau-Ponty, 1962). Based on the systemic view of communication, I propose an alternative definition of the challenge for foreign language teaching. This alternative definition demands an alternative model for curriculum design, which can take advantage of the automatic, complex and constructive nature of communication.
1.1 The challenge for foreign language teaching as currently defined

1.1.1 Teaching culture in a language curriculum

It is generally agreed that the goal of learning a foreign language is to be able to communicate with people who speak the language. However, communication has been construed as “a matter of understanding, arriving at or conveying meaning” (Prabhu, 1987). Meaning is assumed to be something that is created and selectively designed into texts (or semiotic representations of meaning) by human beings. It is assumed to be realized by interpreting the texts in relation to sociocultural contexts (Kramsh, 1993; The New London Group, 1996; Gee, 1999; Bill Cope and Mary Kalantzis, 2009). Language, the linguistic mode of meaning-making, is generally assumed to be a major and the most complex component of texts. Therefore, communicating with people is considered to rely on the ability to understand each other’s language and culture.

Without further examining the relationship between people and their language and culture, language teachers and learners have interpreted the task of learning to communicate with people who speak another language as a matter of learning their “language” and “culture”. “Language” and “culture” are generally distinguished as the linguistic and non-linguistic aspects of knowledge (Street, 1993). In pedagogical practice, language is equated with words and sentence structures we use in speech (the spoken language) and writing (the written language). (The New London Group, 1996). As for the role of culture, it has been under heated discussion. Some believe it is what everyone from the same society knows and is often implied in their language (Hirsch, 1987). In pedagogical practice, culture is often referred to as the facts about and products of a
society that can promote understanding in communication. Some believe culture is the meaning-making process which renders what we speak or write appropriate or inappropriate (Street, 1993; Gee, 1999). Others believe it covers both. In all cases, culture is considered as some kind of background knowledge, which is secondary to language. Therefore, the challenge of foreign language teaching has been defined as how to teach culture as a kind of background in a language curriculum.

1.1.2 Two existing models for teaching culture in a language curriculum

Different beliefs about the role of culture in communication suggest different models for teaching culture in a language curriculum. The model suggested by those who see culture as facts and products may be referred to as “the add-on model” because culture content is added on to language content in separate sections with supplementary information or activities. The reasoning behind this model can be summarized as teaching culture to facilitate language acquisition. In the add-on model, the culture content is categorized into practices, products and perspectives (ACTFL, 2012). It is believed that an understanding of the relationships between the practices and perspectives and between the products and perspectives can facilitate communication in the target language and promote interest in learning the language. In pedagogical practice, learners may be asked to read about cultural facts or products, participate in a discussion about them or engage in some of the cultural practices, such as singing Chinese songs, making dumplings or practicing paper cutting. Instructional treatment of culture content may take place before or after learning the language content. For example, if the language content has mentioned Chinese New Year, students may be introduced to some popular facts about
Chinese New Year, such as its origin and the traditions observed. Some programs may even engage learners in practicing some of the traditions, such as making dumplings and writing New Year’s couplets. If a “culturally-loaded” word such as a four-character idiom has occurred in the language content, the culture content may include a paragraph about how this idiom has come into being, how its meaning has changed and a discussion about how it may be used in a sentence.

The model suggested by those who see culture as meaning-making processes may be referred to as “the integrative model” because language and culture are believed to be integrated as the learner engage in dialogs with authentic texts,¹ which are seen as loaded with the target culture. In the integrative model, culture is seen as embodied in the way people use language, as well as silence, to make meaning in different social contexts. It is believed that authentic texts, when taught as dialog between a text and a reader, can offer the learner models of particularity and opportunities for the dialogic negotiation of meaning and help them find their own voice in the foreign language and culture (Kramsch, 1993; Kern, 2000). In practice, this model emphasizes the shaping of the context in which the meanings are produced and received to help learners “understand the silences” (Kramsch, 1993) or “read between the lines” (Patrikis, 2003). For example, when reading a narrative, the learner would be encouraged to distinguish what the narrator said from how he said it in order to index a particular kind of relationship with readers. Teachers are supposed to get in touch with themselves as readers by examining

¹ An authentic text is defined as a text that was created to fulfill some social purpose in the language community in which it was produced (Little & Singleton, 1988, p.21). Examples may be newspaper articles, essays and literary texts, such as short stories.
their own reaction upon reading, and then make their students into readers (Kramsch, 1993). The reasoning behind this model may be summarized as teaching culture to promote democracy in a multicultural society.

Compared with the integrative model, the disadvantage of the “add-on model” is obvious. First of all, it is impossible to provide an exhaustive list of the knowledge one needs to know to be able to communicate using the target language. Also, with the help of the Internet and search engines, the learner can find out information about any foreign fact or product when he finds it necessary. In addition, culture content is usually presented in the learner’s base language and the hands-on cultural activities do not involve much use of the target language, either. The language level required for discussing the culture content in the target language usually exceeds the level where the culture content is introduced. The cultural information introduced in such culture content is seldom anything that underwrites communicative choices as people interact in specific contexts. Therefore, the payoff of the investment of time, effort and money on teaching the culture content is small in terms of improving effectiveness in communicating with people who speak the target language. Language teaching professionals increasingly realize that such culture content added to a language curriculum is of minimal relevance to developing fluency and formal accuracy in using the target language, which have been two of the major criteria for measuring language proficiency (ACTFL, 2012).

Compared with the add-on model, the integrative model seems to be advantageous in that it teaches culture as dynamic processes and manages to integrate cultural learning into the process of language learning. It is assumed that the learner
learns culture implicitly while he is engaged in “dialogs” with authentic texts, which are usually conducted in the target language. However, in order to promote democracy in a multicultural society, the purpose of integrating culture into language teaching is to help the learner find his own voice in the foreign language and culture (Kramsch, 1993, p.131), rather than an in-depth understanding of the *emic* perspectives\(^\text{1}\) practiced in the target language community. When dealing with texts from the target community, the teacher is supposed to encourage the learner to construct his personal meanings at the boundaries between the native speaker’s meanings and his own everyday life (Kramsch, 1993). Since the native speaker’s meanings accessed from texts are the products of the learner’s own interpretations, the “voice” the learner develops out of such interpretations will not necessarily be one familiar to or favored among people from the target society, especially if they hold a worldview or mindset that differs significantly from the learner’s. By encouraging the learner to construct his personal meanings without any sustained or significant effort to understand – much less enter into – the *emic* perspectives practiced in the target community, the integrative model actually encourages the learner to indulge in his own view of the world and fails to generate sincere interests in exploring how the target culture as a self-referential system sustains itself. The integrative model is, therefore, likely to produce self-centered critics, who unconsciously develop a reluctance to embrace the target culture.

\(^\text{1}\) Adopting Pike’s (1962) distinction between *emic* and *etic* standpoints for describing human behavior, *emic* perspectives are obtained by standing inside the particular system as someone who is part of the system and knows how to function within the system himself. By contrast, *etic* perspectives are obtained by standing outside the system and juxtapose multiple systems or multiple states of one system.
In sum, both models put language content at the center of a language curriculum. Culture is either introduced as supplementary information or assumed to come automatically as the learner interact with authentic texts. In either case, culture is a universal applying across societies or the target culture is treated as something secondary in a language curriculum. Neither model is interested in helping the learner develop a sincere interest in the lifeways of the other culture or an understanding of the *emic* perspectives practiced in the target community. A reliable understanding of these does not automatically come with learning the words and structures with which we speak and write. However, without an interest in understanding *emic* perspectives current in the target community, the learner is unlikely to effectively communicate with its members in their cultural environment, let alone working with them or establishing lasting friendships with them.

1.1.3 Scrutinizing the two models for Chinese language teaching

The failure of the add-on model and the integrative model to emphasize an understanding of *emic* perspectives from the target language community renders both models especially ineffective for teaching Western learners, such as native English speakers, to communicate with Chinese people, whose view of the world is markedly different from the learners’. The western view of the world, which is rooted in the ancient Greek sense of personal agency, tends to emphasize individual identity over social harmony (Nisbett, 2003). By contrast, the Chinese view of the world, as reflected in Taoism and Confucianism, tends to emphasize a sense of harmony and consider every individual as “first and foremost a member of a collective, or rather of several collectives
the clan, the village, and especially the family” (Nisbett, 2003, p.5). Therefore, compared with its western counterpart, the Chinese view of life and their world is more holistic and relational. The general differences can be observed from the products, of course, of everything people do, including how they verbalize their experiences.

Chinese people treasure unity and respect social hierarchy. This is reflected in the ways Chinese people address each other and the honorific terms they use to refer to people of higher social status. For example, in China, a student who addresses his teacher by first name or uses nǐ (你) instead of the honorific second-person pronoun nín (您) would be considered rude. It is entirely consonant with a holistic worldview that Chinese speakers tend to arrange their description from the whole to the part. For example, when introducing oneself in Chinese, a Chinese person would introduce his affiliations (i.e., the university where he works or studies) before his name, or simply his affiliation without his name. In professional contexts, a person who introduces his name without mentioning his affiliation might be considered arrogant by the Chinese. A Western learner who is not used to the Chinese way of introducing oneself may be frustrated by the “distraction” he must process before hearing the person’s name. These different ways of doing things are deeply rooted in a community’s habitus1 (Bourdieu, 1977). Failure to recognize this in communication may lead to all manners of undesired consequences, from the silly to the

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1 Bourdieu (1977) describes habitus as “the product of the work of inculcation and appropriation necessary in order for those products of collective history, the objective structure (e.g., of language, economy, etc.) to succeed in reproducing themselves more or less completely, in the form of durable dispositions, in the organism (which one can, if one wishes, call individuals) lastingly subjected to the conditionings.” (p.85) Essentially, habitus is a complex system that self-sustains through human communication.
disastrous. The two parties may find each other dumb, stubborn and hard to communicate with and eventually give up communicating or even resort to violence.

Unfortunately, both the add-on and the integrative models have been widely adopted by Chinese language programs with little scrutiny. Since culture is seen as background knowledge or processes and a performative familiarity with it is not emphasized in language assessments, such as the ACTFL Proficiency Guidelines (2012), language teachers and learners tend to focus their instruction and learning on the “language,” which is ranked among the most useful and most difficult languages for Americans to learn.\(^1\) In practice, language is further reduced to the words and sentence structures extracted from texts. Informed by the add-on and the integrative models, spoken instruction in many Chinese language programs\(^2\) relies more on mechanical drills of sentence structures than on improvised performances in real-life situations. It emphasizes fluency and formal accuracy and ignores cultural appropriateness of the learner’s performance. Even role playing has been used primarily for developing fluency and formal accuracy. Too often, neither the teacher nor the learner cares whether the situation set up for the role play is one in which the learner may find himself using the

\(^1\) The Foreign Service Institute (FSI) has created a list to show the approximate time an average English speaker (with no prior knowledge of the language) needs to reach “Speaking 3: General Professional Proficiency in Speaking (S3)” and “Reading 3: General Professional Proficiency in Reading (R3)” in a specific language. Mandarin Chinese falls in Category V, which contains the five languages that are considered “exceptionally difficult for native English speakers.” \(\text{http://www.state.gov/documents/organization/247092.pdf}\)

\(^2\) For example, the “Princeton in Beijing” program states on their website, “The emphasis at Princeton in Beijing is on fluency through accuracy, on building a solid foundation in pronunciation and syntax that enables students to strive for genuine fluency in the Chinese language. The stress on accuracy, integrated with the Beijing language environment, is one of the unique features of Princeton in Beijing.” There is no mention of appropriate use of language. \(\text{https://www.princeton.edu/pib/academics/}\) (Accessed at 3:28 pm, January 16, 2016).
target language after he has completed the language program. There is also a lack of concern about how appropriate the learner’s performance would be in the eyes of potential audiences in real-life communication. As for reading instruction, in my experience it is more commonly oriented toward comprehension (where everyone reaches the meaning prescribed for the written text), rather than toward conversation over the text (in which the learners and the teacher co-construct a personal meaning, based in part on how the written text works in the target language community).

1.1.4 Accounting for the ineffectiveness of the existing models

Neither the add-on model nor the integrative model for teaching culture in a language program is effective in meeting the learner’s need for communicating with people who use another language. The ineffectiveness is directly related to confusion about the relative roles of language and culture in communication, which may indicate an incomplete description of the task of learning to communicate with people who use another language. Indeed, equating the task of learning to communicate with learning “language” and “culture” is based on unfounded assumptions.

A fundamental assumption of the existing models was that human beings, as autonomous thinking subjects, control the meaning-making processes, including the creation of language. However, in fact, we cannot control how misunderstanding happens; nor can we control how language changes. Misunderstanding in interpersonal communication is prevalent and much of it is often not recognized at the time of communication (Schank, 1990; Agar, 1994; Qin, 2011). The changes which language undergo over time are nonlinear (Larsen-Freeman, 1997). We cannot predict for sure how
structures will be used differently by future generations; nor can we predict which new structures will be introduced to the language. For example, twenty years ago, no one would expect the phrase 小米 (xiǎomi)\(^1\) to refer to a phone. A year ago, no one had predicted a character with 成 (chéng) on top of 龙 (lóng) would be the character for the onomatopoeia duāng because such a character does not contain a 口 (kǒu) radical, which is common among the existing characters for onomatopoeia words in Chinese.

In interpreting the task of learning to communicate as learning “language” and “culture,” we are assuming language and culture as given and assuming an *a priori* distinction between the referents of the two labels. We are also assuming the sum or integration of “language” and “culture” to be all that is involved in communication. However, judging from the currently prevalent understanding of language and culture, this assumption entails a severely reduced view of communication. The sum or integration of “language” and “culture” does not cover, for example, the human bodies, which are wholly involved in communication. When people interact, their biological bodies are inevitably involved as a source of information (Navarro, 2008) as well as a medium (Mitchell and Hansen, 2010). For example, when we interact with each other face-to-face, the height, the size, the skin color, the posture and the body movements of the other person are all sources of information. When we read on our own, our reading is intricately affected by the physical condition of our body and by our past experiences of interacting with people face-to-face. The interactions in which we engage in a given moment are inevitably intertwined with the ongoing structural changes that our body

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\(^1\) A Chinese name for the type of grain known as millet in English.
undergoes because of metabolic processes. Therefore, the information that emerges for us from communication has a much wider source than the sum or integration of “language” and “culture.”

In fact, when we take the whole picture of communication into consideration, we may find that human beings remain integral, but integral to a larger system of communication with no center of absolute control. In this larger, systemic view of communication, our current understanding of the nature of language and culture as well as their relative roles in communication may have to be revised, and the task of learning to communicate with people from another language may be accordingly different. Consequently, our understanding of the challenge for foreign language teaching may also need to be revised if we are to effectively promote and facilitate communication among people from different languages.

To confront the challenge, we may need to conceptualize foreign language curricula from the perspective of pedagogy instead of second language acquisition (SLA). Whereas pedagogy studies the process of passing knowledge from generation to generation, SLA is primarily concerned about how language is acquired and produced by innate “language acquisition machines” (Chomsky, 1965; Pinker, 1995) or through social interactions (see for example, Larsen-Freeman, 1991; Barron, Bruce, and Nunan, 2002; van Lier, 2003; Kramsch, 2006). Whereas second or foreign language pedagogy has its roots broadly spread across academic fields, SLA is deeply rooted in linguistics, “the science of language” (Pinker, 1995). We do not need to learn the anatomy of human body before we learn to walk. Similarly, we do not need to learn the anatomy of language to
learn to speak. Even if it were possible, knowing the anatomy of human body does not make a baby more ready to walk. Similarly, it is doubtful whether learning the “elements” of a language will make a person more ready to communicate using the language. Therefore, if the goal of teaching a foreign language is to help the learner learn to communicate effectively in the target language, our task should not be reduced to teaching the static “elements” of a language. Rather, we need to base our pedagogy on a more comprehensive understanding of communication as complex, dynamic processes.

1.2 Toward a systemic understanding of communication

1.2.1 Living systems as self-producing (autopoietic)

To construct an effective model for teaching learners to communicate with people who speak another language, we need to base the model on a fuller picture of communication. In the field of second- or foreign language education, our current view of communication is largely restricted to an etic perspective, which assumes human beings to be autonomous thinking subjects, who control their behavior in communication. To obtain a more realistic picture of the phenomenon of communication, we need to also view communication from an emic perspective, in which we do not assume human beings to be the controlling subjects. Broadly speaking, and in the perspective I am here introducing, communication is a function of all living systems. A living system, such as a living organism or an ecosystem, is characterized as “living” because it is continually communicating with its environment and self-producing. In this sense, the exchange of information between the communicating parties is typically mediated by the environment.
Also, communication may not be anything so simple as an “exchange” of “information.” It may also involve emergence of new structures (Bateson, 1972; Maturana and Varela, 1992).

Maturana and Varela’s (1980) used autopoiesis to characterize the dynamics of a living system. This has been widely adopted by systems theorists and artificial intelligence researchers because it facilitates consistent explanations of such complex and intriguing phenomena as cognition, communication, language, culture and mind based on one single basic assumption, which we need to acknowledge as a true fact. This basic assumption is that the biosphere is a coherent system of interrelated autonomous living systems, or autopoietic systems (Maturana and Varela, 1992; Maturana and Mpodozis, 2000). It behooves us to take this assumption as a true fact because we are fundamentally a part of this system and it benefits us to know how to stay in sync with that coherence.

The most striking feature of an autopoietic system is that it pulls itself up by its own bootstraps and it becomes distinct from its environment through its own dynamics, in such a way that both things are inseparable. (Maturana and Varela, 1992, p.44)

Social systems theorist Niklas Luhmann (2002) describes an autopoietic system as “a system that produces and reproduces through the system everything that functions for the system as a unit” (p.161). Simply put, it is a system that is the ongoing product of its own production.

An autopoietic system arises from an environment or an ecosystem, to which it is always a part. The ecosystem is itself a big autopoietic system constituted of diverse smaller autopoietic systems as well as energy and chemicals. What renders an autopoietic
system distinct from its environment is “a semipermeable boundary” (Thompson, 2003, p.103), or “the operational closure” (Maturana and Varela, 1992, p.89), which is constituted of the interactions among the interdependent components of the system. The components of the system are constantly (re)produced by a network of reactions that take place within the boundary. The boundary and the reaction network are interdependent in that the components produced by the reaction network constantly change the condition of the boundary and regenerates the network. This is how an autopoietic system self-sustains or remains self-referential in relation to its environment. The boundary, the reaction network and their interdependence are the three criteria of autopoiesis (Thompson, 2009).

1.2.2 Autopoiesis and cognition

Life meets all the criteria of autopoiesis. This is where Thompson (2009) starts his account of how life is a kind of sense-making or how autopoiesis entails cognition. He says:

Life is autopoiesis. … Autopoiesis entails emergence of a self in the form of a living body, an organism. Emergence of a self entails emergence of a world … a correlative domain of interactions proper to that self. … Emergence of self and world equals sense-making. The organism’s world is the sense it makes of the environment. This world is a place of significance and valence, as a result of the global action of the organism. … Sense-making is tantamount to cognition, in the minimal sense of viable sensorimotor conduct. Such conduct is oriented towards and subject to signification and valence. Signification and valence do not preexist ‘out there’ but are enacted or constituted by the living being. Living entails sense-making, which equals cognition. (pp.82-83)
Thompson’s reasoning is consistent with the two crucial features of the relation between autopoiesis and cognition described by Maturana and Varela (1980), namely, (1) the instantiation of the autopoietic organization in an actual, concrete system entails a cognitive relation between that system and its environment; and (2) this cognitive relation reflects and is subordinated to the maintenance of autopoiesis (Thompson, 2007, p.124, my italics). In this sense, with the emergence of cognition, the organism begins to follow patterns which have been established by their own enactments in the environment.

From the perspective of autopoiesis, cognition signifies a relation between the living system and its environment. It is emergent from the living being’s action in its environment and distributed across the living being and its environment. In other words, cognition is not confined within the living being; nor is it something we purposefully “turn on” to make sense of our world. Rather, cognition is the very process of sense-making, which itself turns on, as our body acts in its environment. Therefore, cognition is better construed as an effect the living being experiences when its system changes state in relation to the patterns enacted or brought forth by the system itself on the basis of its autonomy (Thompson, 2007, p.126), rather than some kind of information processing intended by the living being. The living being has no intention before there is cognition. Intentions are the living being’s a posteriori interpretations of its cognitive experience.

One might ask “How does the body start acting in its environment without cognition?” or “How does it know how to act if there is no cognition before it acts?” As a living system, the body has its own way to communicate with its environment and adjust to environmental changes. As Mark Turner (1991) puts it, “being leads to doing:
attributes possessed by a form of being lead to the way it behaves” (p.184). Therefore, the body does not need to know how to act before it acts. Its autopoietic structure generates action in response to the perturbations from its environment. In fact, it does not know until it acts. It is the difference generated by its own action in a given context that gives rise to the information that constitutes knowing in that context (Bateson, 1972). We do not know we can see things until we see things. Cognition emerges from acting. In Maturana and Varela’s (1992) words, “all doing is knowing, and all knowing is doing” (p.26). Autopoiesis explains how our biological being-in-the-world continues into a cognitive mode of being.

1.2.3 Cognition as distributed

Cognition is not only emergent; it is also multiply distributed, both within neural networks and across bodies, artifacts, and – crucial for language – social groups. The idea that cognition is distributed is not at all new to the fields of cognitive science and cultural studies. It is a fundamental construct of the discipline of “folk psychology” (Bruner, 1990) or “cultural psychology” (Cole, 1996). In Cole’s (1996) words, “cognition is distributed among individuals and cultural artifacts” (p.342). Mark Rowlands (1999) also states that cognitive processes are not located exclusively inside the skin of cognising organisms because such processes are, in part, made up of physical or bodily manipulation of structures in the environments of such organisms” (p. 23).

This is echoed by Menary (2007) in proposing an integrationist model of cognition for explaining how our minds become enculturated and how we learn to be active cognitive agents who think by manipulating their environments and interacting with one another in
social groups. According to the integrationist model, cognitive systems are integrated wholes with heterogeneous, but interacting parts, which constitute richly structured cognitive niches (Menary, 2013). A cognitive system is an autopoietic system in that its parts are produced by the interactions within the system. This may be how Hutchins (2006) comes to the term “cognitive ecosystem”.

The parts of a cognitive system can be neural, bodily and environmental. Environmental components of a cognitive system involve natural objects, such as a stone, and artifacts, which are brought into being by the processes that sustain the cognitive system. The parts and the system co-evolve. Once an artifact is produced, it does not only become an element that is necessary for the cognitive system to operate efficiently, but it evolves with the system as well. For example, a writing system is a cognitive artifact (Donald, 1991; Peterson, 1996; Menary, 2007; Sinha, 2010, 2015). It is indispensible for societies which have writing systems. Writing systems have evolved with time (Coulmas, 1998). The current alphabet, for example, is believed to have originated from three-dimensional tokens used for measuring and record-keeping by merchants in Mesopotamia around 3700 BC (Schmandt-Besserat and Erard, 2007). Our basic biological capacities are continually extended as our cognitive niches get more and more richly structured because of the emergence of new artifacts (Donald, 1991; Sinha, 2010; Menary, 2013; Tomasello, 2014). For example, human beings used to rely on bodily movements to communicate with each other (Tomasello, 2014). Now, we have a myriad of ways to communicate, including speaking, writing, and typing.
“Distributed cognition,” as an approach to examining the interactions between the social and the material worlds, has been discussed by Edwin Hutchins (2001; 2005; 2006) in contrast to “extended mind,” an approach first launched by Clark and Chalmers in 1998. From the extended-mind perspective, “the human organism is linked with an external entity in a two-way interaction, creating a coupled system that can be seen as a cognitive system in its own right” (Clark and Chalmers, 1998, p.8). In Hutchins’s view, the extended mind perspective assumes the organism to be the center of the cognitive system, whereas the distributed cognition approach does not. Instead, the distributed cognition approach sees the cognitive system as emergent from the interactions among the components in the system (Hutchins, 2014, p. 36), which grants no static centers or boundaries. Cognitive phenomena may emerge from distributed systems at many temporal-spatial scales. They may emerge from the neural activities within an individual brain and allow us to experience a self. They may also emerge from the social interactions with a community and give rise to systems of social norms.

1.2.4 Mind and culture as embodied

Both mind and culture refer to the cognitive phenomena that emerge in distributed systems at many spatial scales. Since cognitive phenomena form a continuous whole, mind and culture are essentially one and the same concept. Jerome Bruner was the first to unite culture and mind in psychology. As he wrote in Acts of Meaning, “mind is realized only through participation in the symbolic systems of culture, but culture is also constitutive of mind” (Bruner, 1990, p.33). The idea of understanding mind in cultural and historical terms has been shifting the focus of psychological and educational research
from individual information processing to social construction of meaning (e.g., Lave, 1988; Gee, 1991; Hutchins, 1995; Cole, 1996; Bloome and Katz, 1997; McDermott, 1999). Since what we experience as mind and culture are both embodied as cognitive systems, culture and mind should not be taken as different concepts. We might use mind to refer to the cognitive phenomena that constitute an individual’s mental world and use culture to refer to the total mind of a social group. However, we need to keep in mind that mind and culture refer to phenomena brought about by the same cognitive system at different temporal-spatial scales.

As an array of cognitive phenomena, mind is not a container of knowledge, as has been traditionally believed. Nor is mind contained within any physical boundaries, such as the skull or skin, because cognitive systems do not have static boundaries. Even at the smallest scale, a cognitive system is distributed across the whole organism and its world (the natural, social and technological environment that the organism can make sense of). Therefore, an individual mind, instead of being seen as contained in an individual human being, has to be seen as embodied in the components and interactions that constitute a cognitive system at the smallest scale, which include, at least, the brain and body of the human being, the people he socializes with, the places he frequents, the objects he recognizes and the technologies he employs. Such construal of mind has been broadly referred to as “extended embodiment” (Sinha, 2010). It has its roots in phenomenology (e.g., Heidegger, 1953; Merleau-Ponty, 1962) and is shared among philosophers (e.g., Wittgenstein, 1958; Bourdieu, 1977; Deleuze and Guatari, 1989; Taylor, 1994), psychologists (e.g., Wertsch, 1985; Bruner, 1990; 1996; Cole, 1996), cognitive scientists
From the perspective of phenomenology, the body is our general medium for having a world (Merleau-Ponty, 2002[1962], p.169). The world discloses to the body as the latter moves in it. The body, as an autopoietic system, is continually in motion for the conservation of life. A movement is understood and learned when the body has incorporated it into its world. The instruments involved in the movement are appropriated as part of the “dilated” body through which it makes sense of the world. This is how these instruments become components of the distributed system of cognition, or embodiments of the mind. The components of the “dilated” body are coordinated with the movements of our biological body through practice. For example, an experienced typist knows where the letters are on the keyboard as she knows where one of her fingers is. Similarly, an experienced driver can drive through a narrow opening without comparing the width of the opening with that of her vehicle, just as I go through a doorway without checking the width of the doorway against that of my body. In fluent reading, we feel the pains and excitements through the written scripts as if we are personally involved in the events. This is because our expertise in the technology of mapping concepts onto written symbols has rendered the writing system part of our dilated body, opening up a fresh world of meanings.

In the same vein, Varela, Thompson and Rosch (1993) posit that minds awaken in a world which is with us rather than designed by us. In their words, “we awoke both to
ourselves and to the world we inhabit” (p.3). My lived world and I form an inseparable unity. It is in this unity that my mind is embodied. In explaining how people understand their language and their experience, Johnson and Lakoff (1980) maintain that the concepts that we live by emerge from our continual everyday bodily functioning, emotional experiences and experience with physical objects. Out of his concern for the survival of human civilization, the biologist and anthropologist Gregory Bateson (1972) reminded us that the world that we perceive is created by ourselves because the reality that we perceive are inevitably selected and edited by our form of being, to conform to our beliefs about what sort of world we live in.

What we have been discussing so far demonstrates a common point: nature and mind form continuity, rather than a dichotomy (Bateson, 1972; 1979). Natural processes gave rise to cognition as they gave rise to life; cognitive processes gave rise to mind (Merleau-Ponty, 1962; Thompson, 2007). Mind is distributed and embodied in the components and interactions that constitute a complex cognitive system. We have a somewhat concrete idea about the components that constitute a cognitive system, such as the neural network, our body, objects and artifacts. However, it is still unclear how exactly the components interact and how the interactions sustain the system. This leads us to a discussion about communication or the interactions within and between systems. What is communicated when the components or two systems, such as two people, interact? How is it communicated? Just what is produced or reproduced as a result of communication?
1.2.5 Communication as coordinated behavior

Autopoietic systems are inherently communicational. It is through communication that the system syncs with its environment and sustains itself. From the perspective of autopoietic systems, Maturana and Varela (1992) define communication as “the coordinated behaviors mutually triggered among the members of a social unity” (p.193, my italics). Note that in their view, behavior is not something the living being does in itself. Rather, behavior is constituted of “the changes of a living being’s position or attitude, which the observer describes as movements or actions in relation to a certain environment” (Maturana and Varela, 1992, p.138). In other words, what appear to us as coordinated behaviors are not intended by the living being because in the living being there are only internal structural changes, which are not triggered by itself, but are observed as its behaviors. Accordingly, what appears to us as the trigger of behavior is not something the communicating parties do to each other, but the differences in their environment brought about by the change of state of themselves, the living beings present. In this sense, Gregory Bateson’s (1972) definition of information as “any difference which makes a difference in some later event” (p.381, author’s italics) is very appropriate.

When a difference in the environment is perceived and leads to changes of state of the living beings that perceive it, we observe coordinated behaviors, that is, the phenomenon of communication.

When we observe the phenomenon of communication, we often assume that “information” has been “exchanged”. Based on the description above, however, the exchange of information does not occur between the communicating parties. Rather, it
occurs between the living being and its environment. Each of the communicating parties constitutes part of the other’s environment (McDermott, 1976). The change of the state of each party will bring about differences in their environment, to which both/ all parties will respond with changes of state, that is, differences, as Bateson might say. How each party changes its state depends on its own structure, which, in turn, depends on its history of “structural coupling” \(^1\) (Maturana and Varela, 1992). This is why Maturana and Varela (1992) remind us that “the phenomenon of communication depends not on what is transmitted, but on what happens to the person who receives it” (p.196, my italics). In other words, as participants in a communication, the coordinated behavior we observe in the other party is not determined by what we do, but by the other party’s own internal structure and its history of structural coupling. It follows that what others say or do does not determine what we hear or how we respond; what determines it is our past experience.

Figure 1.1 is a model of communication between two living systems. The numbers 1 and 2 mark two individual living systems. The large dotted circle indicates the dynamic system of communication. Solid arrows indicate causal relationships, whereas dotted arrows indicate selecting or filtering.

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\(^1\) Maturana and Varela (1992) refers to “structural coupling” as recurrent interactions leading to the structural congruence between two (or more) systems, such as an organism (an autopoietic unity) and its environment. They explain that “the interactions (as long as they are recurrent) between unity and environment will consist of reciprocal perturbation. In these interactions, the structure of the environment only triggers structural changes in the autopoietic unities (it does not specify or direct them), and vice versa for the environment. The result will be a history of congruent structural changes as long as the autopoietic unity and its containing environment do not disintegrate: there will be a structural coupling.” (p.75)
Figure 1.1 Communication between two living systems

The bodily behaviors of the communicating living systems are coordinated through the mediation of the shared environment. Each living system selectively responds to the environmental changes, which have been caused by multiple factors, including, at
least, bodily behaviors of the communicating systems, activities of other beings in the ecosystem, and activities in the solar system. Responding to environmental changes may involve selective manipulation of the body, including some dilated portion of it, such as the semiotic system. This is where technology\(^1\) gets involved. For example, if the response needs to be visual, the bodily behavior may involve gesturing, which is a communication technology (Clarke, 2010), or even writing or typing, which are media technologies (Clarke, 2010). Inside the living system, bodily behavior activates chemical changes and neural activities, which constitute the change of state of the system. The change of state of the system is observed as bodily behaviors.

The idea that coordinated behavior in communication is determined by the structure of the organism rather than by stimuli external to it was prefigured by Gregory Bateson (1972), who viewed mind in terms of “an ecology of ideas” (p.xv) or a system that “operates with and upon differences” (p.482). An idea, from the perspective of the system, is a difference (or a change of state) that arises in the system as a result of differences in its environment. A difference (or stimuli) highlights certain event(s) in the environment as the message, while rendering the other events the context, which “tells the organism among what alternatives he must make his next choice” (p.289). An organism responds to the “same” message differently in different contexts. It follows that the message is part of the context and has a meaning that refers to the context.

\(^1\) Technology is used in a very broad sense as “a means to fulfill a human purpose” (Arthur, 2009, p.28). The current discussion is primarily concerned about communication technologies and media technologies. Communication technologies, such as gesture and speech, transmit or broadcast messages without (in the first instance) creating or storing them as external media objects. Note that the human body is a form of biomedia. Media technologies, such as writing, drawing, printing and photography, inscribe the information they process (Clarke, 2010).
Inside the system, a difference highlights certain processes in the cognitive system as *consciousness*, which, according to Bateson (1972), is “a systematic (not random) sampling of the rest” (p.432). It follows that consciousness is jointly selected by the internal structure of the system and the activity engaged. In sum, without context, there can be no message, and consequently no communication. Similarly, without the rest of the cognitive system, there is no consciousness, and consequently no cognition. Therefore, it is an understanding of the entire context, rather than that of just the stimuli, that makes communication happen. To really communicate, we cannot afford to ignore the role played by the context or believe that what we are not conscious of does not happen (Bateson, 1972; Herrigel, 1999).

Both the Taoist and Confucian philosophies emphasize the role of the context or the unconscious over what is verbalized in communication. From the perspective of Confucianism, a person should only verbalize things when the context demands him to do so.\(^1\) Timing is a key for wise communication. However, timing is not a subjective judgment done by the speaker alone; rather, it is given rise by the dynamics of the context of communication. From the perspective of Taoism, any act of verbalizing would change the current context. In other words, as soon as one begins to verbalize the context, the context may become very different because of the act of verbalizing. Therefore, the best

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\(^1\) The original quote can be found in 16.6 of *The Analects*. 子曰: “侍於君子有三愆：言未及之而言，謂之‘躁’；言及之而不言，謂之‘隱’；未見顏色而言，謂之‘瞽’。” (Confucius said, “People who attend upon junzi are liable to three errors. If they speak before an appropriate time has come, they will be considered rude. If they fail to speak when an appropriate time has come, they will be considered secretive. If they speak without looking at the countenance of their superior, they will be considered stupid.”)
teaching is not conducted by attempting to verbalize the context for the subject;\(^1\) rather, it lets the subject experience the context on his own. Such teaching may be hard to imagine for language teachers. However, it is plausible. For example, we can try to reduce the words we use in explaining why certain words occurred in certain structures though we may need to describe the function of a structure in the given context. In addition to describing the functions of structures, we can simulate the situation where the text is commonly used and have students personally enact the situation and feel how the text is related to the situation.

**1.2.6 Knowing as doing**

Not all differences in the environment give rise to differences in systems engaged in communication. This is common sense because communicating beings cannot perceive everything that is going on in the environment. What we consider as *information* is the differences that are responded to by our own systems. The systems respond to differences with changes of state, which is reflected in its behaviors, including neural activities and bodily movements with or without the manipulation of external media. It follows that there are no intermediate stages between sending, receiving and responding to information, though there may be time lags between the manifestation of some change and a being’s recognition of it as information. In other words, no cognitive representation is necessary to store or transmit information. The behavior is at the same time demonstrative of information recognized and response given. It is also information sent if,

\(^1\) The original words can be found in Chapter 2 of *Laozu*. “是以圣人处无为之事，行不言之教。” (Therefore, the sage achieves without intending for what is achieved and teaches without verbalizing what is taught.)
at least, some of the differences generated by the behavior are perceived by the other party. This is consistent with Maturana and Varela’s (1992) idea that “all knowing is doing; all doing is knowing.”

The idea of knowing and doing as one and the same process was prefigured by the Ming Dynasty philosopher Wang Yangming 王阳明 (1472-1529), who proposed that treating knowledge (zhī 知) and action (xíng 行) as a unity is the one effort involved in learning to be a sage. In Wang’s teachings, as recorded by his students, “Knowledge is the beginning of action and action is the completion of knowledge. Learning to be a sage involves only one effort - knowledge and action should not be separated” (Wang, 1963, p.30).  

To Wang Yangming, to learn is “to get rid of selfish human desires and to preserve the Principle of Nature (qù rényù, cún tiānlǐ 去人欲，存天理)” (ibid., p.70). This is because knowledge and action are a unity by the Principle of Nature, or in their “original substance (běntǐ 本体).” To elaborate on the original substance of knowledge and action, Wang said,

Seeing beautiful colors appertains to knowledge, while loving beautiful colors appertains to action. However, as soon as one sees that beautiful color, he has already loved it. It is not that he sees it first and then makes up his mind to love it. Smelling a bad odor appertains to knowledge, while hating a bad odor appertains to action. However, as soon as one smells a bad odor, he has already hated it. It is not that he smells it first and then makes up his mind to hate it. A person with his nose stuffed up does not smell the bad odor even if he sees a malodorous object before him, and so

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1 The original philosophical idea was stated as 知行合一 (zhī xíng hé yī) in Chinese. Wang Yangming’s philosophical ideas are collected in Chuanxi lu 傳習錄 (Instructions for Practical Living).

2 The Chinese text appeared in Chuanxi lu 傳習錄 (Instructions for Practical Living) as “知者行之始，行者知之成。聖學只一個功夫，知行不可分作兩事.”
he does not hate it. This amounts to not knowing bad odor. Suppose we say that so-and-so knows filial piety and so-and-so knows brotherly respect. They must have actually practiced filial piety and brotherly respect before they can be said to know them. It will not do to say that they know filial piety and brotherly respect simply because they show them in words. Or take one's knowledge of pain. Only after one has experienced pain can one know pain. The same is true of cold or hunger. How can knowledge and action be separated? This is the original substance of knowledge and action, which have not been separated by selfish desires. In teaching people, the Sage insisted that only this can be called knowledge. Otherwise, this is not yet knowledge.¹ (ibid., p.10, my italics)

To paraphrase the quotation above, the fact is not that first we (learn to) do things and then we know them. Rather, the fact is that knowing and doing are one and the same process; and no cognitive representation is necessary to register information. It follows that what we experience or observe as knowledge is not a cognitive representation. Rather, it is “an effective (or adequate) behavior in a given context, i.e., in a realm or domain which we define by a question (explicit or implicit)” (Maturana and Varela, 1992, p. 174). The behavior is observed as the system changes the state of its internal structure (of knowledge). Since behaviors are structurally determined, knowledge is stored – remembered, embodied – as the structure of the system. Building knowledge into the system involves causing changes to the structure of the system. To stay responsive and self-adaptive, the internal structure of the system must have cybernetic knowledge about when and how to respond in a given environment (Bateson, 1972; Nicolić, 2014). Such

¹ The Chinese text: “見好色屬知，好好色屬行。只見那好色時已自好了，不是見了後又立個心去好。聞惡臭屬知，惡惡臭屬行。只聞那惡臭時已自惡了，不是聞了後別立個心去惡。如鼻塞人雖見惡臭在前，鼻中不曾聞得，便亦不甚惡，亦只是不曾知臭。就如稱某人知孝、某人知弟，必是其人已曾行孝行弟，方可稱他知孝知弟。不成只是曉得說些孝弟的話，便可稱爲知孝弟。又如知痛，必已自痛了，方知痛；知寒，必已自寒了；知饑，必已自饑了。知行如何分得開？此便是知行的本體，不曾有私意隔斷的。聖人教人，必要是如此，方可謂之知。不然，只是不曾知” (Chan, 1983).
knowledge must have been acquired throughout its history of structural coupling with its environment (Maturana and Varela, 1992). In this sense, the behavior observed of the organism also demonstrates the knowledge stored in the structure of its neural system and body. Since the activity of man (through which the neural system acquires knowledge) constitutes a structural whole (Pike, 1967), knowledge cannot be discrete or item-based. Rather, knowledge has to be construed as the self-sustaining structure of a coherent living system. It operates as a whole to maintain its internal coherence (among the subsystems that constitute the system) and its external coherence (with/ in its ever-changing world) (Davis et al., 2015).

Such a construal of knowledge is consistent with Bateson’s (1972) idea that “knowledge is all sort of knitted together, or woven, like cloth, and each piece of knowledge is only meaningful or useful because of the other pieces” (p.22). Knowledge does not exist in discrete categories, such as language and math, or art and science. It is “all knitted together” as one whole living system. Since the major constituent of the system - the neural network - is plastic and flexible (Dehaene, 2009; Menary, 2013; Nicolić, 2014), the structure of knowledge is plastic and flexible. Therefore, it produces different behaviors in different contexts and gets more sophisticated with experience. Language, math, art and science are all functions of the same system.

\[\text{1 The philosopher Nelson Goodman (1984) has discussed how the arts and the sciences are alike means of understanding based on using symbols of various kinds (p.108). Cognitive scientists Mark Turner (2009) and Michael Tomasello, 2003) have argued that all human higher-level cognitive activities have developed from one common origin. While Turner assigns this common origin to the brain’s capacity for “conceptual integration” or “blending,” Tomasello assigns it to social cognition. James Zull (2009), from the perspective of neural science, has pointed out that “action is the whole purpose of the brain” (p.16). It follows that the brain does not make distinctions between math or language. Brain-imaging studies show a strong overlap of arithmetic and language (p.152).}\]
Because of its plasticity and flexibility as a living system, knowledge has been categorized according to different criteria, such as verbal versus non-verbal knowledge, descriptive versus procedural knowledge, and so on. Categories are always limited and limiting (Bybee, 2010). They tend to mislead us to believe that the different categories can, or even must, be acquired separately. For example, in the field of foreign language teaching, “culture” which is assigned to “the non-verbal” category (Street, 1993; Agar, 1994) has long been marginalized in language curricula. Even after people began to realize the important role of the non-verbal in communication, “culture” still tended to be taught as a separate category of knowledge, in addition to or along with “the verbal.” In fact, since human behavior is a structural whole, the verbal and the nonverbal constitute a unified whole (Pike, 1967). In this sense, language is not a separate compartment in the system of knowledge. Rather, it is integral to the system. Learning a new language as communication, therefore, necessarily involves enhancing the plasticity and flexibility to the structure of knowledge so that the system can operate effectively in contexts where that communicating takes place – in more static terms, where that language “is used.”

1.2.7 Language as an organism

An organism is a continuous living system. The construal of language as an organism is not new. Humboldt (1949 cited in Robins 1967), for example, stresses that “a language is to be identified with a living capability by which speakers produce and understand utterances, not with the observed products of the acts of speaking and writing” (Robins 1967, p. 174). Rutherford (1987) suggests that a better metaphor for language than a machine might be an organism - machines are constructed; organisms grow (p. 37).
The linguistic anthropologist A. L. Becker prefers his term “languaging” (Becker, 1995) to capture the dynamic, organismic nature of language. The complex and dynamic view of language has been echoed by those applied linguists who construe language as a “complex adaptive system” (Ellis and Larsen-Freeman, 2006; The Five Graces Group, 2009). As Diller (1995 cited in Larsen-Freeman 1997) puts it, “The act of using the language meaningfully has a way of changing the grammar system in the user” (p.148). As the user's grammar is changed, this sets in motion a process, which may lead to change at a larger scale (such as at the community level) (Larsen-Freeman, 1997). Language grows and restructures with time. Therefore, a static algorithm, which renders language a fix set of symbols and rules, cannot account for the continual, and never ending growth and complexification of a system that is initiated from the bottom-up by individual language users (ibid. p.149).

1.2.7.1 The self-adaptive organization of knowledge

As a living system that sustains itself by actively maintaining its internal and external coherence, knowledge is dependent on the flexibility of the internal structure. Building knowledge into the system inevitably involves causing changes to the structure of the system and its environment (Nocolić, 2014). This may involve adoption or production of new media and new technologies to coordinate the new media with the other components of the system. In fact, as Hutchins (2006) puts it, “The emergence of a language is a cognitive process that takes place in an evolving cognitive ecosystem that includes a shared world of objects and events as well as adaptive resources internal to each member of the community” (p.37). Simply put, language is a product of social and
biological co-evolution (Tomasello, 2003; Sinha, 2010). It has evolved epigenetically as human beings have communicated and collaborated within bigger and bigger groups (Sinha, 2010; Tomasello, 2014). The complexity of language corresponds to the complexity of social organization and the complex relationships human beings develop with nature. However, at any point of its evolution, language is always a whole and complete organism. It is always a model of the cognitive system in which it functions (Bateson, 1972; Sinha, 2010). This is why “at all stages of the evolution of language, the communication of our ancestors was structured and formed – complete in itself, not made of broken pieces” (Bateson, 1972, p.424).

The initial organization of knowledge is conditioned by the interactions between the human gene and the environment to which it adapts. Since these interactions give rise to a human body, the initial organization of knowledge has evolved to coordinate the neural system with the parts of the body. The structure continuously gains adaptability through the activities in which the system engages. The adaptability is achieved through adding layers of organization and adding varieties at each layer (Nicolić, 2014). Figure 1.2 models a four-layer organization of the highly adaptive human cognitive system.
Each layer of organization has its own cybernetic knowledge (i.e., of when and how to act) as well as cybernetic knowledge of the layer immediately beneath it. The cybernetic knowledge at each layer of organization is of different levels of specificity (Sinha, 2010; Nicolić, 2014). The layer that started to form the earliest in life (i.e., the genetic layer) has the most general knowledge - so general that our consciousness cannot at all recognize it.

New layers of organization in knowledge beyond the temporal-spatial-corporeal level are constructed as a result of activities enabled by the existing organization of knowledge. The process that new layers of organization are formed through, as the organism acts in the world, resembles the growth of a glacier. System activities
accumulate to transform into a new layer which compresses the previous layer and forces it to restructure. As a result, the structures gained through activities early in life (i.e., temporal, spatial, and corporeal knowledge) become more and more abstract and sink deeper and deeper below the consciousness level (Bateson, 1972). Regardless of how deep they sink, however, their impact on the way language works never ceases. However deep they sink, they can still receive eco-feedback directly from the environment (Nicolić, 2014). When necessary, they may restructure and cause structures on top of themselves to change accordingly. As Bateson (1972) puts it, “our life is such that its unconscious components are continuously present in all their multiple forms” (p.137).

The most primitive layer of organization in knowledge that is explicitly involved in language behavior was formed as the individual relates the body to the world through perception and acting in the world using the body as a medium. This is how every use of language can be considered a metaphor whose “source field” is the body acting in a world (Lakoff and Johnson, 1980). This primitive layer is constituted of spatial, temporal and corporeal structures (or concepts), which can function without words. Turner (1990) has termed these structures image schemas, the skeletal patterns that recur in our countless particular sensory and motor experience. Functioning in the world without words has been discussed as pre-linguistic communication or pre-linguistic intelligence (Vygotsky, 1986; Bruner, 1989; Tomasello, 2003)

The more recent layers – the socio-cultural and semiotic layers – come into being as a result of social life, that is, the ever complicating interactions between the individual, other human beings and the shared world of objects. These interactions over time give
rise to an ever-complicating system of semiotics, involving all the signs through and with which we make sense of our world, such as constructions (from clauses to words), numerals, mathematical operators, alphabets and logographs. The semiotic system extends beyond the human body and is not constrained by the here and now. With the semiotic system, human beings can make sense of events from the past and imagine the future. Since the signs are not physically connected to our body, one might wonder how we make sense of the world through them. This is where metaphor comes into play. As will be discussed next, metaphor is empowering but dangerous.

1.2.7.2 Metaphor as a double-edged sword

Metaphor is the technology\(^1\) we employ to make sense of the world through symbols. It involves mapping a relationship from one experiential realm (usually more abstract) onto a relationship from another experiential realm (usually more concrete) in order to make sense of phenomena in the more abstract realm (Lakoff and Johnson, 1980; Goodman, 1984; Turner, 1990; 2009). Whenever we say A is B, and B belongs to a different experiential realm from A, we are operating by metaphor. For example, when we make a sound, such as huò, to refer to actual flames or the written symbol “火”, we are using metaphor because we do not experience the flames or the visual symbol the same way we experience the sound. Even the relationship between the flames and written symbol “火” (or fire in English) is metaphorical because we do not experience the two-dimensional symbol the same way we experience the three-dimensional flames.

\(^1\) This dissertation adopts Arthur’s (2009) definition of technology as “a means to fulfill a human purpose” (p.28).
By using metaphor, we identify one thing as some unrelated other thing. After overuse, we tend to forget that this way of referring to that “other thing” was a metaphor and think of it as “the thing” (Goodman, 1984). For example, a native Chinese speaker tends to equate the sound *huō* and the written symbol “火” with the image of flames. He tends to forget that neither *huō* nor “火” is inherently connected with the real flames. People could have used any sound or written symbol to refer to the flames. The fact is that people from different parts of China do pronounce “火” differently although the majority of Chinese people have been using the same written symbol for flames, regardless of how they pronounce it, thanks to the first emperor of the Qin Dynasty (221 BC - 206 BC).¹

Metaphor constitutes an economical, practical, and creative way of using symbols (Goodman, 1984; Turner, 2009). With metaphor, we can conceptualize things that are not in the “here and now” with ease. Metaphor allows us to deal with a skewed sample of the events in the total cognitive system. It is a skewed sample because the sampling is done by the sounds or written symbols, which are metaphors for life events, rather than the actual events. We do not need to remember the distinction between flames and *huō* or “火” when we use *huō* or “火” to describe _hot sales_ or _hot discussions_ or understand it in such metaphor-inducing phrasal contexts. Nor do we need to be aware of all the referential links behind the expression _fāhuō_ (发火) (“start a fire” or “lose one’s temper”) to use it effectively.

¹ When the first emperor of Qin united China, he ordered that all people in the country use the same set of written symbols.
The empowering nature of metaphor is also dangerous since it tends to trick us into reduced views of our world and counter-productive approaches to solve fundamental problems, such as learning to communicate in another culture. For example, we tend to believe that one can learn to communicate by memorizing individual signs and the “rules” by which they are used to talk and write about things. However, such a reduced approach to learning to communicate turns out to be far from a short-cut. It is labor-creating and ineffective because the signs and “rules” are hardly exhaustible or fixed; nor are the sounds or written symbols used in isolation from other symbols, such as those that are paralinguistic. As Bateson (1972) has pointed out, “the kinesics of men have become richer and more complex, and paralanguage has blossomed side by side with the evolution of verbal language” (p.412). The “rules” or conventions stay active only if they are useful and usable (Clark, 1996).

The current organization of language, which is inherently metaphorical, has evolved to coordinate interactions in the current cognitive system, which is distributed across the neural system, the body, the social group and the system of semiotics with which the individual must live. For example, a Chinese speaker must live with the spoken and written symbols shared by other Chinese speakers. Similarly, an English speaker must live with the spoken and written symbols shared by other English speakers. A Chinese-English bilingual must live with both sets of symbols. To develop the knowledge for coordinating with the symbols in communication, the individual must participate in the activities that involve the symbols. It is through action that structural changes in the system are generated (Maturana and Varela, 1992; Nicolić, 2014).
1.2.7.3 Social and individual-specific aspects of language

Language as an organism is socially constructed but also individual-specific (Gumperz and Levinson, 1996, pp.9-10). People functioning in a certain group for a long period of time develop similar language and react to their environment in very similar ways. However, depending on how closely they have been functioning together, an individual may perceive and react to his environment very differently. For example, when the environment presents a need to introduce oneself, a person speaking Chinese tends to introduce his affiliation before his name, for example, Wǒ shì Huáměi màoyì gōngsī de Zhāng Míng (I am Zhang Ming from Sino-America Trade). Depending on the context, he may even not bother mentioning his name, and say simply Wǒ shì Huáměi màoyì gōngsī de (I am from Sino-America Trade). By contrast, a person speaking English tends to introduce his name before his affiliation, saying, for example, “I am Mike from Sino-America Trade.” Depending on the context, he may not mention his affiliation. This is an example of inter-group difference between English and Chinese speakers in general.

There are also intra-group differences among Chinese speakers or among English speakers. Evidence for this includes personal speech styles and the various dialects and variations within one language. The language shared by a group varies throughout time and across space (Larsen-Freeman, 1997; Bybee, 2010). A response that seems inappropriate to one group may be acceptable by another group in a similar context. For example, the Chinese honorific second-person pronoun nín 您 is more commonly used among the northerners than people in the south. Also, a response that used to be inappropriate may become acceptable over time. For example, more and more Chinese
people consider it acceptable to respond to a compliment with “Xiexie (Thank you),” which used to be considered inappropriate. Therefore, when we teach a language we need to specify to which individual or which group the language pertains and at what time.

Usually, it is the changes that take place at the individual level that set in motion a process, which may lead to changes at the group level (Larsen-Freeman, 1997). The Internet has speeded up the process. A lot of never-before-heard uses of expressions, such as 雷人 (léirén), 吐槽 (tǔcáo), 女汉子 (nǚ hànzi), become popular among netizens overnight and are used in a wide variety of contexts in daily conversation. Therefore, we must teach a language in a way that not only embraces, but also nurtures creativity.

1.2.7.4 The role of language in communication

The construal of language as a coherent and self-sustaining system is consistent with the crucial role language plays in communication. As discussed earlier, one’s behavior in communication is based on an understanding of the context rather than the stimuli alone. The stimuli, such as words and gestures, are meaningless independent of the context of which they constitute a part. In other words, what the system responds to is the context. The responding behavior is determined by the state of the internal structure of the system, rather than by any stored mental representation, such as words or rules of grammar. The internal structure changes its state according to a mechanism that coordinates the interactions in the system. This is how language plays its crucial role in communication. Language as an organism (a living system) alters the state of the system in response to environmental changes (or stimuli) to maintain its own internal and external coherence. It is the coherence of the structure of the system and its world that
renders the stimuli meaningful. This is why a baby’s crying communicates different things to his mother in different contexts. For example, when the baby has not been fed for a few hours, his cry may be taken as a need for milk. When the baby has just been fed, his cry may communicate discomfort in certain part of his body and the mother may check if the diaper needs to be replaced.

1.2.8 Meaning as patterns of brain activity

From the perspective of autopoietic systems, all the changes we experience are determined by our internal structure, whatever it may be, and those structural changes are a result of the dynamics within our own system (Maturana and Varela, 1992, p.96). Our cognitive system, however, extends way beyond the biological structure of individual human beings. It includes the people we socialize with and the shared world of objects. The changes we experience in mind, such as understanding or knowing, are determined by the structure of the cognitive system and are results of the dynamics within the cognitive system. Therefore, in communication, understanding is not achieved by duplicating the other person’s utterance in my own system. Rather, it is constructed, on the fly, in my own system (Bateson, 1972; Luhmann, 2002). The system has no idea of utterances. What it processes is differences, which always exist as units of message-plus-context (Bateson, 1972).

An understanding is achieved because some of the perceived differences have activated familiar patterns of activity in my cognitive system. The concept “pattern” entails prior experience, because of which the perceived events make other events predictable for me and I can guess the missing parts (or the context) of the message. In
other words, for me, the perceived events carry a *meaning* which refers to and includes the missing parts (Bateson 1972). In this sense, meaning is not inherent in the stimulus; rather, it is because of the familiar context that the stimulus seems to carry a certain meaning for the perceiver. What we understand is, therefore, the entire context, not just the stimuli. Communication, or coordinated behavior, relies on a common understanding of the context, or in Clark’s (1996) words, a “common ground.”

Patterns of activity in my neural system are experienced as *meaning* (Turner, 1991; Gazzaniga, 2011). Each neural system has its unique structure and unique history of structural coupling with the environment and may display different patterns of activity in the same context. Therefore, the meaning I experience in a context shared with another person may not be identical with the meaning that person experiences. For example, not everyone will show the same response upon seeing a footprint on a white wall. Depending on prior experiences and how one finds himself in the situation, one person may simply murmur “Who did that?” to himself and walk away; another person may take a photo and post it on social media, criticizing anyone who has done it; a third person may be inspired to do graffiti on the wall. Different people respond to the same footprint on the same wall differently because the scene activates different patterns of neural activities in different people. Different people experience different meanings as they respond to the same scene.

Since my neural system is only part of my cognitive system and its activities only constitute part of the interactions going on in the system during communication, the meaning I experience should not be attributed solely to the work of my neural system.
The work is done by the whole system, much of which has been in operation long before the advent of my brain. Much of what we refer to as language and culture or mind has been there long before the advent of my neural system. The structure of my neural system is shaped by the system into which it was born. My participation in the system simultaneously transforms the structure of my neural system and the structure of the total cognitive system. Brains and environments co-evolve (Godfrey-Smith, 1998; Menary, 2014). For example, my neural network gets more complex (with richer patterns of activities) as I engage in more reading on diverse topics (Dehaene, 2009; 2014; Menary, 2014). As my reading experiences accumulate, I may start producing texts, which may become a vigorous component in the shared cognitive system. The ongoing transformation that takes place in an individual organism is what we refer to as learning.

**1.2.9 Learning as systemic transformation**

Learning as systemic transformation is ongoing and irreversible. This does not mean that learning is linear or predictable. In fact, it is just to the opposite. The path of learning is non-linear and beyond the control of any individual. Our participation simply triggers interactions between our neural system and the rest of the whole cognitive system, which distributes across individuals, social groups, and the world of objects we live with. How learning takes place or which structural changes get conserved, depends on the mutual selection of our individual organism and the whole system. Learning takes place systematically. When learning to participate in an event, we do not simply weld together individual movements and individual stimuli; instead, we acquire the mechanism to respond with a certain type of solution to situations of a certain general form (Merleau-
Ponty, 1962, p. 164). In other words, we do not learn the particular stimuli; we learn to orient ourselves to certain types of contexts. Through learning, we acquire “a habit of ‘punctuating’ the stream of events to give repetitions of a certain type of meaningful sequence” (Bateson, 1972, p.166). For example, if a student’s utterances in a Chinese language class are evaluated for correctness, the student may not remember all “the correct” ways to say things. What he will surely acquire are such things as “the correct” way to say things in Chinese and expecting things to be said in “the correct” way. It turns out that the learner does not only learn what the teacher teaches, but how she teaches as well.

Both the neural system of an individual learner and the system of classroom communication are complex and communicational. They both operate by non-linear stimulus-response mechanisms rather than linear cause-effect mechanisms. A fundamental difference between a system of stimulus-and-response and a system of cause-and-effect is that in the former the energy of the response is usually provided by the respondent, whereas in the latter there is an energy transfer such that the motion of the effector is energized by the impact of the causer (Bateson, 1972, p.403). For example, speaking as a physical movement always causes the air to vibrate, but saying the same thing to different people may not always lead to a singular response. This is because responses are generated within the respondent’s own system based on its own history of acting in its world. This explains why different learners in the same class respond differently to the same teacher. Therefore, the learning of different individuals hardly follows the same path.
Furthermore, the process of learning is communicational and thus stochastic. The stochastic nature of learning is deeply rooted in the constructive nature of communication. Based on the discussion so far, communication leads to construction of new structures because it is mediated by the shared environment of the communicating parties. Each party constitutes part of the other party’s environment. Each party responds to the changes in its own environment. There are always more environmental changes than “intended” by the communicating parties. For example, the onomatopoeia duāng has been used for years without a Chinese character. However, when Jackie Chan used it in a recent shampoo commercial on TV, people unexpectedly began to use the two characters of Jackie Chan’s Chinese name (成 and 龙, the former on top of the latter) to represent the sound. The very fact that certain viewers saw Jackie Chan use the onomatopoeia duāng in that particular way in that particular commercial at that particular moment produced “noise” (unintended stimuli), which created the unexpected connection between Jackie Chan and the onomatopoeia. As Bateson (1972) puts it, “noise is the only possible source of new patterns” (p.410). The emergence of the character for duāng also demonstrates how understanding is a result of local construction, rather than transmission of metal representations. The producers of the commercial may not have intended for a meaning which refers to the connection of duāng and Jackie Chan’s Chinese name.

1.3 Redefining the challenge for foreign language teaching

To summarize what has been discussed so far, human organisms are autopoietic systems and their cognitive capacities, such as mind and language, have emerged from
their interactions with the environment and co-evolved with the organisms and their environment. As autopoetic systems, the only purpose of human organisms is to conserve autopoiesis (or life) in the environment. For this purpose, they must act effectively in response to environmental changes. Through accumulated actions in a certain environment, the internal structures of the organism gain cybernetic knowledge of when and how to act in the environment. This is how human organisms become knowing and began to observe patterns. Being knowing makes the organism act more efficiently in response to environmental changes; however, it also constrains the organism’s reaction – they now tend to follow patterns to maintain efficiency. Since both the environment and the organism are constantly evolving, the patterns which the human organism follows are continually revised. Cognitively speaking, acting according to the revised norms for a substantial period of time leads to revisions in the organism’s internal structure. As a consequence, the revised structure has the updated cybernetic knowledge of when and how to act in the newest environment. This is how the human organism and its cognitive capacity co-evolve with the environment.

Human beings acting in a group for a substantial period of time create a shared self-sustaining cognitive system, or a “cognitive ecosystem of culture” (Hutchins, 2006), which is experienced as mind or culture. The cognitive system distributes across individual organisms, the social group and the material world (Bateson, 1972; Guatarri, 1989). As a self-referential system in its environment, the cognitive system is constantly self-producing. Individual human minds are products and components of the cognitive system. This is how human beings began to have a mind (or to function as an integral part
of a system) and shared patterns came to be observed across the system. Having a mind allows human beings to share their cognitive capacity and act more efficiently; however, it also constrains human beings – they now have to follow the shared patterns to sustain the mind. Since the structure of the individual human being, the social group, and the material world are constantly co-evolving, the structure of the shared cognitive system is constantly revised, which leads to revised patterns of operation. The survival of the patterns is subject to biological as well as social factors. This is how mind or culture co-evolves with human biology and society.

Cognition or thinking is, therefore, a collective effect of biological, social and mental processes, rather than merely an effect of individual mental processes. Biological processes refer to the metabolic processes that sustain life in an ecosystem. Social processes refer to the technological processes\(^1\) that constantly transform social life. Mental processes refer to the synchronic and diachronic communicational processes that sustain the vitality of a mind or a culture. Among these processes, biological processes are the most fundamental and have given rise to social and mental processes. The relationship among the biological, social and mental processes may be construed in terms of the three-ratchet system\(^2\) shown in Figure 1.3. These processes constitute three interdependent autopoietic systems, nature, society, and mind. Together, they constitute

\(^1\) Since technology is defined as “a means to fulfill a human purpose” (Arthur, 2009, p.28), technological processes refer to all the processes that change how human beings act in their world. Communication and writing are both examples of technological processes.

\(^2\) In this dissertation, ratchets are employed as visual metaphors for complex systems, as opposed to complicated systems. Whereas complicated systems are governed by physics and are the predictable, determined sums of their parts, complex systems can never be reduced to their parts because they are always caught up with other systems in a dance of change. Complex systems are spontaneous and context dependent. They have levels of unpredictability. See Davis et al. (2015, p.181).
the total cognitive ecosystem. Each individual and his cognitive niche constitute a fraction of the total cognitive ecosystem. A human being operates simultaneously in all three systems and his behavior is driven by the dynamics of all three systems. Therefore, a complete picture of communication must include the dynamics of all three systems.

Figure 1.3 Co-evolution of biological, social and mental processes in the cognitive ecosystem
With this systemic view of communication, it is impossible to exhaustively specify the stimuli for a person’s behavior in an interaction. If we try to learn to communicate with people from another language by learning the meanings of isolated stimuli, we are doomed to failure. The stimuli are only meaningful in and for the system; they do not have meaning independent of the system (Bateson, 1972; Turner, 1990). From the perspective of autopoietic systems, a person does not respond by understanding the individual stimuli. Instead, his response is based on an understanding of the context, which always takes place before the stimuli acquire meaning (Bateson, 1972). Language does not function as stimuli in communication; rather, it is the organism that constantly syncs with the environment and assigns meaning to stimuli in relation to the context.

Learning to communicate with people from another language involves enhancing the plasticity and flexibility of the organism of language so that it can operate effectively in the contexts where that language functions. The plasticity and flexibility of the organism is determined by the structure of the cognitive system, which distributes across the human body, the social group and external media. Building plasticity and flexibility involves structural changes in the system. Such changes are primarily results of operating in the target environment. Therefore, to learn to communicate with people from another language, the learner must practice operating in the cognitive system that (re)produces their language. This means that the learner must live with people from the target language and the corresponding semiotic system. Consequently, the task of foreign language teaching becomes one of creating an evolving cognitive system, where the learner can personally enact the processes that (re)produce the target language. Accordingly, the
challenge becomes how to generate and sustain such processes in a foreign language curriculum. Ideally, these processes can constitute a self-sustaining system.

The processes involved in (re)producing the target language and the semiotic system are multiple and intertwined, including biological, social and mental processes. Since foreign language teaching and learning take place in a social system, the impact of a foreign language curriculum is primarily on the social system. The processes we can generate and sustain in a foreign language curriculum are a portion of social processes, that is, a portion of the technological processes that transform social life. This portion of social processes has been generally characterized as literacy but has been studied from different perspectives (Havelock, 1963; Ong, 1986; Harris, 2000; Street, 1993; Gee, 1996; Masny, 2001; Masny and Cole, 2009; 2012). The different perspectives on literacy will be reviewed in Chapter 2.

Since society, nature and mind are interdependent systems, we must make sure the processes of literacy generated by the foreign language curriculum cannot only self-sustain, but also sustain the autopoiesis of all the three systems of the target community. This requires the processes of literacy in a foreign language program to constitute a model of the ecology of literacy in the target community. In other words, an ideal foreign language curriculum must constitute an ecology of literacy so that learners prepared by the curriculum can smoothly adjust themselves to the environment of the target community. Since communication is inherent and ongoing in complex, dynamic, self-sustaining systems, the ultimate challenge for foreign language teaching is not how to
make communication happen. Rather, it is how to orient communication in the language program toward an ecology of literacy.

1.4 The purpose of this dissertation

Viewed from the perspective of autopoietic systems, communication is automatic, complex and constructive. It is automatic because it is the process by which the individual syncs with its environment and maintains its autopoiesis (life and identity). It is not generated by a thinking subject; rather, it gives rise to a thinking subject. Communication is complex because it is always mediated by the shared environment, which is responsive not only to human behaviors. Human communication is embedded in other larger dynamic systems of communication. This makes it extremely complex. There is always more information available in the environment than “intended” by the communicating parties. Communication is inherently constructive because it involves a system of actions – stochastic changes in the individual organism and in its environment. Actions lead to (re)construction of structures both in the human organism and in the environment. Languages and the semiotic systems are examples of structures produced as a result of communication.

In the systemic view of communication, understanding is both the prerequisite for and the primary outcome of communication. Without an initial understanding of the context, communication cannot take place. The primary outcome of communication is a revised understanding of the context. The semiotic systems (such as repeated patterns of sounds and written symbols) constitute a secondary but desirable outcome, which can, in
turn, drive communication. These shifted relationships challenge our current models of foreign language teaching, which are based on the reductionist view of communication (in which semiotics are seen as means to understanding instead of the consequences of understanding). Therefore, we need an alternative model for foreign language curriculum design, which can take advantage of the automatic, complex and constructive nature of communication and leads to an ecology of literacy. This work has been in process since the 1990s, as Galal Walker and his colleagues have developed what has come to be known as the performed culture approach (PCA), drawing heavily from anthropology, psychology, linguistics, and cognitive science.

1.4.1 The Performed Culture Approach (PCA) as a step toward an EOL

PCA is not a finished “system” or “method.” Rather, it is “a living and evolving mind-set with pedagogical congruence.”¹ PCA differs fundamentally from the two models reviewed at the beginning of this chapter in terms of educational goal, approach to curriculum design, and instructional method. Firstly, whereas both the add-on and the integrative models set fluency and formal accuracy as the goal of learning a foreign language, PCA defines the goal as “learning to participate in another culture” (Walker, 2000) or learning to do things in another society, which involve much more than fluency and accuracy in using words and structures. “Culture” in “performed culture” refers to the situated “knowledge of what we need when dealing with “man and woman alive” (Walker, 2010, p.2). The PCA view of culture unites language and culture in situated events. In other words, PCA aims to teach non-verbal and verbal communication as an

¹ Dr. Charles Quinn, personal conversation at the Ohio State University.
integral unit. This is consistent with the systemic view of knowledge as all knitted together into a deictic system, which generates effective behavior in particular contexts.

Secondly, whereas both the add-on and the integrative models take words and sentence structures as the basic units of learning, a PCA curriculum chunks the content of learning into units of performances. A performance is defined by specified time, specified place, specified roles, scripts and audiences (Walker, 2000; Walker and Noda, 2000; Noda, 2007). In a foreign language class, a performance consists of a pedagogical sample of language in a cultural context (Walker and Noda, 2000, p. 35). Since linguistic forms only constitute part of the scripts of a performance, what linguistic forms the learners encounter, when and how they encounter them in a PCA curriculum largely depends on the kinds of things they learn to do in the target society. The things they learn to do may be arranged according to time, place or people, to help learners build systems of stories which are connected as sagas (memories related to specific people or places), cases (memories related to tasks and functions) or themes (memories related to behaviors or actions that convey culture-specific values) (Noda, 2007, p.301). A typical PCA curriculum is comprised of performances sequenced from simple to complex\(^1\) and from the most common to the less common. For example, performances about meeting a friend are introduced before those about attending professional conferences. The PCA strategy of chunking language learning into performances of exchanges instead of words and

\(^1\)The complexity of the script of a performance is determined by the number of moves and the abstractness of the context. This is discussed in detail in Chapter 4, under Section 4.5.2.2 “Sequencing performances.”
sentence structures respects the indecomposable nature of human behavior in communication.

Thirdly, unlike the other two models, which emphasize the comprehension and accumulation of words and structures of the target language, the kind of classroom instruction recommended by PCA emphasizes the understanding of contexts and an awareness of audience. PCA classroom instruction strives to engage learners in personally enacting the target performances so as to build personal memories of having experienced the performances. The target performances are not supposed to be random role-plays; they should be the kinds of performances that the learners are likely to encounter in the target society as foreign participants. Teachers’ feedback regarding learners’ performances (including both verbal and non-verbal behaviors) should primarily guide the learners toward an awareness of the audience\(^1\) from the target community, rather than the audience in the classroom. Since effective communication relies on an understanding of the context and of the audience as an important constituent of the context, the PCA emphasis on the understanding of contexts and an awareness of audience from the target society makes PCA a prominent approach to effectively helping learners communicate in the target society.

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\(^1\)The scope of audience may be as narrow as the addressee, or be extended to include the people who are present but are not addressed to, and even include the people who are not present but have impact on the person’s decision-making because of previous and/or potential future interactions. For example, a child may behave in a certain way even if his parents are not in presence because he knows that his parents would be happy to see him behave in that way.
1.4.2 Misunderstandings of the Performed Culture Approach (PCA)

However, misunderstandings about PCA are prevalent among the practitioners of foreign language education. For example, PCA is considered by many to be superficial and insufficient as an approach to foreign language teaching. In a typical PCA class the majority of instructional time is occupied by learners personally enacting performances (mostly spoken ones in the lower level classes), and little time is spent on explicit instruction on words and sentence structures. Such an approach to foreign language teaching is contradictory to the expectation of most people, including sophisticated practitioners in the field of language teaching. Many teachers and learners who have experienced PCA or have observed PCA classes are dissatisfied with the limited explanation of linguistic forms. With a superficial understanding of PCA, teachers and learners are concerned about the effectiveness of PCA in teaching “the language.” They even tend to equate it with “role playing” and reduce it to a technique for teaching spoken skills.

In fact, role playing in the sense of Communicative Language Teaching (CLT) is fundamentally different from the kind of drills and exercises PCA uses. The primary function of role playing in CLT is to develop fluency and accuracy in using the linguistic structures. Whether the roles and performances are appropriate or useful in the target society is not considered. By contrast, the drills and exercises in PCA are intended to create a realistic target cultural environment in ACT classes.¹ The drills and exercises are

¹ PCA utilizes two types of classes – ACT and FACT. The ACT classes provide opportunities for learners to perform the culture in contextualized settings. Ideally, these classes are taught exclusively in the target language by teachers who can provide appropriate models of language use. FACT classes, on the
supposed to be designed with special attention to appropriateness in the target society. Learners’ performances are supposed to be evaluated for an awareness of audience in addition to smoothness of delivery. Also, drills and exercises of PCA may involve reading or writing when relevant. For example, when planning for a party, dictating or reporting a shopping list may become relevant. When staging a job interview, reading job posts and creating CVs are integral acts.

1.4.3 Accounting for the misunderstandings

The current misunderstandings about PCA may be attributed to two major factors. The first factor is the deep-rooted and prevalent reductionist view of language and its role in communication. People have generally believed that language is composed of words and sentence structures and that communication is achieved by understanding “language.” Also, the widely adopted “standardized tests” such as the ACTFL oral proficiency interview (OPI) primarily assesses fluency and formal accuracy. Therefore, teachers and students tend to doubt the effectiveness of any approach (such as PCA) that does not prioritize comprehension and accumulation of words and sentence structures. The second factor behind the misunderstandings of PCA may be a lack of a systemic model for foreign language curriculum design. PCA has put forward insightful ideas about teaching spoken and written skills in Chinese as a foreign language. However, these ideas have not formed a system and there is inconsistency in the actual instructional practices in PCA.

other hand, “include discussion about the language and the culture, such as explanations about how to produce the sounds of the target language, grammar patterns and how they are used, when and how certain vocabulary items are used, when and how natives of the target culture make apologies, how business cards are exchanged, and what the restaurant script for the target culture is like” (Christensen and Warnick, 2006, p.59)
spoken instruction and reading instruction. Based on my observations of introductory Chinese language courses at The Ohio State University, when the Chinese writing system is introduced, the teachers and learners tend to switch their attention from performance to memorizing isolated writing symbols. As a result, first-year and second-year learners tend to find reading and writing classes dull, frustrating and unrelated to spoken classes.

The purposes of this dissertation is to build onto the work of PCA and construct a practical model for foreign language curriculum design that can take advantage of the automatic, complex and constructive nature of communication and lead to an ecology of literacy in a CFL program.

1.5 Organization of this dissertation

This dissertation contains six chapters. This current chapter has scrutinized the view that takes the current definition of the challenge for foreign language teaching as “how to teach culture in a language curriculum.” Taking into consideration an *emic* account of communication informed by extensive literature in biology, psychology, systems theory, information theory, cognitive science, phenomenology and philosophy of mind, the challenge for foreign language teaching has been redefined as “how to orient communication in a foreign language program toward an ecology of literacy.” This alternative definition presents a need for an alternative model for foreign language curriculum design, which can take advantage of the automatic, complex and constructive nature of communication. This chapter has also discussed how the performed culture approach (PCA) to teaching East Asian languages as foreign languages has made
important steps toward the kind of alternative model that is needed. However, a systemic model for foreign language curriculum design has not yet taken shape. Therefore, the rest of this dissertation will build onto the work of PCA and construct a practical model for conceptualizing a design of a systemic process for developing literacy in a foreign language as a lifelong endeavor.

Chapter 2 presents an ecology of literacy (EOL) as a systemic account of literacy, based on a review of three currently existing paradigms for construing literacy. It discusses how the Multiple Literacies Theory (Masny, 2001; 2013) launches an ecological paradigm for construing literacy and provides important clue for a systemic account of literacy. The key concepts of an ecology of literacy discussed in Chapter 2 include language, culture, reading, text, writing, literate beings and conversation. Chapter 3 proposes an EOL model for designing a Chinese language curriculum. It discusses how an EOL informs the goal of a CFL program and constitutes an effective model for designing a CFL program. It describes, in detail, the roles played by the various components of a CFL program, such as the native Chinese-speaking communities, technology, CFL classes, course materials, teachers and learners.

Chapter 4 elaborates on the fundamental and constructive role of conversation in an ecology of literacy and proposes a conversation-driven curriculum as an application of the EOL model to designing a four-year college-level Chinese language curriculum. Chapter 5 reviews the design and implementation of a conversation-driven reading curriculum in an actual Chinese language program over the summer of 2014, and discusses the lessons learned from the implementation. Chapter 6, the final chapter,
summarizes how the evolution of literacy in an ecology of literacy is driven primarily by prototypical conversation and how “conversation-driven” can be a promising approach to orienting communication in a CFL program toward an ecology of literacy. The guiding principles of the conversation-driven approach to teaching CFL are described and future steps toward systematic implementation of this approach are discussed.
Chapter 2 Toward a systemic view of literacy

2.1 Two dominant paradigms for construing literacy

Literacy has been studied from different perspectives. Two of the most influential perspectives may be identified as the technological paradigm and the social paradigm. These paradigms for construing literacy have led to the UNESCO working definition of literacy proposed in 2003 – “the ability to identify, understand, interpret, create, communicate, and compute, using printed and written materials associated with varying contexts” (UNESCO, 2004, p.13). These paradigms have also informed the currently dominant models for foreign language curricula, such as the add-on and integrative models reviewed at the beginning of Chapter 1. These models generally assume a reductionist view of communication, in which the dynamic processes involved in communication are reduced to their relatively static products. For example, language is reduced to the words and descriptions of how to use them and culture is reduced to the presentation of cultural products, practices and perspectives. The task of learning to communicate is thus reduced to memorizing words, “mastering” the descriptions of how to use them and knowing about the cultural products, practices and perspectives. The rest of this section elaborates on the limitations of the technological and social paradigms for
construing literacy and describes the projected characteristics of a perspective on literacy that is consistent with the systemic view of communication proposed in Chapter 1.

2.1.1 An overview of the technological paradigm and the social paradigm

The technological paradigm and the social paradigm take contrasting perspectives on literacy. Whereas the technological paradigm focuses on the role of the writing system in transforming social processes (Havelock, 1963; Goody, 1977; Ong, 1986; Harris, 2000), the social paradigm shifts the focus to the role of social interactions in constructing and transforming social practices, including the conventions of semiotic representation (Street, 1993; Gee, 1996; Kress and Van Leeuwen, 2001; Cope and Kalantzis, 2009). Whereas the technological paradigm studies literacy as a consequence of writing, the social paradigm studies literacy as socially constructed through the interactions to which written texts are integral. The technological paradigm focuses exclusively on what is in a text, which entails that the meaning of a text is encoded with the written symbols. By contrast, the social paradigm emphasizes what a text is in, which entails that the meaning of a text derives from the context in which it is produced. Consequently, whereas literacy in the technological paradigm is about information processing realized by the technology of writing, in the social paradigm, it is about the social interactions and practices in which writing is embedded and rendered meaningful.

The technological paradigm studies literacy as a consequence of technological advancement, primarily the advent of writing systems. Studies within the technological paradigm tie literacy with writing and consider the employment of writing systems, especially the alphabet, as a distinctive feature of literate societies (Havelock, 1963;
Goody, 1977; Ong, 1986; Harris, 2000). In the technological paradigm, written texts are seen as encoding meaning, which is to be accessed through information processing. There is one single standard for being literate, that is, competence in using the writing system. The relationships between the reader, texts, and literacy in the technological paradigm are linear and can be roughly modeled by Figure 2.1. The text, as an autonomously signifying object, generates literacy by engaging the reader in information processing.

![Figure 2.1 Reader, texts, and literacy in the technological paradigm](image)

The social paradigm studies literacy with a sociocultural lens. It rejects the view of literacy as the “great divide” between preliterate and literate societies. Instead, it sees literacy as social practices, which are defined as “the broader cultural conception of particular ways of thinking about and doing reading and writing in cultural contexts” (Street, 2003, p.79). As social practices, the character and consequences of literacy have to be specified for each context, such as school, commercial places and politics (Street, 1993). In the social paradigm, texts are seen as semiotic representations of meaning in
multiple modes, such as linguistic (nominalization and transitivity)\(^1\), visual (images, page layouts, screen formats), audio (music, sound effects), gestural (body language, sensuality), spatial (the meanings of environmental spaces, architectural spaces), and multimodal meanings (The New London Group, 1996; Kress and Van Leeuwen, 2001; Cope and Kalantzis, 2009). There can be multiple standards for being literate. “Literate” is always literate “with regard to something, some aspect of knowledge or experience” (Green 1988, p.160). Literacy is demonstrated as the ability to navigate the multicultural and multilingual world through multiple communications channels. The relationships between the reader, texts, and literacies in the social paradigm are also linear and can be roughly modeled by Figure 2.2. Readers, as autonomous thinking subjects, purposefully and selectively engage in communication, using particular ways of representing meaning with texts to attain particular literacies.

![Figure 2.2 Reader, texts, and literacies in the social paradigm](image)

\(^1\)According to The New London Group (1996), nominalization and transitivity are two major ways of linguistic meaning-making. Nominalization involves using a phrase to compact a great deal of information. After compacting, you cannot always tell what has been compacted. Transitivity indicates how much agency and effect one designs into a sentence. For example, “John struck Mary” has more effect (on Mary) than “John struck out at Mary,” and “John struck Mary” has more agency than “Mary was struck” (p79-80).
2.1.2 Advantages of the social paradigm

Compared with the technological paradigm, the social paradigm yields a broader view on literacy. This broader view has made three important shifts toward a systemic view of literacy. Firstly, literacy is seen as multiple and diverse from the perspective of the social paradigm. Where the technological paradigm focuses on writing, which constitutes one medium for social interactions, the social paradigm brings the multiple users of the medium into view. When the complete scene of the interaction is brought into view, more media are considered. As a result, whereas the technological paradigm only sees written texts and one mode of social interaction, the social paradigm sees multiple types of texts and multiple modes of social interaction.

Secondly, the social paradigm shifts the focus of research and education from texts to the readers, who are considered to actively and creatively construct meaning using texts. Whereas the technological paradigm tends to see learners as passive containers of texts and meaning, the social paradigm sees learners as active “designers” (The New London Group, 1996) of texts and meaning. This shift has inspired the communicative language teaching approaches (Prabhu, 1987; Harmer, 2001; Ellis, 2003, Nunan, 2004) and Clare Kramsch’s (1993) “dialogic pedagogy,” which shift the focus of instruction from the teacher and the text to learners and interactions in the classroom.

Another advantage of the broader, social view is that it makes the role of context in “meaning-making” explicit. From the perspective of the technological paradigm, the meaning of a text is seen as inherent in the written symbols. By contrast, from the perspective of the social paradigm, the meaning of a text is seen as dependent on the
context in which it is created. From this perspective, a text is created by the writer or speaker, who actively “designs” the “intended” meaning, and by the available designs, which include semiotic representations and the conventions for using them (The New London Group, 1996). At the beginning, the reader or listener was expected to interpret the designer’s intention behind the text based on his “assumption” of the context in which the text is created. Soon, researchers and teachers began to realize the possible temporal, spatial, and other gaps between the producer and the consumer of texts. As a consequence, readers and viewers began to be encouraged to “find their own voices” (Kramsch, 1993) from the texts. In other words, not only are the readers or viewers transformed through the process of reading and viewing, but also the meaning of the texts is redesigned by the readers and viewers (The New London Group, 1996). In this sense, from the perspective of the social paradigm we can see how texts and their users constitute the transformation of each other.

The view of literacy as multiple and diverse, the shift of focus toward learners and classroom interaction, and the idea of mutual transformation between texts and their users are important steps toward a systemic view of literacy. However, the social paradigm tends to over-emphasize the role of individual human beings and tends to think of them as the controlling subjects of life events. This restricts the view of the social paradigm to the human society as if literacy only has consequence for the human society.

2.1.3 Limitations of the social paradigm

As distinctive as the technological and social paradigms seem to be, they are not incompatible. The two paradigms share the same foundational assumption about the
relationship between human beings and technology. Both paradigms see human beings as autonomous thinking subjects and see technologies, such as writing, as products of human thinking. Literacy in both paradigms is considered as a function of human thinking, which is believed to constantly bring about social transformation. The difference is that whereas the technological paradigm for literacy research emphasizes the role of writing as a technology that propels the transformation of human thinking (Ong, 1986), the social paradigm identifies the propellant of social transformation as human interactions that involve the application of multiple communication technologies.

In addition, both paradigms tend to view mind and culture as separable, with culture being construed as the environment of mind. It is assumed that cultural processes give rise to the meanings that the mind processes and retains. When this assumption is applied to foreign language teaching, text is seen as a semiotic representation of the meanings “stored in the mind.” The context in which reading and writing take place is construed as the environment of the text that is read or written. The difference here between the two paradigms is that whereas the technological paradigm tends to consider the meaning that emerges from reading and writing as primarily determined by the written text, the social paradigm considers meaning as emergent from the context.

The technological and social paradigms look at literacy from opposite perspectives, but both end up with a delimited, linear view on literacy. Both paradigms are founded on the assumption of an overarching social agency which determines the

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1 In this view, the concept of environment is reduced to a static surrounding composed of institutions and concrete, physical items, such as the cultural artifacts.
dynamics in social life. The technological paradigm considers this social agency to be constituted of information processing by individuals, while the social paradigm considers it to be constituted of interpersonal interactions. In neither cases are the processes before and after the conscious engagement of the human being considered, such as metabolic processes and ecological processes – as if the human organism is a static container for literacies, and literacies only have consequences for human society. In this sense, the two paradigms’ delimited view isolates the evolution of literacy from the evolution of human organisms and their life world. This is incompatible with a systemic understanding of literacy.

2.1.4 Projected characteristics of a systemic perspective on literacy

From the perspective of autopoietic systems, writing and writing systems, with which literacy has been tied, are products of the cognitive system, which distributes across the neural network, the body, the social group and the shared world of objects (Hutchins, 2006). Therefore, writing and the writing system are not independent from the processes that have brought them into being, such as gesturing and speaking. It is true that the social paradigm has extended the referent of literacy to cover texts of all modes of semiotic representations, including gesturing, speaking, writing and imagery. However, these different modes of semiotic representation tend to be seen as parallel, rather than complementary, to each other.

In fact, since human behavior constitutes a structural whole (Pike, 1967), a systemic view of literacies would see the different modes of semiotic representation as complementary to each other. Also, since neither readers/writers nor the modes of
semiotic representation exist *a priori*, a systemic view of literacy would see both the reader and the text as products of some kind of productive processes. Readers/writers and texts are equally constitutive of and constrained by the processes by which they are brought into being. In addition, since the initial structure of a system is shaped by its environment and it is constantly reshaped by its interactions with the environment, a systemic view of literacy would see readers/writers and texts as constantly transformed through processes of communication. Finally, since the interactions between a system and its environment are mutually triggered, rather than controlled by the system, a systemic view of literacy would see the acts of reading/writing as generated by spontaneous processes, rather than simply initiated by the reader/writer. Accordingly, a systemic view of literacy would also see the products of reading/writing (the transformation of the reader/writer and the text) as contingent on multiple factors which are not in the control of the reader/writer. In sum, a systemic view of literacy would see literacy as complex, dynamic, and self-productive.

### 2.2 Multiple Literacies Theory (MLT) as an alternative paradigm for understanding literacy

#### 2.2.1 MLT as an alternative model for educational research on literacy

Recent educational research on literacy has been dominated by models proposed from the perspective of the social paradigm, such as the New Literacies Study (NLS) (Street, 1993) and the Multiliteracies Theory (The New London Group, 1996), both of which study literacy in units of literacy practices. Literacy practices are defined as “the
broader cultural conception of particular ways of thinking about and doing reading and writing in cultural contexts” (Street, 2003, p.79). As a distinction between “literacy practice” and “literacy event,” Street (2000) wrote, “you can photograph literacy events but you cannot photograph literacy practices” (p.21). A “literacy event,” according to Heath (1982) refers to “any occasion in which engagement with a written text is integral to participants’ interactions and interactive processes” (p.93).

The NLS and Multiliteracies models use literacy events as data and analyze the events using ethnomethodological methods, such as conversation analysis and discourse analysis. The goal is to understand how people in particular cultural contexts think about and do reading and writing. For example, looking at literacy events as texts, a discourse analyst would ask interpretive questions such as “Who is doing what? To whom? With whom? When? Where? How?” in order to understand what constitutes a text and what the text means to the participants in the event. Such analyses tend to expect the data to tell coherent and complete stories about what a certain concept, such as knowledge or argument, means to the subjects of the study, or how a certain identity or relationship is constructed through interactions in the event.

Recently, as an alternative model for studying literacy development of children in multilingual contexts, Diana Masny and her colleagues have proposed the Multiple

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1 Ethnomethodology was originally a method used by sociologists to understand how people construct meaning or "definitions of the situation" (Maynard & Clayman, 1991). It has also been applied to educational research to study the participation structure of instructional events in classrooms for understanding the social construction of events, identity, knowledge, learning, personhood, and time (Bloome, 2005).

2 Personal conversation with Dr. David Bloome in his discourse analysis course offered at the Ohio State University during the fall of 2011.
Literacies Theory (MLT). They recommend that literacy be viewed as a range of communication-related processes that constitute and constrain the development of a self and the world of the self (Masny, 2001; 2013; Masny and Cole, 2012; Masny and Waterhouse, 2011). According to MLT,

literacies consist of words, markings, gestures, attitudes, ways of communicating, human and non-human. Accordingly, literacies constitute ways of becoming: becoming with the world. They involve texts in the virtual that actualize as sense emerges. ...They constitute texts in a broad sense (e.g., music, visual arts, physics, mathematics, and digital remixes). (Masny and Waterhouse, 2011, p.291, author’s italics)

Like the research models proposed in the social paradigm, MLT researchers also favor qualitative data and analyze literacy events as texts. However, their purpose is not to explain what a text is in or what it means; rather, they are interested in what a text does and how it does it. Therefore, they use a radically different method for data analysis. This method is referred to as rhizoanalysis. Influenced by the philosophical work of Gille Deleuze and Félix Guattari, MLT adopts the dynamic image of a rhizome to conceptualize the organization of events in an assemblage and the organization of assemblages (Masny, 2013).

An event is like a rupture on a rhizome (Deleuze and Guattari, 1976). A rhizome is open and constantly subject to change. A rhizome may be ruptured at any point and at whatever point a rhizome is ruptured or destroyed, it will always grow further in different and unpredictable directions. Therefore, rhizoanalysts view data as “fluid and in flux” (Masny and Waterhouse, 2011, p.293) in the sense that what is observed is always in the process of evolving toward unpredictable directions. Accordingly, rhizoanalysts do not
expect the data to tell coherent and complete stories. Instead, they embrace ruptures in the narrative by “keeping the way open and working rhizomatic in-between to ask what connections may be happening between multiplicities” (ibid., p.293). They avoid asking the interpretive questions a discourse analyst would ask because they believe interpretation would limit the view “to the world as we know it, not as a world that could be” (Masny, 2013, p.342). Instead, rhizoanalysts would exam the event as a rhizomatic process that creates pathways of becoming. For example, based on video data from a qualitative study of multilingual children’s literacies in French minority communities in Ontario Canada, an MLT researcher would ask questions such as “how do reading, reading the world and self impact children’s perceptions of writing systems?” and “Conversely, how do perceptions of writing systems contribute to reading, reading the world and self?” in order to examine how competing writing systems in learning literacies transform a child and “becomes Other” (Masny, 2010, p.341).

2.2.2 MLT as an ecological paradigm for construing literacy

Construing literacy as processes, MLT situates literacy studies in an even broader context than the social paradigm. Processes of literacy are considered to involve the communication going on in the whole ecosystem, including both the human and the non-human ways of communicating. MLT is grounded in Deleuzian philosophy, especially the work of Gille Deleuze together with Félix Guattari (Masny, 2001). One distinctive feature of Deleuzian philosophy is its objection to Cartesian subjectivity. In the Deleuze-Guattarian framework, a human being is not a controlling subject who thinks and represents; rather, human being is the product of life events. In Deleuzian philosophy, an
event is construed as “life that produces deterritorializations, moments that create ruptures and differences that allows for creation to take off along various unpredicted directions” (Masny, 2013).

In MLT, literacy is inherently multiple not only in quantity, such as multiple types of texts and communication channels, but also in quality (Masny, 2013). The qualitative multiplicities of literacy are believed to have the effect of establishing differences in nature. Such multiplicities more closely conform to the processes of change to be found in any ecological and evolutionary system (Masny and Cole, 2009) rather than linear and discrete continuums. In the Deleuze-Guattarian framework, “dualism dissolves in transversality. Dichotomies become assemblages – dialogue is thought of as a symphony of voices, most of which are not usually heard or are suppressed due to power concerns” (ibid, p.2). In other words, literacy-as-processes assumes no center of subjectivity. Interactions between human beings are considered to be triggered by affects, which are relational forces and processes that come into being in open, rhizomatic networks of interaction (Bogue, 2009). In this sense, MLT and its construal of literacy as processes may be seen as shifting toward an ecological paradigm for construing literacy.

The ecological paradigm exemplified by MLT takes a much broader perspective than the currently dominant paradigms. Figure 2.3 demonstrates the relative perspective that the ecological paradigm takes when observing the interaction between technologies and human beings.
The technological paradigm focuses on how technological innovation enables new modes of communication, new types of texts and new literacies. The social paradigm takes a broader perspective than the technological paradigm by bringing the whole of human society into view. It emphasizes how interactions between human beings as autonomous thinking subjects diversify the contexts for communication and lead to diverse literacies. The ecological paradigm takes an even broader perspective and sees a human society as an integral component of an ecosystem. Consequently, both human beings and technologies are seen as equally constitutive of and constrained by the
processes of the ecosystem. From the perspective of the ecological paradigm, both the reader and the text are products of the processes of literacy that constitute the ecosystem. There are no endpoints in literacies; only intersecting lines of becoming literate (Masny, 2012a).

From the perspective of the ecological paradigm, a human being is no longer a center of subjectivity; rather he is “a text1 in constant becoming” (Masny, 2009). As a text, what a person becomes is equally constrained by the processes of literacy just as other types of texts are. Subjectivity is distributed among texts in the ecosystem, including readers. The relationship between the reader and the text is no longer one of subject-object. Instead, the reader and the text form a subject-subject relationship. Also, literacy is no longer seen as a matter of endpoint abilities; rather they are ongoing processes that constantly bring texts (including readers) into being. Literacies are transformed as they transform readers and other types of texts. The relationship between the reader, texts, and literacies in an ecological paradigm may be modeled by Figure 2.4. The endless interactions between the reader and other texts constitute a self-sustaining system of literacies, which constantly transforms the reader and other texts.

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1 In the ecological paradigm, text is a very broad concept, which encompasses anything that emerges with human communication. Therefore, books and artworks are texts in a relatively stable mode; a reader is an evolving text; even the act of reading can be viewed as a text in a dynamic mode.
As processes, literacies are not for an individual to attain or possess. Rather, they run individuals and other forms of texts as systems and constantly (re)shape them through reading, reading the world and reading the self. A literate individual is primarily an ever-evolving product of literacies, rather than “the autonomous thinking subject” (Masny, 2013, p.341) who controls the process of production. Literacies are coded through fusing with socio-political, cultural, economic, political, gendered, and racialized contexts, which are fluid and transform literacies (Masny, 2011). Literacies are actualized according to a particular context in time and in space in which they operate. However, “they are not wed to a context, but are taken up in unpredictable ways across contexts” (ibid, p.291). Therefore, individuals may be literate in diverse ways and become literate following diverse and unpredictable paths.

In sum, from the perspective of an ecological paradigm, literacies are seen as processes that take place across individual human beings, human society, as well as the whole ecosystem. These processes constitute and constrain the development of individuals, societies, and the whole ecosystem. This broad perspective greatly broadens...
the concepts of text and reading. Such a broadened conceptualization of text and reading will inevitably shift our understanding of what it means to be literate and how an individual becomes literate.

2.2.3 Texts and reading viewed from an ecological perspective

2.2.3.1 Texts as assemblages of events

In MLT, texts are products of literacies. They come in multimodal forms in a broad sense that “fuse with religion, gender, race, culture, and power” (Masny, 2009, p.13). A person is a text that is continuously emerging. Reading, reading the world and reading self are considered as texts that influence the text that a person continually becomes (Dufresne and Masny, 2001, 2005; Masny, 2012a). Literacies are texts that take on multiple meanings and are manifested as visual, oral, written, and tactile (Masny, 2009, p.14). The MLT conceptualization of text is non-conventional in that text is not considered as an object that represents. MLT’s definition of text is fused with its non-conventional definitions to literacy, reading and sense, all of which are understood in terms of events, which are both virtual and actual.

Texts are considered as *assemblages of events* (Masny and Waterhouse, 2011). According to Masny (2012b), an assemblage of event is comprised of *bodies* (such as the reader, writing systems and buildings), *expressions* (acts and speech), and *territories* (systems of interacting concepts). Construed this way, a text is an autopoietic system with a fluid boundary. The bodies constitute its components. These components and their interrelationships are transformed as they interact. The expressions feature the interactions among the components. The territories are constituted of and constantly
transformed by the interactions within it. In this sense, whenever something, such as a road sign, is identified as a text, it is not simply a physical object (a body). Instead, it is an assemblage that involves, at least, the physical object, the reader, the time and place the sign and the reader encounter each other, the local traffic rules, and the changes that take place in all the components of the assemblage because of this encounter. The same sign encountered by a different reader or at a different time and place will constitute a different text or fail to constitute a text. For example, the letters “STOP” painted on the ground of a parking lot may not constitute a text for a monolingual Chinese speaker who has never driven a car. However, a photograph of the same sign in a Traffic Guide may become a text for this person when he prepares for a driver’s test. Therefore, a text is always a text for someone at a time and place. In other words, without context, there is no text.

2.2.3.2 Text as sense-making

In Deleuzian philosophy, an event refers to “life that produces deterritorializations, moments that create ruptures and differences that allows for creation to take off along various unpredicted directions” (Masny, 2013). It has virtual and actual dimensions. Virtual dimensions feature an assemblage of worldviews, sensations, and resonance. Actual dimensions feature what we experience - an assemblage of affection, perception, and belief systems (Masny, 2011, p.495). Difference is the effect of the constant

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1 Dr. Diana Masny suggests “sense-emerging” instead of “sense-making” to do away with subjectivity and emphasize the idea of text as emergent from the interactions between virtual and actual aspects of events. This understanding of text is adopted by the current dissertation. However, sense-making is used to grant texts agency in the process of literacy. It is not the reader who makes sense; rather, it is the text (the assemblage of events) that gives rise to sense. Therefore, “making” is used here in the sense of “bringing about” or “giving rise to.”
interaction between the virtual and the actual (Dufresne, 2006). The virtual becomes actualized only to become virtual again (Masny, 2013, p340). Text is sense-making, which is an outcome of virtual events connecting with actual experiences (Masny, 2010).

Text has virtual/ actual components. It is virtual as pre-personal, *asignifying* machines. It is actualized through an assemblage of heterogeneous forces that come together in a particular time and place (actualization of a sense-event); then sense making is also actualized as perception and/ or possibly experience. (Masny, 2011, p.495, author’s italicization)

A text does not *have* “meaning;” rather, it *makes* sense when its virtual components are actualized through reading. Sense is an event that emerges (Colebrook, 2002). It is activated when, for example, words, notes and ad icons are actualized *in situ* and in interested ways (Masny, 2010, p.340). As an event, sense also has virtual/ actual components. MLT sees language as “the virtual dimension of sense because language is more than its actual element” (Colebrook, 2002, p.20, cited in Masny, 2013). Sense is actualized as transformation (or a becoming) (Masny, 2011, p.495). Transformation takes place along diverse and unpredictable directions. All the components of the actual, including affection, perception, and belief systems, may be transformed to varying extents. Since the actual always becomes virtual again, the virtual also gets transformed. For example, the expression “I’m lovin’ it” does not have meaning in itself, but sense may emerge when a person encounters the expression in McDonald’s commercials. It disrupts an assemblage (the commercial, the person, his knowledge of McDonald’s, etc.). He might find the line true about himself if he is a McDonald’s fan. He might notice the line more easily in the future. These are possible directions of transformation in the actual.
“I’m lovin’ it” may become another way to refer to McDonald’s. It may be accepted as an appropriate expression for strong affection toward all kinds of things. These are possible directions of transformation in the virtual.

From the perspective of autopoietic systems, living is sense-making (Thompson, 2007, p.82). Therefore, texts as sense making are essentially units of life. As an integral part of life, a text makes sense in relation to a life. A text co-evolves with a person’s life. So does the sense it makes. For example, a schoolboy’s encounter with the Tang dynasty (618 – 907 AD) poem “An Ode to the Goose”¹ may disrupt the assemblage with no more than an image of a big white goose floating on green water and singing toward the sky. However, when the boy grows up and encounters the poem again as a linguist or an expert on Tang poems, this encounter may generate more complex disruptions to the assemblage. These may include previous discussions about the discourse features (such as wording, rhymes and tone patterns) or about the aesthetic value of the genre to which the poem belongs. For another example, to a beginning English language learner in an English course, the word “text” often refers to a passage in her textbook. However, to the sophisticated reader of this dissertation, “text” also refers to the whole event in which the passage is involved as a component.

2.2.3.3 Reading as mutually triggered between a text and a reader

Since a text does not have “meaning,” reading is not about interpretation. It is about sense (Masny, 2012a, p.73). As Deleuze (1969/1990) puts it, reading is asking how

¹ A famous poem produced by the Tang poet Luo Binwang 骆宾王 (ca. 640 AD - ?). It describes a live scene of a singing goose. The original title in Chinese is 咏鹅 (Yǒng É).
a text works and what it does or produces, not what it means (cited in Masny, 2011, p.292). Deleuzian philosophy gives up “the pretense of signifying and making meaning in the old way” (St. Piere, 2004, p.283). In Deleuzian philosophy, a book is like a little non-signifying machine and reading involves finding out whether and how it works. “If it doesn’t work, if nothing works, you try another book … something comes through or it doesn’t” (Deleuze, 1995, p.8). Reading, therefore, is like plugging a little non-signifying machine into a circuit. “[T]here is nothing to explain, nothing to understand, nothing to interpret” (ibid, p.9).

Following Deleuze’s analogy, sense may be seen as an event that emerges along with the act of “plugging in.” It is what happens to the circuit. However, the total circuit is not confined in the reader. Rather, it connects the whole cognitive system, which is distributed across individual readers, social groups and the shared world of objects. The reader may be construed as a non-signifying outlet, where the “little non-signifying machine” may plug into the circuit. If nothing comes through, either the “machine” does not work or the “outlet” does not match it. Both the machine and the outlet are subject to inspection and repair. The processes generated by the plugging-in not only bring about transformation to the existing outlets and machines, but also lead to production of new types of outlets and machines. Consequently, the circuit gets more and more complex.

A natural question to ask about the plugging-in analogy for reading is “Who does the plugging in?” Since the ecological paradigm sees subjectivity as distributed across all types of texts (including readers), the act of plugging is performed jointly by the “machine” and the “outlet”. In other words, both the outlet and the machine are animated.
In this animated world of non-signifying machines and outlets, all the machines and outlets strive to remain active in the circuit. The purpose of a machine is to find as many right outlets for itself as possible. The purpose of an outlet is to increase its compatibility with as many types of machines as possible. Therefore, a machine will plug itself in every outlet it comes into contact and the outlet will always let the machine try so that it can find out whether or how it works and what it does or produces.

2.2.3.4 Reading as immanent and intensive

From the perspective of the ecological paradigm, reading is about sense, which may emerge along with any single change in the system and bring transformation to all the processes involved in the change. Reading is therefore intensive and immanent. According to Masny (2012a), reading intensively suggests that when reading critically, cognitive, social, cultural, and political forces are simultaneously at work. It also suggests that “reading disrupts in an interested way in relation to the power to affect and be affected” (ibid, p.75). Reading as immanent suggests that there is no way of predicting when, where and how the disruption happens. An example that Masny has used repeatedly to illustrate the immanence of reading is the reading of the smell of coffee as you walk down the corridor at work.

The reading of the smell of coffee has disrupted an assemblage (you, office, hallway, other co-workers, etc.). What could happen next? You might look at your watch and see it is 4 o’clock: a visual and printed reading. This rhizomatic rupture might lead to the thought of a break, possibly going home or possibly the thought of a next vacation … (Masny, 2012a, p.77)
Therefore, reading takes place when a text (the assemblage of events) is disrupted by a stimulus that emerges from the relational network of texts. When reading takes place, the text becomes the context, within which the stimulus constitutes a new text. This new text soon becomes part of the context in the ensuing reading, that is, when a new stimulus emerges to disrupt the text. In the above example, the smell of coffee soon becomes part of the context of reading one’s watch. In this sense, reading is the ongoing dynamics between text and context, which correspond with the dynamics between consciousness and the rest of the total mind. Consciousness contains a systematic sampling of the rest of the total mind (Bateson, 1972, p.432). Similarly, a text contains a systematic sampling of the context. Reading is the ongoing process of sampling. *Without context, there is no reading; without reading there is no text.*

### 2.3 A systemic view of literacy

From the perspective of an ecological paradigm, we see autopoietic (or self-sustaining) systems that constitute and are constituted of all types of texts. A human being, for example, is an autopoietic system that constitutes an ever-evolving text. A book becomes part of a text when it comes into interaction with a human being. The interactions between a human being and a book constitute a larger autopoietic system, which constrains the transformation of the human being as a reader and the book as a text. Each time a book is read or reproduced (that is, talked about or rewritten) by a reader, it constitutes a slightly different text since the text is an assemblage in which the physical object of the book is merely one component. The other components, such as readers and the time and place the book is read, are dynamic and constantly evolving. Processes of
literacy constitute a coherent system of interrelated autonomous living systems of texts. The total system evolves as the texts within it interact and evolve along diverse paths. The diversity of texts and processes of literacy in a cognitive system and the indecomposable nature of the interdependencies among them may only be captured by the concept of ecology.

2.3.1 Ecology: describing a self-sustaining structure

Ecology originated as a branch of biology which studies how organisms and their environment interact and sustain. Inherent in the concept of ecology is the role of environment, which is implied by the affix “eco.” In an epistemological perspective, “eco-logy” refers to the reasoning of an environment. Since an environment always exists in relation to a system and it is itself a system that generates systems (Maturana and Varela, 1992), ecology may be broadly understood as the study of how systems self-sustain over time. It may also be conveniently used to refer to the self-sustainable structure of systems. For example, Ingold (2000) uses “an ecology of life” to refer to the totality of organism plus environment, which constitutes a developmental system (p.19).

2.3.1.1 Diversity and interdependent relationships as emergent properties

In the past few decades, the concept of ecology has been adopted by many different disciplines, such as psychology, linguistics, curriculum theorizing, social science, and language acquisition, to name just a few. Ecological models have been adopted by these disciplines as a research construct. For example, in psychology, the idea of ecology has been applied to understanding the self-sustainable nature of perception and human development. James Gibson (1979), among others, has promoted ecological
psychology, in which the environment and animals are inseparable. Animals, including humans, perceive the environment directly without active construction or processing by the neural system, and meaning is in what the environment "affords" the perceiver. He coined the term “affordance” to refer to the opportunities for action provided by a particular object or environment (Gibson, 1979). Affordance implies a complementary relationship between the animal and its environment. At a larger scale, Uri Brönenbrenner (1977) has introduced the ecology of human development as “the scientific study of the progressive, mutual accommodation, throughout the life span, between a growing human organism and the changing immediate environments in which it lives” (p. 514). He argues that in order to understand human development, one must consider the entire ecological system in which growth occurs.

In linguistics, Einar Haugen (1972) proposed an “ecology of language” to call linguists’ attention to the diversity within specific socio-political settings where the processes of language use create, reflect and challenge particular hierarchies and hegemonies, instead of just focusing on the phonology, grammar, and lexicon. In curriculum theorizing, John Seely Brown (2000) proposes developing learning ecologies in a region as “a first, important step toward a more general culture of learning” (p.20). A learning ecology is defined as “a collection of overlapping communities of interest (virtual), cross-pollinating with each other, constantly evolving, and largely self-organizing” (p.18). With the Web, “cross-pollination of ideas happens as local students, participating in different virtual communities, carry ideas back and forth between those communities and local ones” (p.19).
The ecological models reviewed above emphasize how things influence one another within a whole. In other words, they emphasize how diversity and interdependence emerge and constitute sustainability. By contrast, the ecological models used in social science and language acquisition emphasize the role of time, in addition to diversity and interdependence. Time is a persistent variable in ecological events. The ongoing ecological processes are memorized as (mostly gradual and invisible) structural changes in the system and its environment.

2.3.1.2 Time as a persistent variable

In social science, Gregory Bateson (1972; 1979) talked about an ecology of human civilization. A civilization is believed to run on ideas of all degrees of generality (Bateson, 1972, p.499). Bateson elaborated on how the systems of the individual, society and ecosystem were all connected into Mind, an ecosystem of ideas. Following this framework, Bateson (1972) defined “a healthy ecology of human civilization” as

[a] single system of environment combined with high human civilization in which the flexibility of the civilization shall match that of the environment to create an ongoing complex system, open-ended for slow change of even basic (hard-programmed) characteristics. (p.494, author’s italicization)

Influenced by Bateson’s idea, the French social scientist Félix Guattari wrote The Three Ecologies, arguing that “it is quite wrong to make a distinction between action on the psyche, the socius and the environment” (Guattari, 2000 [1989], p.41) and that only by broadening our views to include the three interrelated ecologies of the individual, the society and the ecosystem will we be able to effect any enduring changes in our social/cultural/natural environment.
In language acquisition, directly influenced by Mikhail Bakhtim (1981) who construes language as “fundamentally chronotropic” (p.251), an ecology of language is established as “the study of intermeshing temporal networks” (Barron, Bruce and Nunan, 2002, p.2). It is concerned with exploring how language manipulates time (Barron, 1999; Higginbotham, 1999), and with revealing how the past, present and future “question and illuminate one another” (Mullhall, 1996, p.177). An ecological approach to language and language acquisition is deeply rooted in the philosophy of Martin Heidegger and Hans-Georg Gadamer. In their philosophy, the totality of language and discourse is always already in-the-world, “like something at hand” (Heidegger, 1996[1953], p.161/151). Language is more than a system of symbols for labeling the external world; it becomes an expression of the human mode of “being in the world”, where in effect, “being is manifest in language” (Gadamer, 1997, p.362). Language in-the-world is always our language, never my language, because it is an activity in which we are always involved, always inclusive. This view leads us to a holistic perspective whereby human life cannot be conceived without language (Taylor, 1992, p.248). In the ecological perspective, understanding “consists not in understanding what people say, but in grasping what it is possible for others to be, that is, understanding the temporality of others” (Barron et. al., 2002, p.11).

In the same vein, Leather and van Dam (2003) discussed an ecological approach to the study of language acquisition. This approach (e.g., Larsen-Freeman, 1997; van Lier, 2004; Kramsch, 2007) integrates insights from chaos and complexity science, systems theory, psychology and anthropology. They see the individual’s cognitive processes as
inextricably interwoven with their experiences in the physical and social world. They believe “language behavior always involves more than can be captured in any single frame or script” (Leather and van Dam, 2003, p.13). Language acquirers are seen as complex and open systems that operate within and upon the social and physical environment in which they act. The context in which language acquisition takes place is “always complex, dynamic and in principle emergent” (ibid., p.19).

In sum, ecology has been used as a unifying concept to achieve a systemic understanding of nature, human society and the individual mental worlds. The ecologies studied in different fields intersect each other and constitute an ecology of ecologies. Construing the diverse and interdependent processes of literacy in terms of ecology should help us achieve a systemic understanding of the concepts involved in literacy, such as text, reader, reading and writing.

2.3.2 An ecology of literacy (EOL)

Literacies are the various interdependent communication processes that hold the readers and texts together to form a coherent whole. The processes of literacy include but are not limited to reading, speaking and writing. For example, gesturing, visualizing, calculating, mapping and manipulating machines are all processes of literacy. Different processes are distinguished by the communication and media technologies involved. During a given activity, depending on the types of technologies involved, a certain process may be dominant. However, it is important to keep in mind that no process of literacy runs independent of other processes. For example, gesturing and posturing are always at work when we speak face to face although their work only gets explicit when
speech fails to get one’s point across. Similarly, speaking and visualizing are always at work when we read and write although they only become explicit when the sight of a chunk of written symbols alone fails to make sense or fails to elicit the rest of a sentence automatically.

The processes of literacy give rise to various types of texts or “different assemblages of events” (Masny and Waterhouse, 2011), which, in turn, sustain the processes of literacy. In other words, processes of literacy self-sustain by the (re)production of texts. In this sense, the processes of literacy constitute an ecosystem of texts. Texts co-evolve with the system. A text exists because of other texts in the system. The more diversely a text is connected with other texts, the more reproductive the text is. The more reproductive the text is, the more likely it continues to exist in the ecosystem of texts. For example, *Dao De Jing* (or *Laozi*) has been a vigorous text since the 4th century BC\(^1\) because it has inspired people from all fields of study, such as philosophers, artists, poets, political leaders, educators, engineers and health experts. The dependence of a text’s sustainability on its (re)productivity in terms of relationships also applies to a reader, who is an ever-evolving text. A reader relies on diverse interdependent relationships with other texts to maintain his adaptability to his changing environment.

The processes of literacy also constrain the (re)production of texts. The configuration of readers, time and place determines what kind of (re)production is acceptable. For this reason, a student in China is not expected to address his teacher or parents by their names. For the same reason, in 2014 *gaokao* (China’s nation-wide 

College Entrance Examination), a composition produced in the genre of news commentary by the well-established author Zhang Yiyi was rated as low as 29 out of a total of 60 points.\(^1\) A newcomer to an ecosystem of texts must learn the existing patterns of interaction in the system before he can generate new patterns without endangering himself and the ecosystem. The task of foreign language teaching is to help the newcomers to an ecosystem of texts learn the existing patterns of interaction in the system. This rest of this section describes an understanding of language, culture, reading, writing, literate beings, and conversation from the perspective of an ecology of literacy.

2.3.2.1 Languages as self-sustaining organisms

The patterns of interaction in a social system co-evolve with the activities of language, which constitutes the self-sustaining structure of an ecosystem of literacy. The structure connects the individual brain, the social group and the shared world of semiotics. It is loaded with the experienced patterns of interaction among all the components in the system. These registered patterns constitute a dynamic context that makes understanding possible in communication. Language enables understanding by mapping the relationships involving the perceived semiotics, such as an utterance or print symbols, onto patterns of activities in the system. The acts of mapping involve adjusting the organism to accommodate new patterns of relationships. Each time language is used in communication it adjusts itself to sync with the evolving world of semiotics. In other words, a living language creates and recreates itself through communication. This is how language functions as a dynamic context, rather than a pre-given tool, for communication.

As a self-sustaining organism, language is constituted by three interrelated complex systems, namely, the systems of body movements, visual symbols and sound patterns. The relationship of the three systems may be construed in terms of the three-ratchet system shown in Figure 2.5.

Body movements are the fundamental processes that have generated the systems of visual symbols and sound patterns. That is, visual symbols and sound patterns are essentially the effects produced by the movements of particular body parts. The three systems co-exist and have co-evolved in a ratcheted manner as human beings engaged in
increasingly sophisticated communication (Taylor, 1995; Tomasello, 2003; 2014; Sinha, 2010). Therefore, written symbols as a species of visual symbols\(^1\) have not evolved to replace speech, which is a species of sound patterns. Nor has speech evolved to replace gestures, which are patterned body movements.

In Figure 2.5, the system of body movements is represented by the smallest ratchet because this system is the first to react and is always at work in communication. The system of visual symbols, especially the writing system, is represented by the largest ratchet because when this system is at work, the work of the other two systems is assumed. Since the system of visual symbols involves manipulating external media, many of which may be new to the body, it demands the highest level of consciousness. In this sense, the operation of the system of sound patterns is assisted by the work of the system of body movements; the operation of the system of visual symbols is always assisted by the work of the other two systems. It follows that to learn to effectively manipulate the visual symbols of another language, one must first construct a foundation by running the systems of body movements and sound patterns in that language. In other words, the learning of another language can be more effective and enjoyable if it starts with body language and speech, and gradually involves written symbols.

In fact, there is a smaller variety of patterned body movements used in communication. Since body movements are directly constrained by the biological structure of human being, they are comparatively less culture-specific. The pointing

\(^1\) According to Schmandt-Besserat and Erard (2007), writing systems as have evolved from three-dimensional objects.
gestures and many facial expressions, for example, are similarly straightforward across cultures. Speech accompanied with gestures is more likely to elicit the intended responses from people who do not know the language. By contrast, visual symbols are the least constrained by biology and are the most culture-specific. Therefore, without an adequate experience of the culture, one is unlikely to develop self-sustaining structures for manipulating the system of written symbols of a foreign language. The adaptability of language as a whole relies on the coordinated operation of all three systems.¹

2.3.2.2 Culture as a language’s way of sustaining itself

What we refer to as culture or 明 (文化) in CFL teaching has been ambiguous since the English concept of culture and the Chinese concept of wénhuà (文化) are not equivalent. Whereas the English concept of culture is universally applicable to all social insects and animals, the Chinese concept of wénhuà is a unique aspect of human beings. In Chinese, only a person may be described as yǒu wénhuà (literate or educated) or méi wénhuà (illiterate or uneducated). Whereas “culture” is often differentiated by species or groups, such as the culture of ants or the culture of great apes; wénhuà is not only differentiated by groups, but also by degree. In Chinese, a person may be described as wénhuà chéng dù gāo (highly literate or educated) or wénhuà chéng dù dī (poorly educated). In other words, culture is also something that comes with being alive, while wénhuà is something one acquires from education. In this sense, the Chinese concept wénhuà is more consistent with the ecological paradigm, which views literacy as not only

¹Societies that do not seem to adopt a writing system also operate a simpler system of visual symbols, such as landmarks or ad-hoc marks on the trees or on the ground. These visual symbols are less abstract than the established writing systems.
multiple, but also emergent. Therefore, in this dissertation, culture is conceptualized in terms of the Chinese concept wénhuà.

The term wénhuà is composed of the stem wén and the suffix huà, which is associated with change. Together, the term describes the process of becoming wen. In Confucian texts, such as The Analects of Confucius, the concept of wén has been discussed in contrast with zhi. The former refers to the patterns of behavior one acquires from life and the latter refers to what one was born with, which is believed to be imperfect and in need of being shaped by wén. Both wén and zhi constitute the integral whole of being human and they must be developed in a balanced manner. Below are two representative quotes from The Analects of Confucius.

[6.18] 子曰：「質勝文則野，文勝質則史。文質彬彬，然後君子。」
[6.18] Confucius said: “If zhi is in excess of wen, one would appear uncivilized; if wen is in excess of zhi, one would appear unreal. Only when wen and zhi are comparable with each other can one be considered junzi (an ideal human being).”

[12.8] 棘子成曰：「君子質而已矣，何以文為？」子貢曰：「惜乎，夫子之說君子也，駟不及舌！文猶質也，質猶文也。虎豹之韝猶犬羊之韝？」
[12.8] Ji Zicheng said: “Junzi is all about zhi. Of what use is wen?” Zigong said: “What a pity that you describe junzi in such a simple-minded way. Words uttered cannot be called back. (In fact, for a junzi,) wén and zhi are equally important and mutually dependent. (Wen is like the hair of an animal’s fur and zhi is like the hide of its fur.) Can you say that stripped of hair, the hide of a tiger or a leopard is like that of a dog or a sheep?”¹

¹ As far as I know, no other people have put a question mark at the end of this sentence like I do here. The main reason to put a question mark here is that what Zigong is saying here is a counter-argument against Ji Zicheng’s comment that zhi alone is enough to qualify a person as junzi. If the last sentence was not a rhetorical question, the metaphor would be lopsidedly emphasizing wen over zhi, which would contradict the sentence that immediately precedes it. As one of the most eloquent students of Confucius
Based on the discussion, the concept of *wén* in Confucian philosophy is best understood as the quality of being educated or literate, which is an effect of the processes of literacy discussed in this dissertation. Therefore, the concept *wénhuà* is essentially the processes of education or becoming literate. In other words, culture discussed in the context of foreign language learning refers to the processes of literacy. It is embodied as the ecosystem of texts, to which it gives rise.

Language as a self-sustaining organism is a result of biological and cultural co-evolution. It is a deictic text, whose function changes with experiences. The neural system that a person was born with is plastic and recyclable (Dehaene, 2009; 2014). Cognitive neuroscientists have found evidence that reading acquisition proceeds by recycling the same cerebral circuitry in all cultures (Dehaene, 2014). The research of Dehaene and Pegado et al. (2010) has found that the cortical region in our brain that specializes for letters and their combination was particularly responsive to faces and to checkerboards. These responses decrease with increasing ability to read and write. Also, extensive research supports Dehaene’s (2009) hypothesis that mirror invariance (the capacity to identify an object or a face invariantly over a left-right mirror inversion) is progressively lost as one learns to read, because reading imposes a fixed orientation and requires distinguishing mirror letters such as “b” and “d” (Freiwald and Tsao, 2010, Dehaene, Nakamura, et al., 2010; Pegado, Nakamura, Cohen and Dehaene, 2011; Kolinsky et al., 2011; Pegado et al., 2013).

(See *The Analects* 11.15), Zigong is likely to make his counter-argument more aggressive by using such a rhetorical question.
Findings from neuroscience support the idea that the neural network is transformed and sustained by processes of literacy, such as reading books. In this sense, the processes of literacy (or wénhuà) constitute a language’s way of sustaining itself. It follows that to learn a language, one must experience the culture by/ in which the language is sustained.

2.3.2.3 Reading as invisible

From the perspective of EOL, reading is not unilaterally initiated by the reader. Rather, it is mutually triggered between a text (or context) and a reader, both of which have the power of affecting and being affected. Affects are relational forces and processes that come into being in open networks of interaction, and the individuals within those networks are as much products as producers of those affects (Bogue, 2009, p.viii). It follows that reading is a process invisible but inherent in every single event of perception and action. From the perspective of autopoietic systems, an event of perception or action constitutes an understanding of the context, which is demonstrated as coordinated behavior and revised in the ensuing communication. In this sense, reading is integral to communication. It underlies the coordinated behavior observed as communication. Every human behavior, whether verbal or nonverbal, entails an act of reading in a broad, ecological sense.

Reading in this perspective is essentially communication viewed from inside the system. Reading does not exist independent of communication. Every reading leads to communication in a certain way; every communication entails reading of certain texts. For example, the reading of the smell of coffee may lead to a glance at the clock in the
office or lead to a search for a nearby coffee shop in the street. The stopping of a car may entail the reading of certain traffic signs, or of an order from a passenger, or of a malfunction of the car. Reading and communication constitute the coordination between text and context. A text, as an assemblage of events, constitutes a system which, because of the processes of reading and communication, distinguishes itself from the context.

As a process that underlies communication, reading takes place in all kinds of communicational behaviors, such as gesturing, speaking, drawing, calculating and writing. Therefore, reading does not rely on a writing system to take place. In fact, a writing system has emerged as a result of communicating using the semiotic systems existed before the emergence of any writing systems. Just as there are primitive modes of communication, such as gesturing and drawing, there are primitive modes of reading, such as reading faces, gestures and images. Primitive modes and more modern modes of communication co-evolve and constitute the structural whole of human behavior. Accordingly, the reading of gestures, images, sound patterns and written/print texts form a coherent whole. The reading of written/print texts does not take place independent of the reading of other types of texts. Learning to read or becoming literate in another society, therefore, should not be reduced to the learning of reading written/print texts.

2.3.2.4 Writing as a technology

Stiegler’s (1996) conception that humans evolve not only by means of life, but also epiphylogenetically¹ through technical exteriorization is widely adopted among

¹ Stiegler (1996) theorizes three types of memory: genetic (species-related), epigenetic (arising from the experiences of an individual), and epiphylogenetic (the accumulation of individual human
contemporary work in the evolutionary cognitive sciences that emphasizes the role of culture in evolutionary processes (See, for example, Donald, 1991; Clark and Chalmers, 1998; Hutchins, 2001; Menary, 2007; Sinha, 2010). Following this conception, technology is not something external or contingent, but rather an essential dimension of the human (Hansen, 2010, p.64). As Stiegler (2010) puts it,

Human memory is originally exteriorized, which means it is technical from the start. It took shape first as a lithic (or stone) tool, two million years ago. (p.67)

The wording that “human memory is originally exteriorized” should not be understood to mean that humans have no memory in or on themselves. Rather, it should be understood as consistent with the ideas that cognition distributes across the human body and its world (Hutchins, 2001; Menary, 2007) and that the mind is embodied in daily experiences (Varela et al., 1991). The human body is considered as one’s general medium for having a self and a world (Merleau-Ponty, 1962; Maturana and Varela, 1992). In this sense, the body is itself an evolving product of the exteriorization of memory. The structure of the body is loaded with one’s memory of acting in the world, especially how it relates to the world. We might construe memory as the virtual component of knowledge, which is shared across communities and is actualized as an effective action in a given context (Maturana and Varela, 1992).

The exteriorization of memory and access to exteriorized memory are also realized by media technology. From the perspective of EOL, writing is a media experience in technical supports). Human modes of being is unique in that the experiences and memories of a human individual can be accumulated and preserved in technics, and can thus free the individual from genetic and sociocultural bonds, modifying the larger sociocultural group or even humanity as a species.
technology by which memory is exteriorized using a writing system, which is a major part of the system of visual symbols. Writing as a media technology is not fundamentally different from spoken communication since both processes involve embodying information as structural changes in the human body, especially the neural network. However, writing is more complex than spoken communication in that it also embodies information as structural changes in external media. Through writing, the external media, such as a written text, become part of the cognitive system. Also, through writing, the body gets coordinated with the writing system that is involved. The coordinating process inevitably brings about reorganization of the structure of the total cognitive system, or the mind. In this sense, writing is not simply converting thoughts into symbols on paper. Rather, it is an integral component of the cognitive process (Menary, 2007).

Different societies have invented or adopted different writing systems. However, the differences among writing systems are superficial and do not lead to fundamentally different processing strategies in reading. For example, the Chinese “logographic” writing system has traditionally been believed to allow direct access to meaning without phonological processing. However, studies about the processing strategies of readers of Chinese, Japanese, English and Spanish reveal that phonological “encoding” is universal among proficient readers in their first language (Chu-Chang and Loritz, 1977; Hayes, 1987; Perfetti and Tan, 1998). The results are consistent with the findings from fMRI studies comparing English and Chinese readers. The findings from these fMRI studies have confirmed that the same region of the ventral visual occipito-temporal cortex (or the visual word form area) participates in a universal reading circuit, which comprises both
phonological and semantic routes (Booth et al., 2006; Szwed, Qiao, Jobert, Dehaene and Cohen, 2014). The distinction between alphabetic and logographic writing systems may be how they give clues about sound, rather than whether or not they give clues about sound. Compared with alphabetic words, Chinese characters represent sound more holistically. While the pronunciation of an alphabetic word is roughly analyzable in terms of the letters that constitute it, the pronunciation of a logographic character is not analyzable in terms of the strokes that constitute it.

In sum, the differences in the forms of written symbols may not lead to fundamental differences in the ways they constitute reading. In reading, no matter which writing system is used, visual information from the symbols inevitably invokes phonological information if it is to be deemed meaningful by the reader. There is consensus that the majority of cases of dyslexia are accompanied by phonological deficits (Dahaene, 2014, p.329). While phonological deficits used to be assumed to be the cause of reading deficits, recent neurological studies show that phonological deficit is more likely to be a consequence rather than a cause of impaired reading (Castles and Colthearts, 2004; Dehaene, Pegado, et al., 2010; Monzalvo and Dehaene-Lambertz, 2013; Boets et al., 2013). Such controversial findings are not surprising. In fact, phonological deficits may be both a cause and a consequence because the systems of sounds and visual symbols are simultaneously at work in the process of reading.

According to Schmandt-Besserat’s (1996; 2007) archeological study, the difference between different writing systems is deeply rooted in different social structures and life styles. Although the earliest Chinese characters and the tokens of the earliest
Mesopotamian writing system, which is believed to be the origin of alphabetic writing systems, were both logographic, they served fundamentally different purposes. The Mesopotamian tokens were believed to have been created to represent units of merchandise for the purpose of counting. They were modeled in clay in various specific and striking shapes that were easy to recognize (Schmandt-Besserat and Erard, 2007). By contrast, the earliest Chinese characters were not invented for counting, nor were they designed for easy recognition by the masses. Rather, the messages carried by the earliest Chinese characters carved on shards of turtle shell and cow bone, were believed to only be accessible to the king and his diviners (de Bary and Bloom, 1999, p.5). In the king’s or his diviner’s eyes, one pattern may stand for a complete narrative, such as what an event means and what a king should do concerning various matters (ibid.). Therefore, these earliest Chinese characters communicated more virtual or ambiguous information than the Mesopotamian tokens. This fundamental difference between Mesopotamian logography and Chinese logography may have determined the different paths of their later developments. Whereas the Mesopotamian writing system strove for ease of recognition and transparent correspondence to speech sounds, the Chinese writing system remained logographic and ambiguous, and reserved the right to interpret them to the few.

Actually, what makes Chinese writing system unique is the unique Chinese social system, which gives rise to and sustains the operation of Chinese language at large. Language evolves along with the structure of social participation. It turns out that learning a foreign language inevitably involves learning to participate in the target social system.
2.3.2.5 Literate beings as emergent agents

Again, from the perspective of EOL, literate beings, such as speakers, readers and writers, are texts constantly emerging from human communication. They are emergent agents from the processes of literacy that constitute the texts with which they live. Their internal structures, especially their neural networks, are constantly reshaped by the written or print texts with which they interact. As a newborn personally engage in the processes of literacy, his internal structure gets better and better coordinated with the external media in the system and he appears more and more literate. His active participation in the processes of literacy transforms the ecology of literacy in which he functions. This is how everyone becomes a reader and text producer in the ecosystem to which he or she was born.

However, becoming a reader in an ecosystem of foreign texts presents a different situation. The foreign language learner’s internal system has already been tuned to the patterns of interactions in his home ecosystem. The patterns that he is used to may be very different from the patterns in the foreign system. To ensure efficient functioning in a foreign ecosystem, the flexibility of his existing knowledge system needs to be significantly increased. This will involve significant reorganization of his existing knowledge structure. The reorganization takes time because structural changes in knowledge require accumulated successful experiences of functioning in the foreign system (Maturana and Varela, 1992). However, the amount of time a learner can afford to learn to function in the foreign system is limited. Therefore, it is crucial for foreign language programs to engage the learner in processes that can most efficiently increase
the flexibility of his internal system and lay a sound foundation for lifelong patterns of learning the language through productive engagements with the society.

2.3.2.6 Conversation as the most productive process of literacy

The flexibility of a system can be increased more efficiently if new varieties of knowledge structures are formed simultaneously at more layers of organization (Nicolić, 2014). According to the principle of conservative adaptation (Maturana and Varela, 1992), knowledge structures reorganize only if the existing structure of a layer can no longer meet the demand from the environment. To cause knowledge structures to reorganize at deeper layers, the pressure that the environment imposes on the system has to be challenging enough so that the structures at the top layer(s) cannot satisfy the demand (Nicolić, 2014).

It is widely agreed that the human mind as a highly adaptive knowledge system has four layers (see Chapter 1 Section 1.2.6). The top layer, that is, the newest layer, is formed as a result of functioning in the ever-evolving semiotic systems. It has the most specific knowledge, which directly generates human behavior. Changes in the layer below it, that is, the socio-cultural layer, will take place only when the variety of knowledge structures and actions at the top layer fail to meet the demand from environmental changes. Similarly, changes in the layer below the socio-cultural layer will take place only when the variety of knowledge structures and actions at the two layers on top of it fail to meet the demand from the environment. Therefore, an environment will be more conducive to effective language learning if it imposes pressure that demands reorganization at all these three layers.
To cause reorganization at all the three layers, the learning environment must be rich in semiotic, socio-cultural and temporal-spatial-corporeal information. The type of process that generates such information simultaneously and intensively is conversation, which typically takes place face-to-face in the here and now and employs the human body as the primary media. The knowledge that emerges from prototypical conversations is embodied primarily by the human body and the objects involved in the conversation.

2.3.3 Conversation as the foundation for an ecology of literacy

Not every casual verbal interaction between two or more people constitutes a conversation. Also, difference in roles (such as the distance between the participants’ social statuses) may preclude conversation to take place.¹ As a genre of communicational behavior, a conversation meets four interrelated criteria. First of all, it is interpersonal, with or without the assistance of a communication device, such as a phone or a computer. Modern technological advances have broadened the concept of conversation and blurred the distinction between conversation and reading/writing. For example, a live chat online is a hybrid of conversation and reading/writing. Also, video-calling does not quite fit the criteria for a prototypical conversation. A prototypical conversation involves people interacting face-to-face in the here and now. Verbal exchanges in a prototypical conversation are always accompanied with either gesture or tone of voice or other prosodic features, such as pauses and stress. An exchange in a conversation may be completely non-verbal. A smiling or victory emoticon received as a text message may

¹ As Dr. Walker points out in a personal conversation, often times even if the participant of higher social status tries to put aside his/her higher status and intends for a conversation, the participant of lower social status may not take it as a conversation.
suffice for me to learn that my friend is happy about my proposal. Therefore, although much of conversation involves verbal exchanges, a conversation does not have to be verbal.

Secondly, conversation, as I am using the concept, is improvised; not preprogrammed. Conversation is a process by which people play with the ideas they talk about in order to understand them and fit them together (Bateson, 1972). The features that we find in the interactions in a conversation, such as turn-taking and language use, are largely improvised. A conversation does not follow any prescribed agenda. Bateson (1972) insightfully compares conversation to a game, “whose purpose is to discover the rules, which rules are always changing and always undiscoverable” (pp.19-20).

Thirdly, conversation is a cooperative endeavor. Participants respect each other’s agenda. Therefore, there may not be a conversation between a supervisor and his subordinate about the subordinate’s work schedule because only the supervisor’s agenda will be respected. For the same reason, a teacher who is determined to talk a student out of certain plans is not having a conversation with the student. Whether an interpersonal interaction can unfold as a conversation depends on the collaboration of the conversation partners. Grice (1975), for example, has proposed the “cooperative principle” and four categories of maxims¹ that underlie the success of a conversation.

¹The four categories of maxims proposed by Grice (1975) include the maxims of quality (which state that speakers’ contributions to a conversation ought to be true), the maxims of quantity (which state that contributions should provide neither too much nor too little of information), the maxims of relevance (which state that contributions should be relevant to what is going on in the conversation), and the maxims of manner (which state that contributions should be clear and easy to follow).
The “cooperative principle” states “Make your contribution such as it is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged” (Grice, 1989, p.26). The principle is not prescriptive. Rather, it describes how people normally behave in conversation. Cooperation is observed as an automatic tendency to maximize the relevance of one’s contributions (Sperber and Wilson, 1995). From the perspective of autopoietic systems, relevance is mutually determined by the structure of the individual system and its environment (including the stimuli). The tendency to maximize relevance is a result of constant mutual selection between the individual and its environment toward increasing efficiency in coordination.

The cooperative principle is consistent with the view of cognition as distributed and the position held by developmental psychologists such as Tomasello (2014), who maintains that human thinking is inherently collaborative. Because human memory and knowledge are distributed across bodies and social groups, human beings have an automatic tendency to cooperate with others to enhance efficiency and achieve excellence.

Finally, and most importantly, a conversation always gives rise to something new. Because the concept of new is relative, the criteria for what counts as a conversation between the same people evolve as they engage in conversation over time. For example, when two people meet for the first time, an exchange of greeting between them may be considered a conversation since from the exchange they find each other friendly. The next time they meet, the same greeting may no longer be considered a conversation because nothing new emerges from the exchange. Besides friendly or collaborative relationships, the new structure that emerges from a conversation may also be something
which neither partners knew before, such as an original idea or solution to the issue in question or new ways of viewing an issue. A conversation is a pleasant experience. When people “cannot think of anything to say” or, more accurately, when they do not know how to behave in an encounter, they all feel uncomfortable.

As a process of literacy, prototypical conversation is the most fundamental and most productive in that it does not directly require the use of external media (such as the writing system) and the products of conversation are primarily embodied as structural changes in the internal structure of the conversation partners. Through conversation, people who grow up in the ecology with limited or no knowledge of writing or modern media technologies can develop an adequately adaptive mechanism for oral storytelling in their native language and maintain lifelong relationships with other people. The stories that are shared in and emerging from conversations are “active resources for building interpersonal relationships” (Mandelbaum, 1989). Expert-novice conversations are believed by anthropologists to be “an excellent site for exploring the articulation of attitudes and practices that become tacit and unremarkable as members of a society gain competence” (Keating and Egbert, 2004). In expert-novice conversations, such as those between parents and children or between a mentor and his apprentices, experts communicate to novices in expected ways of thinking, feeling, and acting as well as appropriate language use (Schieffelin and Ochs, 1986, p.2). In a sense, literate beings are primarily emergent from conversations. Since literate beings constitute the primary media for having an ecology of literacy, conversation, especially prototypical, face-to-face conversation, can be said to lay the foundation for an ecology of literacy.
Chapter 3 An EOL model for Chinese-as-a-foreign-language curriculum design

The ecological models adopted in social science (Bateson, 1972; Guattari, 2000 [1989]) and language acquisition (Barron et al, 2002; Leather and van Dam, 2003) have inspired much of this dissertation. Those models have been used mainly as research tools for understanding the complexity in social problems and language acquisition. They have treated ecology, or the self-sustainable structure, as the subject matter to be analyzed. The findings from the research conducted using the ecological models have important implications on foreign language curriculum design. However, they have not been systematically applied to foreign language curriculum design. This dissertation intends to use an ecology of literacy (EOL) as an organizing principle for constructing a practical model for systemic design of Chinese-as-a-foreign-language (CFL) curricula. Therefore, in this dissertation the concept of ecology is used to capture both the proximate goal and the effective means for CFL teaching. In other words, CFL teaching is considered to involve creating self-sustainable systemic curricula, which can accommodate the ever-growing involvement of multimedia in communication and lead to the construction of self-sustainable structures of the Chinese language in the learner’s system.
3.1 EOL as the goal of CFL teaching

As discussed in Chapter 2, ecology describes a system that sustains itself by constantly giving rise to diverse and interrelated processes. Literacy refers to the processes that give rise to texts, which interact to sustain the processes of literacy. An ecology of literacy is, therefore, a system that sustains itself by the diverse and interrelated communication processes that bring texts into being. A society is an ecosystem of literacy and various communities within the society can be seen as subsystems. Processes in the system give rise to diverse texts, such as readers, dancers, books, religious rituals and films, which interact to sustain the processes in the system (Masny, 2011).

In an ecology of literacy, processes of literacy (re)produce and select texts. The unit of selection is text-plus-context because the unit of psychological input is difference and difference is only perceived when a text is related to a context (Bateson, 1972). Therefore, a text (such as a reader or a book) that survives in an ecosystem of literacy is integral to its environment and coevolves with its environment. Both the text and its environment self-sustains because of the dynamics of each other. Different forms of texts have different ways of self-sustaining. For example, readers and writers self-sustain by reading and reproducing texts through multiple media, such as sounds, body movements, and visual symbols. Books self-sustain by means of readers, commentators, and rewriters.

Teaching CFL toward an EOL involves supporting self-sustaining systems (or ecosystems) at three interdependent levels – the individual texts (learners, teachers and learning materials), the CFL program, and the Chinese-speaking community. The
particular patterns of interactions among individual texts give rise to and sustain a CFL program. The individual who can self-sustain in a CFL program has a model of the program in his system (cf., Nicolić, 2014). This enables him to effectively sustain the patterns of interactions in the program. If we want the individual texts produced by the CFL program (that is, learners, teachers and the texts that are brought into being in their actions) to be able to self-sustain in a Chinese-speaking community, the CFL program has to be a model of a Chinese-speaking community. Therefore, the key to teaching CFL toward an EOL is the design of CFL programs that are useful models of Chinese-speaking communities.

A Chinese-speaking community is a natural ecosystem of literacy. It is characterized by **richness** in terms of species of texts and **complexity** in terms of processes of literacy. The interacting processes of literacy in a natural Chinese-speaking community are too complex and too dynamic for a newcomer to easily identify patterns that will serve his needs. Yet, the amount of time a CFL learner can afford to learn Chinese is limited. Therefore, a CFL program must **sample** the processes that can help the learner effectively construct a foundation for self-sustained development in a natural Chinese-speaking community. It should also ensure that these sample processes can self-sustain and co-evolve with the target Chinese-speaking community. Essentially, this requires the CFL program to (1) maintain an optimal level of text-diversity, (2) simulate the patterns of dynamics among the texts typical of a natural Chinese-speaking community and (3) generate favorable enduring changes in the learner’s system.
3.1.1 Maintaining an optimal level of text-diversity

As an ecosystem of literacy, a CFL program is stabilized by human efforts. Usually, human efforts to stabilize ecosystems (such as the use of pesticides) result in the loss of biodiversity, while the opposite result is the goal (Reice, 1994). Healthier ecosystems are characterized by greater biodiversity (Reice, 2001). They are more regularly perturbed by such events as floods, droughts, and fires, which cause restructuring of the whole ecosystem. Because of regular perturbations, healthier ecosystems are more resilient and, thus, more likely to recover from perturbations.

“Healthy ecosystems never reach equilibrium. Rather, they are always recovering from the last perturbation, jittering in dynamic stasis or self-organizing along the positive arrow of time” (Johnston, 2005, p.245).

Similarly, a healthier CFL program as an ecosystem of literacy is characterized by greater text diversity, which embodies the diverse prior experiences and perspectives that constitute the learners, and the diverse perspectives and speech styles that constitute a Chinese-speaking community. A healthier CFL program is also more regularly perturbed by disturbances - relatively discrete events in time that disrupt ecosystem and change resource or the physical environment (cf. Reice, 1994). Examples of such events include the introduction of a new semiotic system, such as Chinese character writing, or novel communicative situations where the CFL learners do not have ready scripts to follow. When character writing is introduced, the physical learning environment begins to involve character texts and students will need to do things with the new forms of texts. In novel communicative situations, the learner will need to search for and adopt new scripts.
Disturbances that are intermediate in terms of frequency, magnitude and intensity lead to maximum biodiversity (or species richness) in an ecosystem (Reice, 1994). This is because when disturbances are infrequent or small, superior competitors eliminate inferior competitors, whereas under an overly frequent or intense disturbance, the dominant competitors are reduced or eliminated. Both lead to reduction of species richness. Similarly, in a CFL program, to optimize learning for diverse learners, the challenges (such as new content or novel communicative situations) presented to learners need to be intermediate in terms of frequency, magnitude and intensity. If challenges are infrequent or small, the learner’s creativity and potential will be suppressed. If challenges are too frequent or intense, the learner will be too stressed to exercise creativity. When the challenge is moderate, the learner is more likely to enter a “flow experience,” a psychological state of optimal experience (Csikszentmihalyi, 1990).

In the state of flow, one’s “attention can be freely invested to achieve a person’s goals because there is no disorder to straighten out, no threat for the self to defend against” (p.40). The more often a learner experiences flow in learning to communicate in Chinese, the more he will enjoy learning it. The process of learning is characterized by the increasing flexibility and complexity of one’s system. Following a flow experience, the organization of the self becomes more complex than it had been before (Csikszentmihalyi, 1990, p.41). Therefore, the more often a learner experiences flow in a CFL program, the more efficiently he learns. According to Csikszentmihalyi (1990), the activities conducive to flow, such as play, art, ritual and sports, share the following four features:
(1) They have rules that require the learning of skills. The activities provide learner-friendly guidance toward the target skills.

(2) They set up goals and provide feedback. The activities have specific goals that are clearly communicated to the learner. Feedback is provided timely to individual learners.

(3) They make control possible. The activities make the learner feel that he has a variety of possibilities from which to choose.

(4) They facilitate concentration and involvement. The activities make the learner feel comfortable enough to set aside the information that is less relevant to the stated goal and become unselfconsciously involved in the current activity.

The four features are interrelated in that one feature is not possible without the other three. For example, to make control possible, the learner must not only be allowed to choose (Feature 3), but also have a very good idea of where his choice may lead him (Feature 2) and how he can get there (Feature 1). He must also be supported by an environment where he can feel comfortable concentrating on pursuing his choice (Feature 4). A CFL program could use these features as the criteria for evaluating learning activities. Activities that meet these criteria are likely to provide a sense of discovery for the participants, a creative feeling of transporting the person into a new reality (Csikszentmihalyi, 1990, p.74).

An optimal level of text diversity in a CFL program is not any externally determined number of species of texts. Nor is it a fixed number. Rather, the optimal level of text diversity in a CFL program at any point of time is locally determined by the configuration of the multiple characteristics of the CFL program itself. The temporal, spatial and social settings of the program, the community structure (text diversity and the distribution of individuals among the species), and the resources available all affect the
frequency and intensity of perturbations in the program. A healthier CFL program (with appropriate text-diversity and frequency of perturbation), like a healthier ecosystem, is better at withstanding new species and embracing a higher level of diversity (Johnston, 2005). Also, since a CFL program is constantly evolving, its characteristics do not stay the same. Consequently, the optimal level of text diversity for a CFL program also varies with time. Therefore, an optimal level of text diversity is expected to be automatically maintained by the dynamics among the texts in the program. It follows that a CFL program must simulate the kind of dynamics among texts in a Chinese-speaking community, which is a naturally occurring ecosystem.

3.1.2 Simulating interdependencies among the texts

While the infusion of new species often helps to increase biodiversity and keep a given ecosystem healthy, the introduction of exotic species from remote ecosystems can lead to its demise (Vitousek et al., 1996; Johnston, 2005). Introducing a foreign species to an ecosystem runs a risk of upsetting the complex, recurrent dynamics on which native species depend and reducing the biodiversity and vitality of the whole ecosystem. To avoid the risk, the new species that adds to the diversity of the system had better be a direct or indirect product of local processes, that is, the processes that engage the existing species. This way, all species are interdependent and no species can eliminate another without endangering its own well being. This has three implications for teaching CFL toward an ecology of literacy.

First of all, the products of a CFL program (CFL learners and the other texts that are brought into being because of their actions) should be regarded as being introduced to
as foreign species. If the processes in the CFL program are completely foreign to the Chinese-speaking community, introducing the new species to the community will endanger both the community and the new species. The residents of the Chinese-speaking community will find the foreign newcomers intrusive and the learners will find the community unwelcoming. For example, inviting each other to meals is a very common way of maintaining relationships in China. Usually, people take turns paying for each other’s meal. As a token of courtesy, a Chinese person will offer to pay for his friend’s meal even if it is supposed to be the friend’s turn to pay. If a CFL learner simply operates on the western idea that any conflict over money is distasteful while his Chinese friend is operating on being generous to a guest, he is likely to end up being thought of as being stingy or taking advantage of his Chinese friend.

Secondly, at any given point in the learner’s progress, new course materials and tasks are introduced to a CFL program as foreign species. If they are completely foreign to the existing ones, introducing them to the program will endanger both the program and the new texts. If such new texts are forced into the program, they will upset the complex, recurrent dynamics on which the existing texts depend. Depending on the resilience level of the program, it may or may not withstand such intrusions. For example, the character texts that beginning-level CFL learners feel comfortable handling are short narratives based on the topics that they can handle in spoken communication. If the program insists on using character texts with unfamiliar content, the beginning learners are likely to become more dependent on translations in their native languages than on the communicative context.
Thirdly, the teacher’s understanding of a text may also be a foreign species that intrudes a CFL learner’s individual ecosystem of ideas. If the teacher’s understanding of a text is too distant from what the learner can connect with, it will either upset the complex, recurrent dynamics on which the existing ideas depend or be eliminated by the existing ideas in the learner’s system. In either case, the teacher’s imposition of her own understanding of text on the learner will be counterproductive. To simulate the dynamics typical of a healthy ecosystem, the teacher should not allow her own ideas to dominate the ecosystem of ideas in the program. Instead, she should participate as a fellow (if more aware) contributor to the diversity in the system.

However, this does not mean that the teacher should avoid introducing learners to new texts or her own ideas. In fact, the biodiversity in healthy ecosystems is attributable, in part, to evolutionary action at the borders between symbiotic ecosystems. “Ecosystems that are too isolated from other ecosystems are at risk of stagnation because they do not receive enough infusion of new species to maintain a sufficient level of biodiversity” (Johnston, 2005, p.246). In the case of a CFL program, such borders exist between the texts (such as CFL learners, the teacher and learning materials) and between an individual text and the CFL program. Such borders also exist between the CFL program and the native Chinese-speaking community.

The implication is that the products of the processes that take place at the border can help increase biodiversity in a manner that is conducive to the vitality of both systems. For example, when introducing a new reading passage to a group of CFL learners, instead of presenting the passage as if there is one single correct way to
understand it, it can be more productive to leave room for the learner to interact with the text individually. The interactions between the passage and different learners are likely to give rise to different products. Individual learners’ systems are likely to be perturbed by each other’s products and generate diverse interdependent processes. These processes, in turn, will give rise to products that further enrich biodiversity and increase vitality in the systems.

3.1.3 Generating favorable enduring changes in the learner’s system

Biological evolution is often punctuated, with long periods of *dynamic stasis* interrupted by bursts of change (Gould, 1989, 1994, my italics). This is characteristic of all living organisms, which are self-organizing systems (Johnston, 2005). On the one hand, a living organism is constantly in motion and every small movement counts toward a salient structural change at a certain point of time in the life of the organism. On the other hand, it may take a long time for salient changes to take place. The apparent oxymoron “dynamic stasis” characterizes the way time plays its role in evolution, as well as in an individual’s life. Time is constituted of continuous gradual changes. We usually are unaware of the effect of time until the gradual changes amount to a salient change. For example, we do not realize we have been aging until we notice wrinkles on our skin. However, the wrinkles did not come out just a second ago. They are the outcome of accumulated events in our systems. Persistent gradual changes often lead to enduring structural changes. Once wrinkles come out, they do not disappear without external force, such as a plastic surgery.
Time plays its role through the interaction between the organism and its environment. By acting, an organism creates an environment (Thompson, 2007) and develops knowledge of how to stay in sync with the environment. Learning is a structural change in one’s knowledge as a result of communication. Living organisms in an ecosystem adjust their actions according to eco-feedback, which is experienced as pressure from the environment (Nicolić, 2014). As discussed in Chapter 1, our knowledge system can be modeled by a four-layer cybernetic system. The top layer is semiotic. Actions at this level are demonstrated as verbal and non-verbal behaviors. Below the semiotic layer are the socio-cultural, the corporeal-temporal-spatial, and the genetic layers, in order. Actions at these levels are not directly observable, but are reflected in verbal and non-verbal behaviors as well as in the structure of the body.

Biological organisms respond to eco-feedback by the principle of “conservative adaptation” (Maturana and Varela, 1992). That is, although the pressure from the environment is felt at all levels, not necessarily all levels will react with structural changes. As long as actions taken in the upper level suffice for relieving the pressure, there will be no need for changes at deeper levels of system organization. This is why changes at deeper levels take a longer time. For example, animals do not grow thick fur in a climate where freezing weather is occasional. It takes many generations for a new genotype to emerge (Bateson, 1972). And this is provided that a certain condition in the environment persists for a long enough period of time.

Since deeper-level changes are generated by the need of the system to self-sustain in a different environment, they are favorable for the system in maintaining efficiency in
sustaining itself in the new environment. Also, deeper-level structural changes are enduring and non-reversible. Although the history of evolution may not always be progressive, it never goes backwards (Gould, 1994). What is learned by an organism is non-reversible. If we want the CFL learner to retain the knowledge learned from the program, teaching and learning in a CFL program should aim at generating favorable deeper-level structural changes in the learner’s system. For the changes that a CFL program generates to be favorable for the learner to efficiently self-sustain in a native Chinese-speaking community, we must make the environment in a CFL program resemble a native Chinese-speaking community as much as possible, given the time frames we must work within. Since it takes time for any deeper-level structural changes to take place and the duration of a CFL program is usually limited, we must ensure effective exposure to the language and engage the learner in the types of practice and practices that are most conducive to generating deeper-level structural changes.

3.1.3.1 Environment

Environment plays a key role in generating favorable enduring changes in the learner’s system. On the one hand, the pressure from the environment must be enduring and intense enough to generate changes at deeper levels. The immediate pressure a CFL learner feels when communicating in Chinese is from the foreign semiotic system. The most economic solution seems to be adopting the new semiotics with minimal or no reorganization at the socio-cultural or corporeal-temporal-spatial layers. That is, the learner applies the “rules” he has acquired from communicating in his own culture to the operation of the new semiotic system in Chinese. If by doing this the learner successfully
gets his points across and relieves the pressure from the environment, no reorganization will take place in the learner’s socio-cultural knowledge.

However, in a natural Chinese-speaking environment, the learner cannot go far with such an “economic solution.” For example, following the “rules” in his base culture, a CFL learner may compliment his Chinese friend’s new poster on the wall by saying “Zhēn hǎokàn! Wǒ hěn xǐhuān 真好看！我很喜欢. (It’s beautiful. I like it very much.)” with the intention of expressing admiration for the poster. However, his Chinese friend may feel obligated to offer him the poster as a gift. If the Chinese friend does subsequently offer the poster to him as a gift, the CFL learner may feel embarrassed to receive a gift for no reason. This kind of pressure is likely to generate changes at the socio-cultural level. Therefore, the teacher’s feedback in a CFL program needs to simulate such pressure to cause deeper-level changes in the learner’s system. For example, the teacher may put the learner in a situation where he may compliment on one of her belongings. If the learner says “Zhēn hǎokàn! Wǒ hěn xǐhuān,” the teacher will offer that item to the learner as a gift and see how he responds. Then, the teacher can present the performance of complimenting someone’s possession in Chinese, provide the appropriate “script,” and have the learner personally enact the appropriate “script.” The teacher should also include a performance where “Zhēn hǎokàn! Wǒ hěn xǐhuān” is appropriately used upon accepting a gift.

On the other hand, the pressure from the environment cannot be so intense that it damages the individual’s own system. To simulate eco-feedback, a teacher’s reaction to an inappropriate verbal or non-verbal behavior may be a confused or frustrated facial
expression or gesture. However, in cases where the learner constantly fails to self-adjust his behavior, the teacher needs to temporarily release the pressure and provide explicit guidance. The teacher may either demonstrate the appropriate behavior or have another student demonstrate it. Also, the teacher should avoid putting excessive pressure on the learner. For example, real communication takes place in rich contexts, where words are not the only source of information (Bybee, 2010). In fact, in a given communication event, more information comes from the context than from the verbal message. Meaning is experienced in the interaction of the words with the listeners, with the cultural contexts, and with present circumstances (Walker and Noda 2000). If the teacher isolates the words from their context and requires the learner to respond to the isolated verbal stimulus, she will be putting excessive pressure on the learner and run the risk of damaging the learner’s system. Learners who become used to dealing with verbal messages in isolation will find it hard to attend to other information in the context, which they often need to communicate properly.

3.1.3.2 Exposure

Provided appropriate pressure from the environment, favorable enduring changes will eventually take place. For example, a child who grows up in a Chinese-speaking environment becomes fluent in the language without explicit, structured instruction. However, it is a very inefficient process and takes an enormous amount of time. A conservative estimate is that a preschool child has over 18,000 hours of contact with his native language between the ages of one and six (Hammerly, 1986, p. 95). Moreover, the child is surrounded by models of the language. No adult CFL learner can get the
extensive, elaborate, and caring exposure to the Chinese language that children receive from their caretakers. Typical CFL programs offer five hours of classroom instruction per week (at beginning levels). This amounts to approximately 150 hours a year (15 weeks a semester × 2 semesters). Usually only one model (the teacher) is available, for five or more CFL learners during instruction.

Given such limited exposure to the language, it is important for a CFL program to ensure the effectiveness of exposure. Research reveals that in second language learning, face-to-face spoken communication seems to be the greatest motivator for about eighty percent of the students (Politzer, 1953; Hammerly, 1971, Quinn, 1971). This is understandable if we consider the role of face-to-face spoken communication in the construction of emotional ties. Also, face-to-face communication involves collaboration between the participants, and the feedback is usually immediate. Emotional ties, collaboration and instant feedback all contribute to intrinsic motivation (Ryan and Deci, 2000).

Moreover, face-to-face spoken communication facilitates memory construction. From any instance of language use, the user does not only register the string of words, but also the nonverbal elements (such as the temporal, spatial, social dimensions of the interaction) (Bybee, 2010). The verbal and non-verbal elements are experienced as an integral unit – a story, which can be defined as a personal memory of having experienced a performance (Schank, 1990; Walker and Noda, 2000). A performance is a communicative event defined by specified time, specified place, specified roles, scripts and audience (Walker and Noda, 2000; Noda, 2007). On the one hand, face-to-face
spoken communication takes place in a rich context, which gives the person a better chance to connect the current experience with prior experiences because a richer context means a larger selection of categories to match to, as well as relations to be established at more levels of grammar (Bybee, 2010). On the other hand, face-to-face spoken communication involves “responsive storytelling”, which is a major process of memory (Schank, 1990). Responsive storytelling will be further discussed in Chapter 4.

All things considered, the most effective exposure for our purpose is face-to-face spoken communication in Chinese. Communication entails that the CFL learner uses Chinese to participate in the communicative events. To maximize this type of exposure in a Chinese language program, one cost-efficient way is for the learner to engage in “deliberate practice” (Ericsson et al., 1993) in between meetings with the teacher. Deliberate practice is discussed in detail in the next section. Research has confirmed that a minimum of 10 years (or 10,000 hours) of deliberate practice is necessary for an individual to reach expert performance¹ in any domain (Chase and Simon, 1973; Krogius, 1976; Hayes, 1981; Ericsson et al., 1993). A CFL learner certainly cannot get this much deliberate practice from class instruction in a CFL program. Therefore, the kind of deliberate practice a learner engages in a CFL program must prepare him for maintaining long-term relationships with native Chinese speakers, preferably monolingual Chinese speakers. Once the learner is closely connected with native Chinese speakers or a Chinese

¹ According to Ericsson et al. (1993), expert performance reflects the mastery of the available knowledge or current performance standards and relates to skills that master teachers and coaches know how to train for (p.392). It is the highest level of performance that can be reached through instruction. Individuals can aim to go beyond expert performance to eminent performance, which requires the individual to go beyond the available knowledge in the domain to produce a unique contribution to the domain.
organization, he can get regular deliberate practice out of the program in a real Chinese-speaking community.

To maintain a long-term relationship with a monolingual Chinese speaker would require the learner to be very knowledgeable of Chinese culture and be able to effectively read Chinese minds in communication. This can only be achieved by engaging the learner in substantial face-to-face spoken communication in a Chinese environment. Besides class instruction, the program should also create co-curricular opportunities for learners to interact face-to-face with native Chinese speakers out of the program. For example, they may be encouraged to go to clubs organized by Chinese students, conduct practice research projects with local Chinese organizations, and correspond regularly online with people from Chinese-speaking communities.

3.1.3.3 Deliberate practice

Deliberate practice is a highly structured activity conducted toward the goal of improving performance (Ericsson et al., 1993). Ericsson et al. have compared deliberate practice with work and play in terms of goals, costs of mistakes, and rewards. The differences are summarized in Table 3.1. Work requires that the individual give his best performance at a given time. The cost of failure to meet the requirement can be as great as unemployment. The external rewards of work activities include social recognition and pay. In contrast, “deliberate practice would allow for repeated experiences in which the individual can attend to the critical aspects of the situation and incrementally improve her or his performance in response to knowledge of results, feedback, or both from a teacher”
(Ericsson et al., 1993, p. 368). Also, external rewards are almost completely lacking in both deliberate practice and play activities.

<table>
<thead>
<tr>
<th></th>
<th>Goals</th>
<th>Costs of mistakes</th>
<th>Rewards</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Work</strong></td>
<td>Best performance</td>
<td>High</td>
<td>External</td>
</tr>
<tr>
<td><strong>Deliberate practice</strong></td>
<td><em>Improve performance</em></td>
<td>None</td>
<td>Internal &amp; External</td>
</tr>
<tr>
<td><strong>Play</strong></td>
<td>The activity itself</td>
<td>None</td>
<td>Internal</td>
</tr>
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Significant differences between deliberate practice and play lie in the goals and the levels of structuredness. The primary goal of a play activity is the engagement in the activity itself, whereas deliberate practice has the explicit goal of improving performance. Because of this explicit goal of improving performance, in deliberate practice the individual consciously invests effort in performing specific tasks to overcome weakness and in monitoring the performance to obtain cues for ways to improve it further. Therefore, whereas play is inherently enjoyable, deliberate practice is not inherently so. An understanding of the long-term consequence of deliberate practice is important for the individual to persist in the type of activities (Ericsson et al., 1993). Also, since deliberate practice is effortful, the individual cannot do it for an extended period of time without rest periods, as he might spontaneously do with play activities.
Thanks to educational technology, nowadays the CFL learner can engage in deliberate practice without the physical presence of a teacher. With pedagogically designed learning materials, audio or video files and interactive online programs, adult learners can teach themselves the expressions necessary for performing the assigned functions in class. During self-managed learning, a learner can learn at his own pace in a way he finds most effective for him. If he needs structures to remember things, he can consult grammar references. If he needs to improve his pronunciation, he can spend more time with the audio files. When learners come to class with preliminary understanding of the target functions and ready to produce the target expressions, the teacher can engage them in enacting scenes of face-to-face spoken communication. Even a learner who is less prepared for communicating can benefit from a Chinese-only, context-rich environment in class if his fellow classmates are well-prepared. This can optimize the learning environment and maximize the learner’s effective exposure to the language.

In sum, if a CFL curriculum is structured in a such way that the learner can effectively self-manage his learning and come to class with informed hypotheses about performing the assigned functions, the limited classroom hours can be spent testing his hypotheses in (simulated) real-life face-to-face spoken communication and revising them in response to the teacher’s and classmates’ feedback. It is through the processes of testing and revising hypotheses that deeper-level structural changes are consolidated in the learner’s knowledge system (Zull, 2011).
3.2 EOL as an efficient model for designing a CFL curriculum

Besides sampling optimally constructive processes of literacy for learners, a CFL program also needs to create and sustain an environment where the processes of literacy, such as conversation and reading, can constantly generate one another through teaching and learning. To create and sustain such an environment, the events in a language program must constitute a coherent flow toward more advanced processes. In other words, the events that are given rise to by preceding events are desired and they give rise to other desired events. For example, a conversation that is generated by a reading or research activity makes a further reading or research activity necessary. Class instruction in a program should address class preparation and go beyond it to facilitate further self-managed learning. An assessment has to culminate the preceding period of instruction and lead to more effective teaching and learning in the instructional period to come. Participation in a CFL program has to lead to self-sustained patterns of learning in a native Chinese-speaking community. In this sense, every event constitutes a scaffold, which helps the learner perform more independently in the events to come; the CFL program as a whole functions as a scaffold, which helps the learner to self-sustain in a native Chinese-speaking community.

To conceptualize such continuous processes, an ecology of literacy (EOL) can be a useful model because the ecosystem is filled with continuous, self-sustaining processes. Take the re-generation of tissue in the case of a lesion for example. A scaffold (the scab) is put in place to support the emergence of the skin and it goes away when the skin is no longer vulnerable. Similarly, a CFL program can be seen as a scaffold put in place to
support the emergence of the structures in the learner’s system that enables him to sustain conversations in Chinese. The “scaffold” must change with time and eventually withdraw to avoid being in the way of the growth of the new structures, that is, autonomous CFL learners who can self-sustain through productive engagements with a Chinese society.

3.2.1 Life as a performance and ecology as its script

The EOL model requires that the CFL curriculum have a dynamic structure that evolves with the processes in the program. Ideally, the processes of literacy in a CFL program increasingly merge with the processes of literacy in a natural Chinese-speaking community – a natural ecosystem of literacy. To design such a structure, we need to have a concrete idea of how the activity patterns of diverse species of texts may constitute self-sustaining systems. In other words, we need to understand the roles that different species of texts (such as learners, teachers, course materials and technologies) play in the system. To this end, we may view life in the ecosystem of a Chinese-speaking community as an ongoing live performance and view each individual text in it as playing a leading role in the scenarios that constitute its own life.

As a performance, life is unique in that the performers do not have scripts to share prior to the performance and their lines are constructed on the fly. The performers improvise their performances based on their successful prior experiences. In an ecosystem, a successful experience is one where self-sustainability is conserved at various levels of the system, such as the whole system, the individuals and the various organs of an individual. The conservation of self-sustainability is the single criterion by which a performance is evaluated for ecological effectiveness. Self-sustainability in an
ecology of literacy is demonstrated as the ability to effectively elicit expected behaviors from one’s fellow performers (or audience). When a performer fails to do this, his self-sustaining status is threatened and he knows that he has to adjust his next action. In this sense, ecology (the self-sustaining structure) is the dynamic script that orients the ongoing performance of life. It does not prescribe the events; rather, the script is dynamically constructed by the performers as they act based on the shared principle of conserving self-sustainability.

3.2.2 A CFL program as the prologue of a lifelong live performance

What happens in a CFL program constitute an ecology of literacy, which is a fractal of a broader ecology of literacy – events in a Chinese-speaking community. Like life events in an ecosystem, the unfolding of a CFL program is neither linear nor completely predictable. This is because a CFL program is an integral part of larger complex systems, including the biological, social, and mental systems. The teaching and learning processes in a CFL program are inevitably constrained by the processes in these larger complex systems. Complex systems are characterized by dynamicity and chaos (Gleick, 1987; Waldrop, 1992; Larsen-Freeman, 1997; Cilliers, 1998; Capra, 2005). To gain an approximate structure of the processes in a CFL program, we may view a CFL program as the prologue of a lifelong performance, which merges with an ongoing performance put up by native Chinese speakers. The plots of the performance are not prescribed and the CFL learners will need to collaborate with native Chinese-speaking fellow performers, who have already set up the stage.
Although the plots of the main performance are not prescribed and the performers have to improvise, the target audience and fellow performers and their expectations can be roughly anticipated. The purpose of staging the prologue portion is, therefore, to help the novice performers get a concrete idea of the kind of performance expected by the target audience and fellow performers. As the prologue of a main performance, a CFL program only represents a small portion of the lifelong performance of CFL learning. However, it is a crucial phase for the performers to adjust their acting to the lifelong performance that follows the program. Therefore, the prologue director (the teacher) and the persons who draft the script for the prologue (the curriculum and syllabus builders) need to be very clear about the target audience’s expectations and make it explicit to the performers. The director must also be able to demonstrate the kind of performances expected by native Chinese fellow performers and audiences.

A CFL program stages a background event that ties into the main performance, that is, the learners’ lifelong patterns of learning Chinese through productive engagements with Chinese culture and society. The background event that a CFL program stages is itself a composition of multiple interrelated events. The events in a language program, like those taking place in any ecosystem, constantly extend a decentralized network of communication – a network that comprises clusters of interacting parts, which also have decentralized structures (Davis et al, 2015). The learning dynamics by which a learner develops or a language program unfolds is best visualized as recursive elaboration– a process of development that proceeds not simply
by accumulation, but by transformation (Davis and Sumara, 2006; 2010; Hipkins and Boyd, 2011). Figure 3.1 illustrates recursive elaboration.

![Figure 3.1 An illustration of “recursive elaboration”](image)

In a process of recursive elaboration, at each stage,\(^1\) a *rule* is applied to the outcome of the previous stage, often giving rise to surprising detail in very short order (Davis et al., 2015). Such rules have been discussed in terms of *schema* or schemata (Piaget, 1926; Bartlett, 1932; Rumelhart, 1980; Anderson, Sinha, 2010), *frame* (Minsky, 1977; Goffman, 1997), and *script* (Schank and Abelson, 1977; Bower, Black and Turner., 1979).

\(^1\)There are no prescribed stages in the development of a learner or the unfolding of a language program. Stages simply reflect individual-specific or program-specific ways of punctuating the ongoing meta-event of learning.
Schemata, frames and scripts have all been used to account for the molar forms of human generic knowledge. However, *scripts* are used specifically to account for generic (stereotyped) sequences of actions (Schank and Abelson, 1977). Schank (1990) defines a script as “a set of expectations about what will happen next in a well-understood situation” (p.7). In other words, it is knowledge of how to act and how others will act in given stereotypical situations. According to Schank (1990), scripts also account for a kind of memory structure. They “serve to tell us how to act without our being aware that we are using them” (p.8). The more events we experience, the more scripts we get. Understanding, in most cases, is script-based. However, “script-based understanding is a double-edged sword” (p.8). On the one hand, the more scripts we know, the more situations will exist in which we feel comfortable and capable of playing our roles effectively. On the other hand, the more scripts we know, the more situations we will take for granted and fail to wonder about or figure out on our own.

We get scripts from past experiences. It is absolutely easier to apply scripts than to reason out situations from scratch. However, life is an ongoing performance and the scripts we know are never complete. If we apply the scripts without noticing or wondering about the aspects of a situation that go beyond the scripts, we will fail to understand the real situation. For example, learning a foreign language is an integral part of the life of a foreign language learner. The script we know for learning a foreign language culminates in the “mastery” of linguistic forms. It assumes language as a preprogrammed system of codes and assigns a foreign language learner the role of a code breaker. Consequently, CFL programs tend to be oriented toward the “mastery” of
textbooks, which contain the “standard” codes. However, recent research has revealed that language is more like an organism, whose action has a way of changing itself (Larsen-Freeman, 1997). What is printed in CFL textbooks can never capture the adaptive dynamics of the Chinese language. If we still followed the old script and acted as if the textbook – a closed set – is something to be “mastered” through participating in a CFL program, learners may end up wasting time on situations they may seldom or never encounter in daily life. Our traditional script for learning CFL needs to be updated. Instead of culminating in the “mastery” of any textbook, the script must orient the CFL program toward the learner’s self-sustained development in life beyond the program.

Learning a language is a lifelong live performance and does not follow prescribed storylines. However, the CFL learner, as a newcomer to the stage, will need sample scripts and rehearsals to acquaint himself with the new stage, with his native Chinese-speaking fellow performers and with the roles he is expected to play. A CFL program is thus expected to provide sample scripts and engage learners in rehearsals with feedback.

### 3.2.3 A CFL curriculum as a preliminary script for prologue rehearsals

A CFL curriculum can be viewed as a preliminary script for a CFL program, the prologue of lifelong learning of the Chinese language. It is preliminary because it is subject to revisions as the events in the program unfold. As the script of a prologue, which is itself a self-contained performance, a curriculum (1) describes the intended effect on the target audience; (2) describes the setting of the events (time, place and roles); (3) suggests the sample scripts (such as learning materials) for rehearsals; and (4) anticipates the pattern that the program may be punctuated (for example, where
preparation merges with class instruction, or which portion of instruction is counted as assessment). However, as soon as the program is launched, the curriculum, together with the participants and available resources, becomes an integral component of the program and subject to the dynamics in the larger complex systems, to which the program is integral. The curriculum is, therefore, not an independent document that prescribes the unfolding of a language program; rather, it is, in a sense, the program itself and evolves with program events. Ideally, a CFL curriculum as a script functions in a manner similar to what ecology does for an ecosystem – it does not prescribe events beyond the program, but it cultivates learners who know how to act with native Chinese fellow performers based on the principle of conserving self-sustainability both at the individual level and at the group level.

As a preliminary script, a CFL curriculum differs from the scripts for plays or movies in important ways. The script for a play usually specifies performers’ lines with descriptions of when, where, how and by whom the lines are acted out. The performers are usually expected to follow the instructions with limited freedom for improvisation. By contrast, while a curriculum may begin each new lesson by directly specifying the performers’ lines and giving specific instructions on how the performers should act, these are but a “leg up.” They indirectly constrain the future lines and actions of the performers, by providing sample scripts and specifying a time frame, location, roles, a target audience and the effects to be achieved on the target audience. In class, the participants in a CFL program are challenged and encouraged to improvise their performances, which often involves using the sample scripts in creative ways, or creating or adopting new scripts.
Therefore, the implementations of the same CFL curriculum will differ from context to context. The director and the performers are encouraged to keep records of the lines, actions and audience responses and review them relationally to adjust their own future performances.

3.3 An EOL model for CFL curriculum design

Designing a CFL curriculum is like developing a preliminary script for the prologue of a lifelong live performance. The script needs to ensure that the performance can continue smoothly beyond the program with few NGs and sustain audience satisfaction. In other words, the script should ensure that performing in the CFL program can familiarize CFL learners with the kind of scenes they will encounter and give them a concrete idea of the kind of performance expected by his native Chinese fellow performers and audience. To this end, the script developer needs to be very clear about who constitutes the primary target audience and what they expect from the performance. At the same time, she needs to be clear about the time frame and other resources available, including personnel (such as who will be directing and who will be acting), materials, technologies and a budget for additional supplies.

3.3.1 Native Chinese-speaking communities as the primary target audience

CFL learning is a lifelong live performance. The success of live performance relies on the active engagement of its audience. The target audience of CFL learning primarily comprises particular native Chinese-speaking communities, such as a Chinese

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1 NG, abbreviation of “no good,” is used by movie makers to refer to a scene taken that is not good and needs to be cut out. The more NGs take place during shooting, the less profit the movie makes.
residential community and the Chinese academic society of a certain domain. The interests and expectations of the audience cannot be homogeneous. Depending on what is performed, different parties of the audience will be engaged with the performance at different levels. They will also be evaluating the performance according to different criteria (Zeng, 2015). For example, the learner’s Chinese boss and neighbors in China are likely to be highly engaged with the performance. They actually play important roles in it. However, their criteria for evaluating the performance will be very different. The boss will be more concerned about how professional the learner appears; whereas the neighbor may be more concerned about how respectful the learner appears to others in the neighborhood.

Members from the target native Chinese-speaking communities not only constitute the target audience for the CFL learner’s performance. They also participate as fellow performers at various points of the performance. The learners will need to collaborate very closely with some of them, such as the learner’s future research advisor or boss. Therefore, the CFL curriculum needs to make sure that what is staged in the program raises the learner’s awareness of the expectations of their audience and fellow performers so that the learners know how to act their roles in an intelligent manner in different contexts.

3.3.2 Technology as the setting

Technology is an aspect of our third nature – culture, which has emerged from our first and second natures (the physical and biological natures) and co-evolves with them (Johnston, 2005). Technology has played a major role in the evolution of our third nature.
It has infiltrated virtually every aspect of our daily lives and plays a central role in the dynamics of the institutional order and the big problems (Johnston, 2005, p.254). Arthur (2009) defines technology as “a means to fulfill a human purpose” (p.28). Indeed, the scope of technology is as broad as human purposes and it has evolved in a ratcheted manner with human purposes. As Diamond (1997) suggests, each new technological innovation sets the stage for the next one such that invention is as much the “mother of necessity” as necessity is the “mother of invention.” In this sense, technology constitutes a kind of ecology and may be seen as another example of “self-organizing complexification” (Johnston, 2005). It began with primitive humans’ manipulation of their own bodies and moved through the upper-Paleolithic, Neolithic, industrial, and information revolutions to the wide diversity of present-day technological wonders.

It is tempting to reduce technology (a self-sustaining system of dynamic processes) to its products because the processes are dynamic and invisible. Human communication constitutes an important process of technological evolution, whereas the specific gestures, words and writing systems that are involved in communication are some of the comparatively static products of technological evolution. Technological evolution is beyond the control of any individual, whereas the technological products tend to appear as if they are invented or innovated by individual human beings. People tend to view technological products as their own creations because they often forget that life gave rise to the mind (which plays a crucial role in creation) the same moment it gave rise to technological processes, such as the externalization of memory (Stiegler, 1996).
Thus, technology situates every aspect of CFL teaching and learning. However, its products are double-edged swords. On the one hand, they alter and constrain what and how we know. Rothenberg (1993) traces the co-evolution of technology, epistemology, and the Western worldview. He suggests that what we "know" about nature and even how we know about it have been driven by how we have exploited it in the course of technological evolution. Technology fuses our biological body together with a world of semiotics to form a “dilated body” (Merleau-Ponty, 1962). The experiencing biological body constitutes the primary source field for the metaphors that we use to understand aspects of nature; the world of technological products constitutes another source field. We sometimes understand the world and ourselves in terms of the physical artifacts generated by technology. For example, we used to (and many people still) understand the brain in terms of a computer. Such technological reductionism has given rise to various reductionist models for language acquisition, such as the comprehensible input and output models (Krashen, 1982; Swain and Lapkin, 1995). These models generally assume that understanding relies on the brain’s processing of stimuli, rather than the context to which the stimuli is merely a part.

On the other hand, technological products expand human scale. Communication technologies, such as gestures and speech, enable us to collaborate to perform higher-level efficiency in adjusting to the changing environment. Various media technologies, such as writing, videotaping and digitizing, offset the constraints of spatial and temporal distances in communication. Communication and media technologies make the globe shrink into a village. Various technological inventions, such as the computers and other
multimedia devices, support us in multitasking. The younger the generation, the better they are at operating systems of technologies. Technological products have become integral parts of our body. When we compare the daily average amount of handwriting different generations of scholars are doing, the trend is obvious: we are doing less and less handwriting. We cannot tell for sure whether this trend is favorable or not. However, it is inevitable and irreversible. If we intend to actively engage with the dynamics in our world, we must keep up with the trend and make good use of what technological advancements endow us.

When developing a CFL curriculum, we need to take both the constraining and the constitutive roles of the technological products into consideration. On the one hand, we must keep in mind that technology sets up a stage, but it does not determine who we are. A human being is not merely a machine, which runs by certain preprogrammed, linear, cause-effect principles. Rather, he is an organism – a complex, dynamic, self-sustaining system. The capability of seeing ahead and learning makes human beings and other animals the only really unpredictable things in the world (Bateson, 1972). A human being does not learn by welding together individual movements and individual stimuli (Merleau-Ponty, 1962, p.164). Rather, he learns to orient himself to certain types of contexts, which are constituted of events that tell him among what set of alternatives he must make his next step (Bateson, 1972, author’s emphasis). Learning is stochastic in nature. The very act of learning has a way of changing the nature of future learning. For example, our perception can be changed by experience. Our eyes and ears selectively attend to the information that connects with what we have experienced before. Therefore,
when developing a CFL curriculum, we must not assume the learner to be a machine, who readily produces what we program it for. Instead, we need to keep in mind the diversity among learners and the stochastic nature of the learning process.

On the other hand, we must not ignore the constitutive roles the technological products play in all aspects of CFL teaching and learning. Instead, we must make technology an integral part of the curriculum. For example, communication and media technologies have become indispensable for collaboration in many contexts, including a CFL program. With the Internet and a computer or other digital smart devices, learners can expose themselves to the language anywhere anytime for pleasure, for review, or both. Pedagogically designed online language programs can get the learner ready for class instruction by helping the learner check comprehension and practice the fundamentals, such as pronunciation and orthography. Learners can use search engines, online dictionaries or dictionary apps to look up specific items and expand their knowledge about the society.

In sum, with the assistance of technological products, an autonomous learner can do a substantial part of CFL learning on his own. However, this does not mean that the teacher or classroom instruction is no longer necessary. Rather, it means the roles of the teacher and classroom instruction need to be adjusted accordingly. For the constitutive role of technology to enhance the efficiency of CFL learning, the learner needs to be guided to cultivate strategies for self-managed learning. To maximize the efficiency of teaching and learning, what the teacher does with the learner in class must avoid merely
repeating what the learner can do and has done with the assistance of technological products.

3.3.3 CFL classes as prologue rehearsals and auditions

Classroom instruction in a CFL program constitutes a series of planned rehearsals and auditions for the prologue. Accordingly, a class can be seen as a time and space the prologue director (the CFL teacher) has designed to rehearse and audition a certain number of scenes with the performers (the learners). A scene is constituted of interrelated conversations that employ contextualized “speech acts”. A speech act is a social act that a speaker or a writer performs when creating an expression (Austin, 1962). A contextualized speech act is a function in the sense that each speech act performed in a given context realizes certain intentions.\(^1\) Therefore, a class can be considered to be organized by functions. A speech act comprises multiple functions because it may be realized in different contexts. The context of a speech act is defined by the time, the place, the roles, the audience and the mode of communication. Take the speech act of making a request as an example. Making a request from one’s boss is a completely different function from making a request from a close friend. Similarly, making a request from one’s boss in the presence of colleagues is a different function from making the request in private or in writing.

Before coming to the rehearsal, the performers are supposed to have prepared with sample scripts for the performances to be rehearsed. The sample scripts are the assigned portions of learning materials. It could be in various formats, such as print,

\(^1\) Dr. Galal Walker, personal conversation at the Ohio State University.
audio, video, PowerPoint slides or even a live skit presented by students. The sample script for a spoken class may be an audio or a video of a dialog. It may also be the oral narrations of the students’ own experiences. The sample script for a reading class may be a narrative or an article from various media. The sample script for a composition class may be a sample of writing or students’ written work. In sum, the sample script is what the students use to prepare for the class and it contains instructions and prompts for acting out the scenes to be rehearsed or audited in class.

In class, the performers realize functions by performing them with props under the guidance of the director(s). The director sets the scene and assigns students roles to elicit target performances. She makes the time, the place, the roles, and the audience of the scene explicit to the performers so that they can adopt, adapt, or create the most appropriate scripts and actions. Depending on how well the performers are doing, the director may model the expected performance. Generally speaking, this period is filled with actions and reactions. Through these actions and reactions, the students confirm or revise their intuitive understandings of the functions and form more informed hypotheses about expected performances. The actions and reactions of the performers are the major base of the ongoing assessment of the performers’ readiness to independently perform their roles. They are also the major base for adjusting the rehearsal schedule and strategies for directing future rehearsals.

Auditions (assessments) are conducted regularly after a certain number of rehearsals (a certain period of instruction). They do not differ from the rehearsals in nature since they both constitute the integral event of teaching and learning in the CFL.
program. A rehearsal may be seen as constituted of a series of mini auditions; an audition may be seen as a rehearsal with performers who are better informed of the performance. The only differences between an audition and a rehearsal lie in the proficiency level of performance and the ways feedback is provided. An audition usually involves continuous performing of a combination of multiple rehearsed scenes, which requires higher level of proficiency than most of the performances done during rehearsals. Also, depending on the nature of performance, feedback concerning an audition may only be provided by the director upon the completion of the audition, whereas during rehearsals, a performer receives feedback from both the director and his fellow performers in the process of their performance. For example, after the learner has rehearsed separate scenes of greetings and exchanging personal information, he may engage in an audition for a scene where he is at a conference and would like to initiate small talk with a Chinese attendee.

The primary purpose of the rehearsals and auditions is to prepare the CFL learner for collaborating with native Chinese fellow performers in the lifelong performance of CLF learning, which demands much improvisation on the part of the learner. Therefore, merely helping the learner perfect his performances of the sample scripts will not be enough. CFL classes need to aim at enlarging the learner’s repertoire of transferable performing strategies for playing his roles in similar scenes in live performances. This can be achieved by having the learners personally enact a range of rehearsed and (partially) improvised performances. It is crucial for every CFL class to stage some improvised performances because this will allow the learners and the instructor to experience something they have never experienced before as a class. It is through the
creation and success of improvised performances that learners establish a sense of ownership over what they learn. This sense of ownership is the source of pleasure in learning and the driving force underlying sustained commitment to learning. It is also through creation of successful communicative moves in class that the teacher feels a sense of accomplishment, which is the source of pleasure in teaching and the driving force underlying sustained commitment to more creative teaching.

3.3.4 Course materials as sample scripts for prologue rehearsals

The performers and the director need sample scripts to rehearse scenes. Ideally, there are scripts (course materials) specially drafted for the current prologue rehearsals, with careful consideration of the time frame, the place, and the performers. However, developing sample scripts takes time and money. Not every CFL program can afford to develop a whole new set of course materials for each new group of learners. Therefore, in most of the cases, the director and the performers are presented with previously used scripts, that is, premade textbooks with or without accompanying audio/video files. Since these materials are not specially designed for the current rehearsals, they should only be considered as references. The users (especially the director) need to use them critically. In other words, they should be ready to drop, add or revise things in the materials to make them fit the current needs. Also, since a sample script only features the performance in one particular context, it should always be considered to be subject to critical analysis and variation. This is especially true about materials for higher level courses, where learners are working toward their individual domains.
Few of the currently existing CFL textbooks provide detailed instructions on how they should be used with particular groups of learners. Even fewer of them present the sample texts as scripts for real-life performances. Most of the CFL textbooks assume that everyone knows how to learn Chinese language. However, most CFL learners have come from a tradition of learning familiar European languages, such as Latin and Spanish, which also use sound systems that are highly analyzable into the spelling. The learners tend to rely on analyzing the grammatical rules and assume that Chinese can be learned in the same way they learned Latin or Spanish. In addition, most of the currently existing CFL textbooks explain expressions as if meaning derives solely from the forms and grammatical rules. Below is the explanation of the Chinese adverb 也 (yě) extracted from the widely adopted CFL textbook *Integrated Chinese Level 1 Part 1*:

The adverb 也 (yě) basically means “too” or “also.” In Chinese, adverbs, especially one syllable adverbs, normally appear after subjects and in front of the verbs. They usually cannot precede subjects or follow verbs. The adverb cannot be put before the subjects or at the very end of a sentence. … [Sample sentences are left out] When the adverb 也 (yě) is used with the negative adverb 不 (bù), 也 (yě) is placed before 不 (bù). … [Sample sentences are left out] pp.31-32

Such explanation does not treat the sample dialogs in the textbook as scripts for real-life performance because the explanation does not tell the learner the communicative function of 也 (yě) or in what contexts the “rules” apply. Instead, it treats the dialogs as compositions to be described. Such explanatory approaches tend to mislead the learner to believe that Chinese words match English words and that they will be prepared to use Chinese language if they can recall the English glosses and grammar “rules.” The way
the Chinese language is presented in this kind of CFL textbook may only prepare detached observers of the sample scripts (not of the performances). Using it as it is written may not effectively prepare performers for the lifelong performance of CFL learning.

Learners who are trained to learn Chinese this way are likely to be inefficient learners of Chinese because they have little experience surviving real life performances in Chinese-speaking contexts even if they have spent hours memorizing vocabulary, grammar “rules,” and Chinese characters. They will appear too slow to keep up with the flow. This is because whereas native Chinese speakers’ responses are automatically generated by the context, such learners will need to first come up with English utterances for the contexts and convert them into Chinese by consulting the glossary and the remembered “rules.” In most cases, they are too pressed for time to consult the “rules.” As a result, they produce nonsense or utterances barely acceptable to native Chinese interlocutors. Their performances will put such a big burden on native Chinese interlocutors that the latter may avoid using Chinese with him in future encounters.

In sum, it is very important for the CFL materials to present the Chinese language in a way that the users can readily use the sample texts as scripts for real life performances. In particular, the material needs to (1) explain how particular lines apply to particular roles in particular scenes; (2) be accompanied with audio or video files which demonstrate how an expert may perform the scene; and (3) provide contextualized exercises with which learners can develop automaticity in applying sample lines to partially improvised performances. When such materials are not available, the director
will need to be ready and able to take up the job of a “screenwriter” and provide additional instructions on how the sample lines may apply to real life performances. This can be done by providing a schedule with detailed description of the scenes to be staged in each rehearsal and suggestions on how the performers should prepare for their parts. For example, if the sample lines for novice learners involve the use of ye 也, the schedule may tell the performers to prepare for a scene where he needs to emphasize a feature shared between two people.

### 3.3.5 The CFL teacher as an executive director of the prologue

In an EOL curriculum model, the CFL teacher’s role is primarily an executive director, who ensures the quality of prologue rehearsals. She is also an expert performer who acts various roles and models the target performances when necessary. The current situation is that not many CFL teachers are ready to take up their roles as an executive director and a performer. Instead, they generally assume roles as interpreters of the course materials and assist the learners with explanations or activities which aim at helping the learner observe and comprehend the course materials, without engaging the learner in personally performing any scenes. Therefore, a CFL program needs to provide teacher-friendly instruction on how to perform the role of an executive director in the CFL program. For example, besides descriptions of the role and the principles for playing the role, the program should provide sample schedules, activities and video demonstrations of implementing the activities with real learners.
To fulfill her role in a CFL program, a CFL teacher has four interrelated responsibilities, namely directing, assessing, providing feedback, and responding to her students. Directing is the overarching responsibility. It involves orchestrating the program resources and facilitating performances between and during rehearsals. All the other tasks are derived from directing and are interrelated. Figure 3.2 demonstrates the relationship among the four tasks of a CFL teacher. The following paragraphs describe the four tasks in detail.

Figure 3.2 Tasks of a CFL teacher
3.3.5.1 Directing

As an executive director, the CFL teacher has a clear idea of the kind of performances her learners need to be able to do by the end of the program. Prior to the beginning of the program, the teacher assesses the available course materials (sample scripts) in relation to her students’ needs and other resources, such as time, location, and technologies. Based on the assessment, she creates a general agenda for the rehearsals (classroom instruction) and auditions (assessments). She also prepares learner-friendly daily schedules, which tell the learners what they are expected to do during the rehearsal or audition and how to prepare for it.

In class, the teacher sets the scene and assigns students roles to elicit target performances. Since the class is primarily a time and place for learners to perform, the scene-setting has to be as efficient and concise as possible. Also, the learners’ base language is not expected in the classes that are focused on performing the functions.\(^1\) Therefore, the teacher has to decide on the most effective strategy to communicate the contexts. Using props, either miniature objects or realia, are usually the most direct and effective practice. However, a lively image or a brief description can serve the purpose with adult learners. The teacher has to always make sure the learner understands the scene that is to be rehearsed and his role in it. Once the context is communicated, the teacher can act one of the roles to elicit the target performance from the learner. If the learner has followed the curriculum instruction and prepared before class, he should be able to come up with tentative responses.

\(^1\) For each instructional cycle, a specific class hour is allocated for the class to discuss, in the learner’s base language, grammar patterns and how to use them in communication.
3.3.5.2 Assessing

To effectively direct and ensure progress, the teacher inevitably has to assess all the ongoing events in the classroom. First of all, the teacher needs to assess the pacing of activities and the classroom atmosphere. Based on the actual situation in the classroom, adjustments to the original plan may have to be made to ensure that the class session leaves the learners a sense of progress or completeness. For example, if the learners are unexpectedly struggling on a certain function, the teacher may have to spend more time than she has allocated for that particular function. As a result, there may not be enough time for the last activity on the plan. In such a situation, instead of rushing through the activity or stopping in the middle of the activity, the class may do a simplified or shortened version of the activity. They may also postpone the activity for a later session when it can be dealt with properly in terms of learners’ preparation and class time, and instead, do a review of previous activities.

Secondly, the teacher needs to assess each learner’s moment-on-moment performance in order to provide timely and individualized feedback to the learner concerning his performance. Ideally, the feedback constitutes an integral part of the ongoing performance. In other words, the kinds of feedback to be provided on different occasions are carefully gauged to maintain the integrity of the scenario. Table 3.2 describes six major ways a CFL teacher may provide feedback. The first four ways represent the possible responses from fellow performers in the process of a performance and the last two types represent the possible responses from the audience upon the completion of a continuous performance.
### Table 3.2 Six major types of feedback

<table>
<thead>
<tr>
<th>Types of feedback</th>
<th>Ways of delivery</th>
<th>Suggested occasions for application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interactive</td>
<td>Responding to the error as the interlocutor in the context, e.g., showing a confused expression, recasting, requesting for confirmation, repetition or further explanation, etc.</td>
<td>When the student misunderstands the context or the performance confuses the interlocutor. This method is for the purpose of eliciting self-correction. If self-correction is not available, other more explicit ways need to follow.</td>
</tr>
<tr>
<td>Demonstrative</td>
<td>Demonstrating the appropriate way or manner of doing things.</td>
<td>Used for culturally inappropriate acting (e.g., facial expressions/postures/gestures, etc.) in an oral performance; wrong stroke order in writing.</td>
</tr>
<tr>
<td>Collaborative</td>
<td>Eliciting the expected response from other students and then returning to the student who has made the initial error.</td>
<td>When most students in the group have mastered the performance in question. Remember to go back to the student(s) who committed the error.</td>
</tr>
<tr>
<td>Adjustive</td>
<td>Directly providing the instructor’s way of doing things.</td>
<td>When the error is in the middle of a longer performance and when a correction is necessary and it can be done briefly. E.g., during an extended response, the student miss pronounced a word which would be misleading to other students; or when the above ways fail.</td>
</tr>
<tr>
<td>Descriptive</td>
<td>Providing detailed comments on the strengths and weaknesses of the performance/work with specific directions for improvement.</td>
<td>Used for oral presentation and written composition</td>
</tr>
<tr>
<td>Evaluative</td>
<td>Commenting on the student’s ability to do the task or the quality of the performance without specifying the strengths or weaknesses.</td>
<td>When an individual has given an exceptional performance. If evaluative feedback is done indirectly or combined with descriptive feedback, it will be more effective.</td>
</tr>
</tbody>
</table>
3.3.5.3 Providing feedback and responding

In practice, the six ways of providing feedback summarized in Table 3.2 are usually used in various combinations. Ideally, the initial feedback in most occasions is interactive and exemplifies the response of the interlocutor in communication outside the classroom. For example, in a scene where a student is supposed to make a request from a teacher, if the student does it in an impolite manner, the teacher’s initial feedback may be a confused face. Interactive feedback is often backed up by other types of feedback. An interactive feedback is usually provided to invite self-correction (Noda, 1999). If the student cannot self-correct, the teacher may either use demonstrative feedback by switching roles with the student or initiate collaborative feedback by having another student do the same performance. Adjustive feedback, in which the teacher directly provides a proper way of doing things, is used only when necessary, when it can be done briefly and when the error is in the middle of a longer performance. When the adjustment is on pronunciation, the student should always be asked to reproduce the whole sentence that contains the error. Reverse build-up\(^1\) is an effective technique for correcting pronunciation while preserving the tonal patterns of the sentence.

The other two types of feedback, descriptive feedback and evaluative feedback, represent possible responses from the audience. These two types of feedback are usually used when the student has done an oral presentation or a written composition. In descriptive feedback, the teacher provides detailed comments on the strengths and weaknesses of the work and makes specific suggestions for improvement, whereas in a

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\(^1\) For example, to use reverse build-up to practice Wǒ shì Měiguó rén (I am American), we have the student pronounce rén or Měiguó rén first, and then shì Měiguó rén, and finally Wǒ shì Měiguó rén.
purely evaluative feedback, the teacher comments on the student’s skills or the overall quality of the work (usually by means of appropriate compliments). To be effective in improving the student’s performance, evaluative feedback has to be used in combination with descriptive feedback. Generally, if an evaluative feedback is conducted in an indirect manner, it will be better appreciated by adult learners (especially at the higher levels). For example, instead of simply saying “Very good” or “Well done,” the teacher says “Sounded like a native speaker.” Still, this kind of feedback is saved for occasions where a student has given an exceptional performance.

Besides the types of academically-oriented feedback mentioned above, the teacher may sometimes need to provide feedback concerning students’ preparation before class and their classroom conduct. To respect the student’s privacy, such feedback is usually provided out of class in a one-on-one manner or in a written format through emails.

As the executive director, the teacher needs to respond to all kinds of situations in all kinds of ways. Making adjustments to pacing and providing feedback to students are two kinds of responding. Responding is also done in other ways. For example, the teacher may need to model native performances of the target functions or respond to students’ inquiries about the nuances between different versions of performances. Besides, the teacher needs to be observant and respond in a timely manner to students’ non-verbal signs of confusion or frustration. In class, the teacher is responsible for maintaining a cooperative and conducive atmosphere for learning to perform in a Chinese-speaking environment.
Experienced teachers work with high time-efficiency. Ideally, every single detail in and out of class contributes to the learner’s progress. To achieve the ideal time-efficiency, it is crucial for the teacher to prepare before class and reflect on the implementation of lesson plans. By doing this consistently, the teacher will make steady progress toward becoming an expert executive director.

3.3.6 The CFL learner as a growing performer

Learners who come to a CFL program usually expect to be able to communicate effectively with Chinese speakers. However, they have little idea of how their expectations can be realized. For example, at an orientation for a first-year college-level Chinese language course, I did an informal survey, asking the twenty participants why they were taking the course and what they expected their primary role to be in a Chinese language class. All of them explained that they wanted to be able to communicate with Chinese people, either for business or for friendship. When asked to select their primary role in a Chinese class, their responses distributed evenly among (1) a discussant at a seminar, (2) an audience member for a lecture, and (3) an experimenter in a lab session. A few selected the fifth option – Other – saying that their role will be a little bit of each of the options above. This is close enough to the fourth option – a performer at a rehearsal – since a performer may play different roles. However, no student specifically selected the fourth option for their primary role in a CFL class. Such unpopularity of the fourth option was unexpected but interesting. It reveals that few CFL learners have ever imagined CFL classes to be rehearsals and their role in class to be performers.
When a CFL class is construed as a rehearsal and the learners are performers, learners must prepare substantially before they come to class. Ideally, they come to class with a very good idea of the scenes to be rehearsed and having practiced their scripts based on some initial hypotheses formed from previewing the course materials. This way, they can use the class hour to rehearse their performances, confirming or revising their initial hypotheses and forming new hypotheses by attending to others’ performances and feedback. By the end of the class, they will be ready to independently collaborate with native Chinese fellow performers in scenes that are similar to the rehearsed ones. Otherwise, if the learners come to class with no idea of the scenes to be rehearsed or the sample lines, the teacher will need to spend much class time explaining the scenes and coaching learners to say the sample lines. In such cases, the teacher and learners usually end up having little or no time for rehearsals. Consequently, the learners will not feel prepared for carrying on their lifelong performances of CFL learning with the native Chinese fellow performers.

For these reasons, it is crucial for a CFL curriculum to be designed to cultivate learners who are ready to take up their roles as growing performers for their lifelong performance of CFL learning. To this end, the expectations on a good performer need to be communicated clearly in learner-friendly language, at the very beginning of the program. Also, learners often come with diverse and mostly misleading assumptions about native Chinese fellow performers and their own role as CFL learners. For example, they may expect native Chinese fellow performers to readily follow the scripts they have learned from the course materials. They may expect their primary task to be studying the
words and grammar “rules” in the sample lines so that they can reconstruct them in performance based on their experience of performing in their base culture. Such expectations often lead to ineffective preparation for class, and consequently, unnecessary frustration in learning to perform. The learner may, as a result, spend much time memorizing the “rules” and individual words without spending enough time working with the audio/video files to imitate expert performance. Therefore, a CFL curriculum must also provide learner-friendly instructions on how they should prepare for a CFL class.

In addition, how professionally a CFL teacher plays her role as an executive director of performances has direct impact on the learner’s understanding of his role. If the teacher can consistently play the role of a professional executive director, her student will gain an increasingly better understanding of his role as a growing performer for his lifelong performance of CFL learning and play it better and better.

3.4 Summary

From the perspective of EOL, the purpose of a CFL program is to prepare the learners for self-sustained lifelong patterns of learning the language through productive engagements with the culture and society. An EOL model of CFL curriculum design requires the curriculum to not only ensure that the preparation and rehearsals staged during the program familiarize the performers with typical scenes and effective scripts for their roles in the scenes. Most importantly, it also requires it to cultivate performers who have a passion for carrying on a lifelong performance of CFL learning. To cultivate
passionate Chinese language learners, the processes in a CFL program must help the learners develop enthusiasm and confidence in learning Chinese and develop a habit of using the language. This can be done by engaging learners in substantial moderately challenging rehearsals and stage scenes where learners can successfully improvise based on what they learn from the rehearsals.

Designing a CFL curriculum following an EOL model means drafting a script for a series of rehearsals and auditions that can lead to the learner’s readiness for live performances. It must be done based on a thorough understanding of the future stage on which the learner will be doing live performances as well as the “budget” allocated for rehearsals. An understanding of the future stage entails knowledge of the temporal, spatial and social setting, the key fellow performers, and the audience. An understanding of the “budget” should include knowledge of the teacher’s and the learner’s prior experiences, and the time frame and the temporal, spatial and social setting for the rehearsals. A CFL program (as opposed to a CSL program, such as a study abroad program in China) is set in a non-Chinese speaking environment. The setting for rehearsals in a CFL program will be different from the setting for live performances in a Chinese-speaking community. Consequently, a CFL curriculum, more than a CSL curriculum, needs to simulate a Chinese cultural environment to familiarize the learner with his future stage.

The more concrete the learner’s experiences in the environment are, the better he learns and the more readily he can use the experiences as context in future communication. To concretize the learner’s experiences, the curriculum may include
extensive elements from the community where the instruction is taking place and engage learners in personally enacting daily life events in the community. Ideally, this community is Chinese-speaking. Since CFL programs do not take place in Chinese-speaking communities, the curriculum may use visual aids, such as realia, video clips and images of street sights from a particular Chinese-speaking community in China. These visual aids, as well as the scenes staged in Chinese in the rehearsals, had better follow a consistent storyline so as to help the learner gradually get oriented to this particular Chinese-speaking community and construct a coherent identity in the community.
Chapter 4 A conversation-driven CFL curriculum

A program is a series of events that lead to a desired outcome.¹ “A series” indicates that the events follow a certain sequence. The outcome is something observable and measurable. In the case of a CFL program, a major desired outcome is the Chinese language learner who can sustain his development when living or working in a Chinese-speaking society. From the perspective of EOL, a society is an ecosystem constituted of ever-emerging interrelated processes of literacy embodied in people’s use of multiple media texts in communication. As discussed in Chapter 3, to sustain development in such a system, the learner’s individual system must have a model of the ecosystem. Such a model can only be constructed through personally engaging in the multiple interacting processes of literacy, which may be observed as various modes of communication, such as face-to-face conversation, reading and creating multiple media texts.

However, on the one hand, the interacting processes of literacy in a society are too complex and too dynamic for a newcomer to easily identify useful patterns. On the other hand, the amount of time a CFL learner can afford to learn Chinese is limited. Therefore, a primary task of a CFL program is to sample the processes that can effectively lay a

¹ Dr. Galal Walker, personal conversation at The Ohio State University.
foundation in the learner’s individual system for self-sustained development beyond the program. These processes are expected to constitute a healthy ecosystem that co-evolves with the target Chinese-speaking community. In particular, as discussed in Chapter 3, these processes should be self-sustaining and give rise to texts that are (1) optimally diverse, (2) intricately interactive, and (3) efficiently self-adaptive.

Self-sustaining processes, such as those in an ecosystem, are complex, diverse, and dynamic, but are constantly self-producing and self-adjusting. They constantly give rise to new diversity and drive the evolution of the system. Like the species in an ecosystem, the diverse modes of communication do not fall into clear-cut categories. Rather, they fall on various continua, such as a continuum of concreteness of context and a continuum of acceptable response time. For example, communication in a prototypical conversation, which involves people talking face to face in person, takes place in the most concrete context and features the most instant responses. By contrast, communication through prototypical reading/writing takes place in the least concrete context and features the least instant responses. The context becomes less concrete as the distance between the communication partners increase in terms of either time or space or both. Therefore, the elapse of time between responses inevitably contributes to the abstractness of context. Since communication is dependent on context (Bateson, 1972), the more abstract the current context is, the more the communication is dependent on the participants’ “prior text” (Becker, 1994) for concretizing the context.

Nowadays, in between a prototypical conversation and prototypical reading/writing, there are all kinds of different modes, such as video and voice calling,
video and voice messaging, live online chat, texting, emailing and so on. Figure 4.1 models the approximate positions of some common modes of communication on a coordinate of immediateness of responses and concreteness of contextual cues.

Figure 4.1 A continuum of common modes of communication

There is no clear-cut dichotomy between conversation and reading/writing. Figure 4.1 turns out to describe a continuum of modes of communication. Seen at a large enough temporal-spatial scale, reading/writing can be interpersonal, collaborative,
improvised and constructive.¹ Reading or producing a text message may be a turn in a conversation at a larger scale than a prototypical conversation. At the largest scale, an act of reading or writing may count a turn in a historical conversation. However, prototypical conversation is the most fundamental and constructive since it involves the fewest external media and features the most instantaneous responses.

Prototypical conversation has been widely recognized by social scientists as a complex, highly structured event which the participants of a conversation locally manage, turn-by-turn, moment-by-moment (see e.g., Schegloff, 1968; Sacks, Schegloff, and Jefferson, 1974). It is both the foundation for a self-sustaining system of literacy and the demonstration of the level of literacy involved in a communication event. As discussed in Chapter 2, from the perspective of systems theory, conversation is a fundamental communicative process by which people construct systems of “local knowledge” (Geertz, 1983; 1992). Through prototypical conversation, people who grow up with limited or no experience of reading, writing or using information technology can develop an adequately adaptive internal system for oral storytelling in their native language and maintain lifelong collaborative relationships with other people. Experiences of sustaining prototypical conversations are prerequisites for experiencing reading, writing or information technology. Conversely, experiences of reading, writing or using information technology will allow the person to sustain prototypical conversations more productively and at more advanced levels. If we agree that a CFL program should produce learners who can self-sustain their development in a Chinese society, then the goal of a CFL

¹ These are the four features of conversation discussed in Chapter 2.
program is essentially to prepare learners who can sustain conversations, at various temporal-spatial scales, with the Chinese people with whom they live and work.

4.1 A pedagogical definition of conversation

For the purpose of language pedagogy, we need to prepare learners for sustaining conversation in the target society at different scales. From a pedagogical perspective, conversation can be broadly defined as a genre of daily performance that involves “responsive storytelling” (Schank, 1990) sustained by the collaboration of two or more participants toward a shared goal in a given context with or without the assistance of external media (such as a writing system). To elaborate on this definition, I will first describe “performance” and “story” in relation to conversation, and then discuss the significance of responsive storytelling.

4.1.1 Performance

A performance, as proposed by Walker and Noda (2010), is a (chunk of) communicative event that is specified by five interrelated elements, namely, specified time, specified place, specified roles, script and audience. These elements are interdependent in that any one of them is specified by the other four. For example, the time is specified as “when a person performs a particular role for particular audience following a certain script at a particular venue.” A script does not only comprise the lines. It also contains non-verbal information about when, where and how the lines should be acted by which particular role to achieve the expected impact on what kind of audience.
As a genre of performance, conversation is unique in that its participants would avoid imposing their own agenda upon others at the cost of the others’ agendas. Consequently, the participants feel assisted by each other in recalling things they know to sustain the interaction. As a performance, every conversation takes place in a time and place and involves more than one person. The scripts of a conversation are not only specified by temporal and spatial aspects, but also by social aspects, such as how close the conversation partners feel toward each other and whether there is audience. For example, a conversation during a class break in a classroom may follow various scripts depending on who is talking and whether there is audience or who the audience is. If the teacher is involved as a conversation partner or as the audience, depending on how close the students feel toward the teacher, certain details may be added or avoided and the language style may be more formal.

4.1.2 Story

According to Walker and Noda (2000), a story is the memory structure constructed personally as a result of having experienced a performance. Since a performance does not necessarily involve words, a story does not necessarily have verbal elements. In this sense, a story encompasses what Mark Turner (1996) termed an “image schema” and what A.L. Becker (1995) termed a “prior text”. Image schemas, according to Turner (1996) are “the skeletal patterns that recur in our sensory and motor experience” (p. 16). They arise from perception and interaction. They can be static or dynamic. Simple image schemas can combine to make more complex image schemas, such as narrative schemas. Prior text, in Becker’s (1995) words, is “lingual memories”
Prior text is what we rely on for understanding or creating texts in the current context. They come only from particular instances of using the language in context. According to Becker, knowing how to use a language means having a repertoire of prior text, the particularities of which are always imperfectly remembered. When we speak or write, that imperfectly remembered prior text is reshaped in new contexts (Bruner, 1991).

New stories emerge as we perceive and act in our surroundings. They do not pile up like we pile up books. Instead, they constitute structural changes in our knowledge, which is a rhizome-like network. As discussed in Chapter 2, a rhizome is open and constantly subject to change. A rhizome may be ruptured at any point and at whatever point a rhizome is ruptured or destroyed, it will always grow further in different and unpredictable directions. A new story is a point of rupture on the “rhizome” and it has the same level of detail as the whole structure. In other words, a story is an integral unit of temporal-spatial-corporeal structure (time, place, body movements), socio-cultural structure (roles and audience), and semiotic structures (script). Because our knowledge structure is an open, rhizomatic structure, stories are never perfectly remembered. They are always susceptible to ruptures. Consequently, our knowledge structure is constantly revised and refined by emerging contexts throughout life. Due to the imperfect nature of stories and thanks to their dynamic rhizomatic structure, they are highly adjustable to different contexts. A context may simultaneously activate multiple stories, but only the one(s) or the portions that are most relevant to the current context get told. The very act of telling a story in context changes the organization of the stories that constitute memory (Schank, 1990).
To tell a story, we have to not only reconstruct the verbal elements of a performance, but also verbalize the nonverbal elements. In order to remember an experience, we have to tell it as a story because the process of verbalizing a story also creates the memory structure that will contain the gist of the experience for the rest of our lives (Schank, 1990). Remembering our own experiences is the only way to understand other people’s stories because we understand events in terms of the events we have already understood (Schank, 1990). Therefore, to understand another person’s story, we will have to be reminded of our own stories. In this sense, conversation (responsive storytelling) is a productive process in that it involves constant creation of new memory structures (or stories) by blending the new with the old (Becker, 1995; Turner, 2009).

4.1.3 Responsive story-telling

Storytelling in a conversation has to be responsive because a conversation is an interpersonal and collaborative endeavor to create. In a conversation, we sustain a pleasant interpersonal relationship in order to continue collaborating. We regard to each other as partners and respect each other’s agenda. To respect the other person’s agenda, we will attend to the context which is constantly updated by the other person’s and our own behavior, and act in a responsive manner. For example, if the other person seems to be interested, we may tell the whole story. If the situation indicates a short conversation, we may adapt that story into a one-liner. This is why Roger Schank (1990) maintains that “Conversation is no more than responsive storytelling” (p.24). In communication, what we respond to moment by moment is the change of the context as a whole, which is an
integral unit constituted of the interactions between ongoing verbal and non-verbal cues (such as gazes, facial expressions, postures and pauses).

To sustain a conversation, the participants are compelled to respond to the context, rather than merely what the other person says. The rich context inherent in a prototypical conversation, for example, makes the brain activities in such a conversation more conducive to memory construction. This is because a richer variety of contextual cues create better chances to connect the current context with known contexts. Connecting the current context to known contexts is the process toward an understanding of the current context. Therefore, processes of understanding are more likely to be generated in a prototypical conversation than in other forms of communication. Most importantly, in a prototypical conversation, processes of understanding are sustained by instant feedback. By contrast, in deprived contexts, where a person has to rely solely on words and sentences printed on paper, it will be very hard to generate understanding processes unless the person can visualize a rich context. This is because knowledge is not represented as words and sentences in our brain. What the brain has is a complex, decentralized neural network that organizes relationships (Zull, 2011). The words and sentences we use in a conversation are composed on the fly as the neural network acts in response to various contextual factors. Moreover, instant feedback is hardly available in such contexts. Consequently, communication in such deprived contexts is less likely to be motivating or engaging for CFL learners. An anticipated conversation in richer contexts, such as prototypical conversations, phone calls and written correspondences, may be an
external incentive for people to engage in further communication in such deprived contexts.

In sum, responsive storytelling is collaborative, improvised and constructive. A story has to be told differently in different conversations because of the other factors involved in the collaboration, such as time, place, roles and audience. Also, each time a story gets told in a conversation it is remembered differently by the teller because of the contribution from other participant(s) in the conversation. In addition, the conversation itself yields a story of having participated in a telling of a story with certain people in certain emotional states in a given place and time.

4.2 Conversation as means and end in CFL learning

4.2.1 Conversation as a process of memory construction

Cognitive scientists have, for some time, been revealing the advantages of construing stories as both a major target of and an important basis for cognition (Schank, 1990; Bruner, 1991; Turner, 1996; Herman, 2003). Bruner (1991), for example, maintains that “we organize our experience and memory of human happenings mainly in the form of narrative – stories, excuses, myths, reasons for doing and not doing, and so on” (p.4). Therefore, memory can be construed as the dynamic rhizomatic network of stories that we construct as we experience the world and retell our experiences as stories. Responsive storytelling in a conversation involves “unpacking” stories from internal memory, blending them with current context, telling the blend, revising the blend based
on what is heard or observed and “repacking” the revised blend into internal memory for future telling (Turner, 2009).

Figure 4.2 roughly models the relationship between the internal memory (the biological body)\(^1\) of one of the participants in a conversation and the major processes involved. The processes are described next to the arrows that represent them.

![Diagram of mental processes in an individual conversation participant’s internal memory](image)

**Figure 4.2** Mental processes in an individual conversation participant’s internal memory

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\(^{1}\) As discussed in Chapter 1, one’s knowledge structure (memory) distributes across the body, the social group, and the world of objects he lives with. The body (internal memory) is an integral part of the total knowledge structure. Internal memory is intricately connected with the world with which the body lives.
The graph is based on one single turn in a conversation. Both “hearing a response” and “telling in response” involve verbal processing, whereas the “unpacking” and “repacking” processes do not. The “unpacking-repacking” metaphor has been proposed by Mark Turner (2009) together with the “blending” metaphor. These are used for the abstract processes that occur in our mental network when we use language. According to Mark Turner, we say something in order to prompt the other person to unpack his stories and locate relevant ones to understand our stories. When others tell us a story, we do the same. As the new story is blended with our existing stories, the existing stories are reshaped and repacked into our internal memory. Therefore, unpacking and repacking occur simultaneously whether we are trying to make sense of something we perceive or to tell others what we know. Also, each time there is a blend, a new story ruptures our rhizome of knowledge and extends it. Therefore, every single turn in a conversation involves two stories that vary to a certain extent. If a foreign language can only be learned by weaving rhizomatic networks of stories in that culture (cf. Walker, 2010), conversing with people from that culture should be the most efficient way.

The arrows in the graph represent the processes of perceiving or interacting. The thick arrows indicate that those processes had to recur before their effects in the long-term memory become salient or permanent. In other words, random conversations that do not involve any recurrence of previous experiences may not cause new stories to emerge in the learner’s system. Therefore, the conversations in a CFL program need to be pedagogically designed to ensure recurrence of similar experiences.
In addition, conversation analysts have pointed out that emotional aspects of interaction, such as laugh tokens, an emotional tone of voice, affective lexical choices and/or facial expressions, are intertwined with spoken utterances in a conversation (Edwards, 1999; Local and Walker, 2008). Elizabeth Couper-Kuhlen (2009) has demonstrated how emotional displays are relevant to the ensuing conversation and how people observably orient to an underlying affective structure in conversation. As the neural scientist James Zull (2011) puts it, “emotion impels action” (p.54). Emotion and practice (action) are the two factors that cause changes in the brain (Damasio, 1999; Zull, 2001), maybe the rest of the human body as well. The networks of neurons are the physical equivalent of knowledge and the change in the connections that make up the networks is learning, which is a result of practice.

When our network connections are awash with emotion chemicals, synapse strength is modified and the responsiveness of neural networks can be dramatically changed (Brembs et al., 2002). Rewarding experiences\(^1\) enhance memory. “In time, a rewarding experience is remembered through the feelings it generates” (Zull, 2011, p.62). When engaged in a conversation – a collaborative, responsive and creative process – the CFL learner is likely to constantly experience reward through responsive storytelling. Such pleasant experiences constitute an essential part of learning – the development of

\(^1\) Reward here does not refer to material gain, but a type of experience. Therefore, there is reward in both the process and the result of an action. According to Zull (2011), the three aspects of a rewarding experience include identification of reward (i.e., determining that the sensory data are likely to generate reward), progress toward reward (i.e., initiation of “reward-seeking” behavior), and reaching reward (i.e., the experience of the reward itself).
mind (Zull, 2011). That the pleasure of learning lies in timely application of what is learned was discussed in *The Analects of Confucius* over 2000 years ago.¹

### 4.2.2 Conversation as a means to better reading and writing

The immediate gains expected from reading in a foreign language are stories and the vocabulary and sentence structures necessary for telling those stories in the target language. Traditionally, in a reading course, we tell students to read written texts for accumulating vocabulary, for locating answers to content questions, for summarizing the passage, for raising discussion questions or other activities that engage the learner with reading and writing tasks. This is because our intuitive belief has been that writing is the directly reciprocal activity with reading written texts. For example, Troyka (1986) once wrote, “reading [written texts] and [written] composition are reciprocal meaning-making activities; one is diminished without orientation toward the other” (p. 187). While this statement is true, it tends to mislead us to believe that reading and writing can be reciprocal without conversing about the ideas that have emerged from reading or those that are to be written. In fact, both reading and writing can be facilitated by having learners converse about what they read and write. Enhanced efficiency in reading and writing can help the learner accumulate stories and the language necessary for telling those stories in future conversations.

As developmental psychologist Michael Tomasello has demonstrated in his recent publication *A Natural History of Human Thinking* (2014), “human thinking is

¹ The opening line of *The Analects of Confucius* goes 子曰：學而時習之，不亦說乎? (Confucius said: “Study and timely put what is studied into practice. Is it not a pleasure?”)
fundamentally cooperative” (ix). According to him, human thinking has gained its sophistication and efficiency as humans began to coordinate within larger and larger groups, which are organized into decentralized structures. A larger, more sophisticated and more efficient memory has been constructed by and for such coordination. Generally, when we know that we are in collaboration, we tend to be more responsible for what we are supposed to do and our brain gets more alerted. This is why we tend to think more efficiently when we collaborate. Conversation is a collaborative endeavor. Not only the pressure from having to tell stories in a conversation will make us remember things better, the process of conversation itself also helps us create the memory structure that will contain the gist of what we hear and tell for the rest of our lives (Schank, 1990).

When we tell our students to read in order to tell what they find interesting to someone else, they will be more motivated and are likely to do the traditional reading and writing activities in order to get ready for the telling. For example, they will get the gist of the article, locate points that interest them and rehearse presenting it orally to their conversation partners. To ensure that they do not forget what they would like to present or ask during the conversation, they may draft some of the scripts. In this sense, when the goal of a reading activity is to participate in a conversation, the reading itself entails a range of complementary learning processes.

Since conversation presupposes collaboration, students do not need to remember every detail of the article to participate in a conversation. Instead, they will only need to focus on the points of interest or the questions and emotional reactions that arise from the reading experience. This relieves students from the unnecessary and unrealistic pressure
to remember all the details while reading, and allows them to focus on the parts for which they are more inclined. During the conversation, the learner can tell others what they know well and get reminded or informed by others of the parts that they do not remember or do not know well. Through recalling and telling, memory can be updated, consolidated and expanded.

To better understand the role of “telling” in memory construction and hence in enhancing reading, we can consider a phenomenon in dream-recall. When we wake up from a dream, if we tell it immediately to someone next to us, we can recall most details of the dream later. When we do not have anyone to tell to immediately, we can still remember enough details if we go over it in order to tell someone else later. However, if we simply go over the dream for ourselves, we are very likely to forget it soon. Trying to write down the dream before any telling will not help us remember it any better. This is because dreams are imagery and highly elusive. Before the memory structure of the dreamed experience is consolidated, composing with written symbols, which is visual and demands a high level of consciousness, will be distractive and interrupt the recall. Similarly, the sense that emerges from our interacting with a text is an elusive imagery. Conversing about it can help consolidate the memory structure for it. Otherwise, if we skipped the conversation stage and moved directly to writing, the product would likely be forced and uncreative.

As Schank (1990) puts it, “Talking is remembering” (p.155). By talking, we remember things by causing structural changes in the internal “storage,” primarily in our brain, whereas by writing, we rely more on external storage. When external storage
suffices, we are less likely to bother packing the story itself into our internal “storage” for the sake of the latter’s efficiency. Instead, what we will try to pack into our internal “storage” is only the indexical information for locating the story from external storage in the future. Such information cannot be reconstructed into the story we have stored without the sight of the external storage, such as a written paper. This means a story written down without any telling cannot come in handy when we need to tell it in a prototypical conversation.

### 4.2.3 Conversation as assessment for reading

Reading a written/ print text as a literacy process differs from prototypical conversation in two related ways. On the one hand, it involves external memory, that is, print texts. In particular, it involves connecting the print text with the reader’s internal memory. A connection can be built when the print text or any part of the text activates the contexts that the reader knows. However, such connections are usually transient unless they are strengthened by repetition. Transient connections are easily interrupted by ongoing activities in and out of our system. Also, as soon as a connection is established the print words and sentences in the text begin to lose significance to our internal memory and they may fade or subside, unless they are intentionally retained for retelling without the assistance of external memory, such as in the case of a prototypical conversation about the text.

On the other hand, reading a print text is silent and invisible because it involves “communication” between the reader’s internal memory with an external object – a print text. The print text is non-responsive, so “coordinated behaviors” in the process may only
occur on the part of internal memory embodied by the reader’s body. This makes it impossible to observe the reading process or find out what changes have occurred in the reader’s internal memory after reading. To tell that reading has happened, we need to make the reader demonstrate it. One way to do it is to have the readers tell the stories activated by the reading.

Telling such stories in a conversation cannot only demonstrate the effects of reading, but also promote very intensive learning. Because readers have different internal memories, they are likely to have different stories to tell after reading even the same text. When they share their stories in a responsive manner in a conversation, the stories that each reader gets from the reading can be multiplied. Most importantly, different people tell stories from different perspectives. Therefore, conversing about what is read is a way to learn from different perspectives and develop a broader background for understanding future reading. In this sense, conversations are assessments for reading – they assess reading in a way that facilitates future reading.

4.2.4 Conversation as demonstration of intelligence

Every society holds tacit rules concerning “when to say what in what manner” in a conversation in order to appear intelligent. For example, in The Analects of Confucius, which is the most influential philosophical work in China, there is extensive discussion about how intelligence is demonstrated as timely contributions to a conversation and what

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1 The preposition “for” here is used as opposed to “of.” Assessment of reading conveys a summative sense, whereas assessment for reading is formative and facilitative for future reading. This contrast between “assessment for reading” and “assessment of reading” is borrowed from Richard Stiggins et al. (2007), who contrasted “assessment for learning” with “assessment of learning” in a similar manner.
counts as a *timely* contribution to a conversation. The concept of *shí* 時 (timeliness) entails appropriate timing, content and manner. The three quotes below explicitly relate one’s behavior in conversation to intelligence (or wisdom).

[19.25] Zigong said: “A *junzi* (an ideal human being) may be known as wise or unwise by a single instance of *yan*. One cannot but be careful of *yan*…”

[20.3] Confucius said, “If you do not know your destiny, you cannot be *junzi*. If you don’t know *li*, you cannot establish yourself in the society. If you don’t know how to discern people’s *yan*, you cannot discern people.”

[15.8] Confucius said, “When it is worthwhile to speak with a person and you fail to speak with him, you waste an opportunity to know that person. When it is not worthwhile to speak with a person and you speak with him, you waste your words. A wise man wastes neither opportunities to know people nor his own words.”

In *The Analects*, a person’s verbal contribution to a conversation is discussed as *yan* 言. In 19.25, *yan* is said to give clue about a person’s *zhi* 知 (intelligence or wisdom). Judgments regarding to a person’s *zhi* 知 can be made based on one single instance of *yan*. On the other hand, as discussed in 20.3, *junzi* (an ideal human being) is expected to understand others’ *yan*, so that he can properly discern people. Similarly, 15.8 indicates that a wise person knows when to speak to whom. At one point in *The Analects*, the *zhi* 知 of *junzi* is actually summarized as his ability to discern people.2 This is deeply rooted

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1 See *The Analects of Confucius* 14.13: ……夫子時然後言，人不厭其言；…… (…That person [Gongshu Wenzil] spoke, but only when it is timely, so people were not offended by his words. …)

2 See *The Analects of Confucius* 12.22: 樊遲問「仁」。子曰：「愛人。」問「知」。子曰：「知人。」 (Fan Chi asked about “ren.” Confucius said, “It is love for people.” He asked about “zhi.” Confucius said, “It is knowledge of people.”)
in the overarching Confucian concept – *ren* 仁, which conceptualizes people as thoroughly relational in their thoughts, feelings and actions\(^1\) (Eno, 2015).

The following quotes from *The Analects* describe various aspects of a timely *yan* (or verbal contribution to a conversation).

[10.1] 孔子於鄉黨，恂恂如也，似不能言者。其在宗廟朝廷，便便然，唯謹爾。
[10.1] When Confucius was among the villagers. He appeared self-confident but reticent as if he were not good at words. When he was in the ancestral temple or at the court, he talked eloquently but with prudence.

[10.2] 朝與下大夫言，侃侃如也；與上大夫言，訚訚如也。君在，踧踖如也，與與如也。
[10.2] When waiting at the court, in conversation with officials of lower ranks, he spoke amiably in a straightforward manner; in conversation with officials of higher ranks, he spoke blandly in a respectful manner. When the ruler was present, his manner displayed respectful uneasiness; he was solemn and attentive.

[16.6] 孔子曰：「侍於君子有三愆：言未及之而言，謂之『躁』；言及之而不言，謂之『隱』；未見顏色而言，謂之『瞽』。」
[16.6] Confucius said, “People who attend upon *junzi* are liable to three errors. If they speak before an appropriate time has come, they will be considered rude. If they fail to speak when an appropriate time has come, they will be considered secretive. If they speak without looking at the countenance of their superior, they will be considered stupid.”

Each of the quotes above highlights one of the interrelated aspects of the timeliness of *yan*, namely, place (10.1), audience (10.2) and time or the moment-to-moment turn-taking (16.6). These factors jointly determine the appropriateness of one’s verbal contribution to a conversation. The wording of 16.6 is worth noting. The use of *ji* 及 together with the subject *yan* indicates that an appropriate verbal contribution is one that manifests itself as an integral part of the context (or timing). This entails one’s

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\(^1\) As Dr. Galal Walker observes in a personal conversation at The Ohio State University, the character 仁, with the character for human being on the left and the character for the number “two” on the right, indicates that a person of humanity (or *ren*) sees other people as of the same kind as himself.
attentiveness to the moment-to-moment context in a conversation as a whole, rather than focusing on one’s own mental activities, such as recalling a certain expression. Little of our behavior in a conversation in our native language is the deliberate work of our brain. Rather, the activities of our brain are automatically generated by the context that we create moment after moment. As noted in previous chapter, both our brain and our body are integral parts of a larger cognitive ecosystem of culture (Bateson, 1972; Clark and Chalmers, 1998; Hutchins, 2006; Gazzaniga, 2011).

Scholars in the West have also discussed intelligence in terms of telling the right stories to the right people at the right times. Roger Schank is one of them. According to Schank (1990), “we assess the intelligence of others on the basis of the stories that they tell on the basis of their receptivity to our own stories” (p.xi). In other words, one’s intelligence is demonstrated through responsive storytelling, which is what we do in conversation (Schank, 1990).

In sum, if our goal of running CFL programs is to produce individuals who can appear intelligent to native Chinese speakers and effectively communicate with them, our programs should orient toward sustaining conversation in particular domains at various scales with native Chinese speakers. As discussed in Chapter 2, conversation is the foundation for an ecology of literacy. Once the learner can sustain conversations with native Chinese speakers, he is ready to self-sustain his development in an ecology of literacy in the language. In other words, the learner becomes an autonomous learner who is prepared to effectively continue life-long patterns of learning the language through productive engagements with the society. The learner will voluntarily engage in more and
more reading and writing as he learns to appear better and better educated in conversations.

4.3 Challenges for conversing in Chinese as a foreign language

To sustain a conversation involves responsive storytelling, which can be challenging even in one’s native language in certain situations. For example, we have all heard about situations where a parent and his teenage child find it hard to sustain a conversation with each other. How does this happen? A conversation breaks down or ceases to be a conversation (a pleasant engagement) whenever one participant tries to impose his own agenda upon the other and ignores the other person’s contribution. In such cases, the storytelling ceases to be “responsive” because the two participants stop responding to one another’s response. This is what often happens between some inexperienced parents and teenage children. It can also happen between a teacher and her students if the teacher focuses on her teaching without considering students’ responses (which constantly alter the context of communication). Sustaining a conversation with people who speak a different language can be even more challenging. This section will discuss three of the major difficulties CFL learners may experience due to their limited experiences conversing with native Chinese speakers.

4.3.1 Predicting the impact of one’s storytelling on native Chinese speakers

To sustain a conversation, the participants must make their storytelling easy to follow and appealing to each other, and must be able to tell when the other person is being serious. Without adequate successful experience of participating in storytelling in
Chinese, the CLF learner will not be able to effectively predict the effect of his own story or behavior on his native Chinese conversation partner. Nor will he be able to respond in ways that are expected by his partner. For example, upon being complimented on an excellent performance (such as an oral presentation), many Chinese people tend to respond by downplaying the performance, saying something that may translate as “It is nothing. You can make it as well if you work hard on it.” A CFL learner who is not used to this way of storytelling would feel offended by such a response because he would understand the response as an indirect criticism of his laziness or an indication that the complimenting person is ignorant.

To effectively predict the impact of his storytelling on native Chinese conversation partners, the CFL learner must learn to read Chinese minds (Turner, 1991). One’s mind is essentially what one remembers – the rhizomatic network of stories (or personal memory structures) constructed through life experiences. It is the basis on which a person acts in a conversation. It is also the context that renders a person’s behavior relevant or irrelevant in an interaction. An understanding of this context is the prerequisite for communication to happen. Since this context is constituted of stories, to participate in storytelling in a responsive manner in Chinese as a foreign language, a CFL learner must have adequate knowledge of the stories shared by the group, and of the ways the stories are told and used by the members. Paradoxically, such knowledge can only be gained through participating in responsive storytelling.

To participate in responsive storytelling, the learner must either share the stories that his Chinese-speaking partners are interested in telling, or have stories to tell that may
appeal to his Chinese-speaking partners. A story is a personal memory of having experienced a performance (Walker and Noda, 2000). Therefore, to collect such stories, the learners must personally experience performances in Chinese culture. However, opportunities for such experiences are very limited for the CFL learner who lives in a non-Chinese-speaking community. For many CFL learners, their language class may be the only time and place where they may experience performances in Chinese. Therefore, it is crucial for a language curriculum to provide such valuable opportunities for learners.

4.3.2 Operating a variety of Chinese semiotic systems

The CFL learner lacks the knowledge of the Chinese semiotic systems (including gestures, sounds and written symbols), which constitutes an important part of a Chinese person’s self and his world. In communication, the various semiotic systems, verbal and non-verbal, operate together and complement each other. However, considering understanding as dependent on the written/print symbols, traditional CFL teaching and learning have lopsidedly focused on the verbal aspect of communicative behavior, especially the written/print character texts. As a result, the CFL learners tend to depend solely on the verbal signs in communication.

Once I presented a graphic novel to a second-year college CFL learner to see how comfortable he felt reading it. As he took the graphic novel, he directly turned to the first page, which was filled with a large image of a snowflake with a line of Chinese characters at the bottom. Without my request, the student voluntarily read the line aloud with perfect pronunciation of every single character in the line. Then he stopped, raised his head and asked me “What’s ‘xuēhuā’,” pointing to the characters “雪花 (snowflakes).”
I was quite surprised at his question because he pronounced all the characters in the line fluently and accurately. In response to his question, I just pointed to the image of the snowflake that fills up the page and he went “Oh,” appearing quite embarrassed. However, during the reading of the first two chapters, he still systematically ignored the images. It seemed that for him, reading a Chinese book is always reading the Chinese characters in the book, regardless of what other information is presented with them.

Written symbols have never been the only medium used in communication. Our body, for example, has been our first and primary media and it never ceases mediating our communication. Nowadays, people are commanding an even wider range of media in communication. These media include our body, video, audio, print or written symbols and images. Multimedia texts dominate the texts we encounter daily. Therefore, no one can afford to be ignorant of how multiple media complement each other in a communication event. CFL curricula must accommodate the growing presence of multi-media in CFL instruction. Learners need to be trained to understand that an understanding is achieved primarily through the temporal, spatial and social context, and only secondarily through the semiotics, such as perceived sounds and visual symbols.

4.3.3 Commanding a variety of coordination devices in Chinese

The semiotic system is complex and self-adaptive (The Five Graces Group, 2009). The learner needs to coordinate his own system with the Chinese semiotic system. To do this, he needs to acquire effective “coordination devices” (Clark, 1996). Clark (1996) discussed three types of coordination devices for communication, namely, conventions, precedents and non-conventional coordination devices. A convention refers to a
community-wide solution for a recurrent coordination problem (Lewis, 1969). There are lexical conventions, which govern the co-ordination of word use per se, and conceptual conventions, which govern our conceptions of things (Clark, 1996). Different cultures have different conceptual conventions for categorizing objects and different lexical conventions for naming objects. For example, the plural concept of trousers or pants in English is a singular concept in Chinese: one pair of trousers is yi tiáo kùzi 一条裤子 in Chinese. Here, tiáo 条 is a measure word and it does not indicate plurality. A precedent may be defined as a solution for a recurring coordination problem based on a previous joint experience. Non-conventional coordination devices encompass the solutions for new coordination problems, which do not readily conform to any particular convention. The non-conventional coordination devices play as great (if not greater) a role in everyday language use as conventions. They are actually the processes by which new signs or new uses of existing signs emerge. For example, Chinese netizens have created the term fāngjiě 房姐 (lit. house sister or sister of houses) to refer to the particular former female government official who possesses an excess of real estate properties through bribery. This way of compounding has no precedence in Chinese language use at all.

The three categories of coordination devices are interrelated and dynamic. A non-conventional coordination device may have been inspired by multiple conventions and/or precedents. It has the potential to become a precedent, which, in turn, has the potential to become a convention. Every convention begins as a non-conventional coordination device. A convention enjoys a longer life than any member from the other two categories. However, it is not immortal. Like non-conventional coordination devices, a convention
survives only when it is useful and usable in a community (Clark, 1996). When a convention is no longer useful or usable, it may disappear or be replaced by a new convention. For example, due to the popularization of email, the convention for formatting a print letter is being replaced by the emerging convention for formatting an email. In China, it used to be conventional for people to respond to a compliment on one’s skill saying “Nǎlǐ nǎlǐ 哪里哪里?” However, nowadays, responding in such a way will sound out-of-date or old-fashioned. Instead, “Méiyou méiyou 没有没有” is more commonly used to downgrade a compliment on one’s skill.

Due to the interrelatedness and dynamicity of coordination devices, effective adoption of coordination devices cannot be a once-and-for-all job. The learner not only needs to know the conventions in effect, but also be flexible enough to accommodate the ever-emerging non-conventional coordination devices among Chinese speakers. It follows that language learning cannot be oriented toward “mastery” of existing conventions as prescribed universal rules. Rather, learners need to personally engage in the construction of conventions. Only if they know how conventions have been constructed will they know how the conventions may be altered in a creative but acceptable manner. To this end, learners must have successful experiences of communicating in Chinese in a Chinese-speaking environment before they engage in discussions of the grammatical patterns and the ways they are used in communication.
4.4 The paradox for a CFL learner

In sum, conversation is the process of literacy that can most effectively lay a foundation for sustained development in an ecology of literacy. However, sustaining a conversation in Chinese as a foreign language presents challenges for the CFL learner. All the challenges discussed above are rooted in the CFL learner’s limited experience of personally engaging in conversations with native Chinese speakers in a Chinese-speaking environment. To gain such experiences, the learner must personally engage in conversations with native Chinese speakers. The CFL learner who intends to sustain conversations with native Chinese speakers seems to be presented with a paradox. On the one hand, the learner has difficulty sustaining a conversation in Chinese as a foreign language. On the other hand, he must engage in such conversations to overcome the difficulty. Therefore, a CFL program is there to get the learner out of this paradox.

A CFL program must function to efficiently help the learner construct an initial model of the ecology of literacy in which they will live. To this end, it needs to create and sustain a supportive environment where the ecology is sustained even if the conversations in CFL are mostly “fake,” that is, rehearsed conversations. The environment has to be designed in such a way that the events gradually demand more authentic conversation, in which the participants improvise their responses. As discussed in Chapter 3, a CFL program is a scaffold put in place to support the emergence of the structures in the learner’s system that enables him to sustain conversations in CFL. The “scaffold” must change with time and eventually withdraw to avoid being in the way of the growth of
autonomous CFL learners who can self-sustain through productive engagements with a Chinese society.

4.5 A conversation-driven CFL curriculum

4.5.1 Sustaining a conversation as the goal

As discussed in Chapter 3, an EOL curriculum is a preliminary script for the prologue, which is staged to prepare the participants for collaborating with native Chinese-speakers in a lifelong live performance. The goal needs to be specific but indefinite. It needs to point out a specific direction for the learner and the teacher to work after. However, it must not point at any definite spot or prescribe any particular path because learning, like evolution, is a stochastic process and does not follow any prescribed path. Therefore, the goal of a conversation-driven CFL curriculum is, to prepare the learner for sustaining conversation with the native Chinese speakers he will live and work with.

This goal points out a specific direction for the teacher to provide feedback and for the learner to manage learning resources and self-adjust his behavior. The direction is that the learner needs to appear intelligent in front of his native Chinese interlocutors so that the latter are willing to converse with him. Although the learner will interact with an indefinite number of different native Chinese speakers while living and working in China, the people he interacts with at any particular time and place are more or less definite. Also, depending on who the learner needs to converse with, he will need to explore different resources beforehand to appear intelligent in the conversation. For example, to
be able to converse with a potential business partner or future employer, the learner will need to read the profiles of the person and/ or his organization. The teacher’s feedback is provided based on the learner’s performance in each particular interaction, and so is the learner’s self-adjustment made. A conversation-driven curriculum can allow the teacher and learners to focus on particular performances because, as will be discussed in the next section, it is performance-based.

Learners come to a CFL program with different prior experiences, which set them at different starting points. A learner’s unique experiences prior to and during the program constitute his unique path toward the target direction. Different learners’ experiences can be infinitely different. Therefore, there can be an indefinite number of possible paths toward the goal. Since the paths are different, learners who set off at the same time do not necessarily reach a certain point at the same time. A conversation-driven curriculum can permit such flexibility because it aims to teach the learner (as opposed to teaching any textbook) and teach communication (as opposed to teach words and grammar). Thus, the primary outcome of implementing a conversation-driven curriculum is a system of personal stories that enables the learner to read minds when participating in responsive storytelling in a Chinese-speaking community. Repeated patterns of words and sentence structures constitute a secondary but desirable outcome.

4.5.2 Performances as basic units of learning

Learning CFL is learning how to live and work with Chinese-speaking people. It involves developing a system of behavior that can self-sustain in a Chinese-speaking community. Human behavior is an integral unit (Pike, 1967) and it is integral to its
contexts (Bateson, 1972). CFL teaching should neither isolate a speech act from its context nor emphasize the verbal components at the expense of non-verbal ones. Therefore, the basic unit of learning has to be a unit of behavior-plus-context, which is essentially a *performance* (Walker and Noda, 2000). Behavior, including verbal and non-verbal aspects, constitutes the script of a performance and the context is a configuration of the time, place, roles and audience of a performance.

Like ecology, performance (or life event), as well as story, has a fractal structure – it has the same level of detail whether reduced or magnified. The events in the universe, on the earth, and in the life of an individual are all units of the same ongoing performance at different scales. Whatever the size of the units, they can be specified by five basic elements, namely time, place, roles, audience and script. The larger the unit, the more complex the interrelationship among the elements is. CFL teaching needs to chunk life events into performances of a size that is not too overwhelming for the learner to focus on, one at a time. By personally enacting performances, the learner will yield stories – personal memories of having experienced the performances (Walker and Noda, 2000). To a large extent, these stories determine how intelligently the learner will be able to act in conversation (responsive storytelling) with native Chinese speakers.

### 4.5.2.1 Categorizing performances

Performances are more efficiently categorized by contexts since the script for a particular performance is contingent on the dynamic interrelationship among the other four elements, namely time, place, roles and audience. For example, we may categorize performances according to the time and place they take place, such as when meeting a
person for the first time in a casual/ formal context or when ordering a meal at a restaurant. We may also categorize performances according to the roles involved, such as between a customer and a server or between colleagues. In fact, these two strategies for categorizing performances can be employed in an integrated manner. For example, the performances under the category of meeting a person for the first time may be subcategorized according to the roles that the learner plays. Similarly, the performances under the category of “between colleagues” may be subcategorized according to the time and place the interactions between the colleagues take place, such as at their first encounter during the new employee orientation and when one invites the other to dine together.

In each performance, a learner will be assigned a specific role with a specific goal, such as “to order a meal for himself at a Chinese restaurant.” Depending on the learner’s role and his goal, his script for the performance will be different. However, the scripts for ordering food across contexts share certain basic common features. For example, the waiter will greet and ask the customer what he wants and the customer will identify the dishes either by pointing or by saying the names of the dishes. A basic script for ordering food at a restaurant may involve the customer greeting the waiter and pointing out the dishes he wants to order from the menu. At a more advanced level, the same performance may involve the customer requesting the waiter to recommend dishes and asking for more details about the recommended dishes. It may also involve the customer ordering banquet over the phone or on the Internet. Therefore, the performances in a given category of context can be sequenced according to the complexity of scripts.
4.5.2.2 Sequencing performances

The complexity of a script is determined by (1) the number of moves the learner takes to approach his goal in the performance and (2) the abstractness of the context involved in each move. Each move in a conversation is accompanied with a change of context (McDermott, 1979). Therefore, to be able to take more moves, the learner needs to know more contexts. For example, a one-move script for an invitation may involve the learner proposing the activity and the other person accepting it. However, in case the other person declines the invitation for a reason, the learner will need to take further steps based on the response. The abstractness of a context may be considered as reflected in the difficulties the learner has in connecting it with his system. Connecting a context with the learner’s system involves coordinating the learner’s system with the Chinese semiotic systems and making the latter integral parts of the former. This requires the context to (1) contain elements that are familiar to the learner and (2) occur frequently enough to cause necessary structure to form in the learner’s system.

Since the learner’s system is constituted of a rhizomatic network of stories and body movements, the (verbal and non-verbal) elements in a context may be related to the learner’s system either through the stories he knows or through his body movements. In other words, the elements either bring up a familiar context or are physically performable. Generally, a learner will have less difficulty connecting with a family-based or school-based story than a story about world economics or international relations because the former is generally more familiar to him. He will also have less difficulty connecting with conversational expressions than written style expressions because the former are
more readily performable. Narrative structures may be easier than expositive structures because narratives describe the experience of the body. In sum, the more concrete the context is to the learner and the more frequently the learner encounters the context, the more readily it may be connected with the learner’s system. Figure 4.3 models how a conversation-driven curriculum may increase the complexity of the script through manipulating the two major variables, namely, number of moves and abstractness of contexts.

**Figure 4.3** Variables that determine the complexity of the script
As shown in Figure 4.3, the more moves and the more abstract the contexts, the more complex the script is. For example, a simple script for a first-time meeting may involve one move, that is, the two people saying “Nǐ hǎo (你好)” to each other during a brief encounter at a conference. It may evolve to include multiple moves, such as exchanging names, professions and contact information. It may also evolve to include less familiar contexts. For example, when formally introduced to a big figure in one’s field, instead of simply saying “Nǐ hǎo (你好),” a Chinese person may say “Jiǔ yǎng (久仰)” or “Xìng huì (幸会)” to formally express his excitement about meeting the person. Such situations are much less common than the contexts where the learner needs to say “Nǐ hǎo (你好).”

In Figure 4.3, the numbers along the line of “complexity of scripts” mark the transitioning points between levels of learning. At the beginning, the number of moves increases faster than the level of abstractness of contexts. This means the learners will engage in a large variety of different daily contexts using mostly spoken-style verbal structures, which are more vivid. However, toward the more advanced levels, the increase in the variety of contexts becomes less significant. Instead, the learner works to increase his repertoire of verbal structures to gain flexibility and sophistication to meet the requirement of domain-specific performances in academic or professional contexts. In a conversation-driven curriculum, we increase the number of moves before increasing the abstractness of contexts because this will allow the learner to find himself functioning in a larger variety of daily contexts even at the early stages of CFL learning. Learners will
feel a greater sense of accomplishment when they know they can do a lot of different things in Chinese at ease with what they have learned.

4.5.2.3 Selecting and enacting performances

As a foreign person, the roles the learner is allowed to play in a Chinese-speaking community are constrained by multiple factors, such as the physical appearance, social background and communicative competency of the learner and the political and economic context in the community. Generally, it is unlikely that the learner can copy the role of any native Chinese speaker. Therefore, the kind of performances we have learners enact in a CFL program needs to be selective. Ideally, the performances can give rise to useful stories, which enable the learner to appear intelligent in a Chinese-speaking community. To this end, the selected performances should help the learner construct preliminary scripts for acting in contexts where he, as a foreign person, is likely to find himself using Chinese when he lives and works in a Chinese-speaking community. Therefore, when selecting performances it is very important to keep in mind the situations where the learner may use Chinese in and beyond the program.

Also, what the learner learns from acting in the contexts should help him construct knowledge structures that contribute to the flexibility of his system. This requires that the teacher’s feedback concerning the learner’s performance orient the learner toward the context, that is, when, where and to whom he is speaking or responding in the presence of whom. To accumulate useful stories from performances, the learner must form the habit of acting based on an understanding of the context that is most likely shared by his native Chinese interlocutor. The teacher’s feedback should tell
the learner whether or how likely his understanding of a context can be shared with his native Chinese interlocutor.

4.5.3 Levels of a conversation-driven curriculum

Performances can range from completely rehearsed to completely improvised. A completely rehearsed performance closely follows a designated sample script, of which all the performers are made aware beforehand. For example, acting out a dialogue that has been assigned for memorization and live delivery would be toward the completely rehearsed end on the continuum. By contrast, in an improvised performance, the learner needs to select and adapt, on the spot, the scripts available in his system. A conversation, as discussed in this dissertation, is considered to be a completely improvised performance. There can be performances that are partially rehearsed. For example, a classroom discussion based on an assigned reading would be partially rehearsed, especially when the discussion questions are provided with the text assigned for reading.

To be able to improvise, the performer will need to be able to do an adequate variety of rehearsed performances at ease. Similarly, to sustain conversations in a Chinese-speaking community, the CFL learner will need to be able to do at ease an adequate variety of “fake” conversations, which are rehearsed to different extents. In other words, the curriculum progresses in cycles of “rehearsed performances – partially rehearsed performances – improvised performances (conversations) – (partially) rehearsed performances.” The improvised performance in the current cycle becomes a rehearsed or partially rehearsed performance in the next cycle. Ideally, the learner’s learning activities in and out of class constitute such cycles. For example, the learner first
rehearses with a sample script from his course material out of class. Then, the CFL class provides him with opportunities to participate in partially or fully improvised performances. After class, he tries to adapt the scripts yielded from class to real life situations.

A conversation-driven curriculum aims to teach the learner (as opposed to teaching any textbook) and teach communication (as opposed to teaching words and grammar). Therefore, the levels of a conversation-driven curriculum are defined by the learner’s progress as a performer in conversations. The growth of the learner as a performer is primarily reflected in the variety of performances he can successfully improvise. The levels of a conversation-driven curriculum are distinguished by the proportion of improvised performances the learner enacts at each level. Figure 4.4 models the gradual change of the proportion of rehearsed and improvised performances (conversations) from beginning to advanced levels.

![Figure 4.4 Rehearsed and improvised performances in a CFL curriculum](image)
A CFL curriculum functions as an interface between the learner’s native community and a Chinese-speaking community. In Figure 4.4., the CFL curriculum is represented by the parallelogram in the middle, which is constituted of an upward triangle, representing rehearsed performances, and a downward triangle, representing improvised performances (conversations). The darker-colored the triangle, the more improvisation is involved in the performances. The dashed lines in the parallelogram mark the transitions between different levels. At the beginning level, the learner is doing mostly rehearsed performances. As he progresses in the curriculum, the proportion of rehearsed performances decreases whereas the proportion of improvised performances increases. Upon accomplishing the advanced level, the learner should be able to continue life-long patterns of learning the language through productive engagements with the target community. In other words, when the learner graduates from the CFL program his learning will rely almost entirely on conversations in Chinese.

This model is built on Walker’s (1996) inverted triangle model (Appendix A) for the roles of two types of instruction in the foreign language-learning environment. According to Walker (1996), a Chinese curriculum includes learning model instruction (LMI) and acquisition model instruction (AMI).¹ LMI is item-based. It is concerned with teaching appropriate responses to specified situations. AMI is process-based. It is designed to practice the application of the learners’ existing Chinese skills to problem-

¹ As Dr. Walker points out during a personal conversation, the labels “learning model” and “acquisition model” has now been replaced with “item-based” and “strategy-based” to stay away from the controversies over the distinction between “learning” and “acquisition.”
solving tasks. The initial stages of an elementary CFL curriculum will consist entirely of LMI (p.187).

The current model in Figure 4.4 and Walker’s (1996) model share the same fundamental principle of creating a language learning environment that evolves with the learner’s progress. They both take into consideration the changes in the learner’s needs at different levels. The two models are largely compatible. When an instructional activity is concerned about building an inventory of knowledge in Chinese (that is, item-based), the performances the learner is engaged in doing in Chinese are mostly rehearsed; whereas when instruction is designed for application (that is, strategy-based), the learner is likely to improvise most of his performances in Chinese to different extents.

However, the two models represent a CFL curriculum from slightly different perspectives, due to which they differ in their representations of the beginning and advanced levels. Walker’s (1996) model is designed with a focus on the types of instruction, which roughly correspond with different types of materials. Materials used in item-based instruction are mostly pedagogically constructed texts and recordings, which are not used in strategy-based instruction. The instructional materials used in strategy-based instruction are linguistic artifacts of Chinese-speaking societies (p.189), which are not used with beginning learners who have no inventory of knowledge in Chinese. Therefore, in Walker’s (1996) model, the beginning level involves an initial stage that consists of no strategy-based instruction and the advanced level eventually eliminates item-based instruction.
By contrast, the model in Figure 4.4 focuses on the growth of the learner as a performer in Chinese societies. It is concerned with promoting effective, improvised performances in different contexts. Since a performance does not necessarily involve verbal behavior, even a novice learner may be encouraged to improvise some basic performances. For example, in the very first class the teacher may say “Nǐhǎo 你好” and offer to shake hands with a CFL learner, who has no prior training in Chinese. On the other hand, even at the most advanced levels, some of the learner’s performances may be rehearsed to some extent. For example, advanced learners are also encouraged to rehearse before giving an oral presentation and going to a job interview.

There are four major reasons for the current model to represent the ratio of rehearsed and improvised performances instead of the ratio of LMI (item-based instruction) and AMI (strategy-based instruction). Firstly, the change of the relative proportions of rehearsed and improvised performances directly reflects the learner’s growth as a performer in Chinese. Secondly, the basic units of a conversation-driven curriculum are performances, which demonstrate what the learner can do in Chinese. Thirdly, focusing on learner’s performances can remind the curriculum designers and teachers to design instruction based on what the learner does, rather than what the material presents. It can also remind them to assess learning based on the quality of the learner’s performance, rather than on the quantity of memorized linguistic items from any text book or instruction. Fourthly, the proportion of rehearsed and improvised performances at different levels provides reference for daily instructional design. The proportion of rehearsed and improvised performances a learner enacts during each
instructional cycle should be consistent with the ratio suggested for his level. In other words, in each instructional cycle, there must be opportunities for the learner to (at least partially) improvise with what they have learned.

4.5.4 Spoken courses and written courses

A conversation-driven curriculum includes spoken courses and written courses. The primary distinction between the two types of courses changes gradually as the learner gains competence in operating the three fundamental semiotic systems in Chinese, namely, body movements, speech sounds and the Chinese writing system. At the beginning level, the primary distinctions lie in the predominant semiotic systems involved in classroom activities and the kinds of activities the learner does for class preparation. For both types of courses at all levels, the learner needs to come to class ready to perform. However, since the predominant semiotic systems involved in the performances in spoken and written classes are different, the preparation activities for a spoken and a written class inevitably have different objectives. Table 4.1 summarizes the distinctions between a spoken course and a written course at the beginning level.
### Table 4.1 Distinctions between a spoken course and a written course (beginning level)

<table>
<thead>
<tr>
<th>Predominant semiotic systems involved in class activities</th>
<th>Spoken course</th>
<th>Written course</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Systems of speech sounds, non-orthographic visual aids (e.g., gestures and images), and <em>pinyin</em></td>
<td>Systems of Chinese characters, speech sounds, and non-orthographic visual aids</td>
</tr>
<tr>
<td>Learner preparation</td>
<td>Practice acting out scenes with the help of audio files and/ or native Chinese speakers</td>
<td>Study character texts and practice tracing characters</td>
</tr>
<tr>
<td>Objectives of class preparation</td>
<td>(1) Smooth and mindful oral production of particular lines; (2) Hypotheses about how the lines may be applied to spoken contexts</td>
<td>(1) Quick recognition of particular characters in contexts; (2) Efficient reproduction of particular characters following a model</td>
</tr>
</tbody>
</table>

In a beginning level spoken class (especially during the introductory stage), the performances will rely primarily on speech sounds and non-orthographic visual aids, such as images and gestures. The Romanization system, *pinyin*, may also be used, but with caution. By contrast, in a written class, *pinyin* is avoided; instead, Chinese characters will be extensively involved in class performances. Accordingly, to prepare for a spoken class, the learner mainly works with audio files or native Chinese speakers to practice acting out the sample scripts based on an understanding of the scene. The objectives include (1) smooth and mindful oral production of particular lines and (2) hypotheses about how the lines may be applied to spoken contexts. To prepare for a written class, in addition to audio files, the learner must also work with character texts. These texts feature

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1 It is better to have the learner extensively imitate the sounds based on listening, before *pinyin* representation of the sounds is provided. This will promote the habit of learning with ears and avoid misleading the learner to apply English pronunciation conventions to pronouncing *pinyin*.
the lines and/or the scenes performed in spoken classes. The texts will appear as conversation transcripts and/or written narratives adapted from learned dialogs. They are used to help the beginning learner construct a foundational system of Chinese characters. The objectives of preparing for a beginning level written course include (1) quick recognition of clusters of characters in context and (2) efficient reproduction of particular characters (following an efficient stroke order).

As the learner gains competence in operating the writing system, spoken classes may increasingly involve character texts to help the learner recycle the previously encountered characters. It gradually becomes harder to distinguish spoken and written courses based on the predominant semiotic systems involved. In the meanwhile, the linguistic styles of materials used in the two types of courses gradually become distinct. The learner may prepare for a spoken class using materials primarily consisting of spoken-style speech, while preparing for a reading class using materials which primarily consist of written-style speech. Accordingly, while the learner’s preparation for a spoken class has more or less the same objectives as before, his preparation for a written class will have more application-oriented objectives, such as (1) identification of useful information, ideas and rhetorical strategies and (2) hypotheses about how the information, ideas and rhetorical strategies may be applied in spoken and written contexts.

Spoken-style speech and written-style speech differ in terms of “lexical density” and grammatical complexity (Halliday, 2014). Lexical density is “the proportion of lexical items (content words) to the total discourse” (p.161). Written-style speech generally has a higher lexical density than spoken-style speech but less complex sentence
structures. For example, the written version of a story will appear much shorter than the script of the spoken version of the same story. However, the script version may be easier to understand for language learners who have developed adequate conversational skills in Chinese. Spoken-style speech assumes face-to-face communication, where pitch, stress, and speed are used to distinguish between important and less important information, and additional information or after thoughts are inserted now and then as attempts to enhance coherence and understanding (Kramsch, 1993). Written-style speech, on the other hand, uses syntax and paragraph structure to differentiate the important from the less important (Kramsch, 1993). Therefore, compared with spoken-style speech, written-style speech entails more effort in word choice and structuring. This is why reading and writing have to be systematically learned in formal instructional settings.

Toward the advanced level, as the learner’s inventory of knowledge of Chinese language and society has expanded through reading, spoken course will increasingly include performances that take place in more complex and more domain-specific contexts. Communication in such contexts usually involves discussing the latest social or domain-specific issues. Such discussions have no prescribed agenda to follow. Consequently, the objectives of students’ preparation for an advanced-level spoken class are no longer centered on smooth and mindful oral production of sample lines. Instead, what the learner does to prepare for an advanced-level spoken class is not much different from what he does for a written class at this level. He will work with multimedia resources as well as native Chinese speakers to identify and critique perspectives and viewpoints, and
consider how he could present his own viewpoints on the issue in a way that appeals to monolingual Chinese audience.

Table 4.2 is a summary of how the learner’s objectives of preparing for spoken and written classes evolve over time. Note that the objectives described in the table are expected to be reached by the learner through class preparation. Therefore, self-managed learning materials need to be designed to assist the learner in reaching the objectives, and class activities should go beyond these objectives. “Number of hours” in the table refers to hours of class instruction. For every one-hour class instruction, an average of two hours of preparation (or deliberate practice) out of class is assumed. Therefore, seven hours of class instruction roughly equals 20 hours of deliberate practice toward learning the language. This way, by the end of the CFL program, the learner is likely to have accumulated a total of about 1800 hours\(^1\) of deliberate practice and should be ready to continue life-long patterns of learning the language through productive engagements with Chinese-speaking societies.

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\(^1\) It is estimated by the Foreign Service Institute that a native speaker of English with no prior knowledge of Chinese language needs to accumulate at least 2200 effective instructional hours in learning Chinese to reach Interagency Language Roundtable (ILR) Language Skill Speaking-3/Reading-3 level, which is the minimum level of proficiency required by the Foreign Service positions that require Chinese proficiency. [http://www.state.gov/documents/organization/247092.pdf](http://www.state.gov/documents/organization/247092.pdf). Accessed at 5:06 p.m. January 16, 2016.

American Council on the Teaching of Foreign Languages (ACTFL), on the other hand, estimates that an average learner needs to complete at least 2400 hours of full-time intensive and/or immersion, proficiency-based language training under the supervision of an instructor and with 1-4 students per class to reach the superior level described in ACTFL Proficiency Guidelines. [http://www.languagetesting.com/how-long-does-it-take](http://www.languagetesting.com/how-long-does-it-take). Accessed at 5:02 pm January 16, 2016.
Table 4.2 Learning objectives of spoken and written courses at different levels

<table>
<thead>
<tr>
<th>Accumulated hours of class instruction</th>
<th>Learner’s objectives of preparation for a spoken class</th>
<th>Learner’s objectives of preparation for a written class</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
<td>(1) Smoothly imitate rhyming lines spoken at a natural speed</td>
<td>(1) Quickly recognize the strokes consisted in a character</td>
</tr>
<tr>
<td>7 hours</td>
<td>(2) Quickly recognize spoken sounds and accurately represent them with <em>pinyin</em></td>
<td>(2) Group characters according to shared radicals or similar compositional structures</td>
</tr>
<tr>
<td>3 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 hours</td>
<td>(1) Smoothly produce particular lines orally from memory</td>
<td>(1) Quickly recognize clusters of characters in context;</td>
</tr>
<tr>
<td></td>
<td>(2) Form hypotheses about how the lines may be applied in spoken contexts.</td>
<td>(2) Efficiently reproduce particular characters following a model</td>
</tr>
<tr>
<td><strong>Level 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Level 3</strong></td>
<td>(1) Identify useful information, ideas and presentation strategies from what is heard or watched</td>
<td>(1) Identify useful information, ideas and rhetorical strategies from what is read;</td>
</tr>
<tr>
<td>140 hours</td>
<td>(2) Share one’s own stories in response to what is read, heard or watched</td>
<td>(2) Form hypotheses about how the information, ideas and rhetorical strategies may be applied in spoken and written communication</td>
</tr>
<tr>
<td><strong>Level 4</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>160 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Level 5</strong></td>
<td>(1) Critically analyze the perspectives, viewpoints and presentational strategies identified from multimedia resources, including book/film reviews, news commentaries, and peer-reviewed publications</td>
<td></td>
</tr>
<tr>
<td>80 hours</td>
<td>(2) Be ready to present in Chinese one’s own viewpoints on the issue in a way that appeals to Chinese audience</td>
<td></td>
</tr>
<tr>
<td><strong>Level 6</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80 hours</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The levels of learning are punctuated based on academic semesters at college. Level 1 of learning roughly corresponds to the first semester (5 hours per week X 14 weeks). Level 2 corresponds to the second semester. Level 3 corresponds to the second
year of regular instruction at a U.S.-based institution and Level 4 corresponds to a summer abroad in a Chinese-speaking community with an intensive curriculum (20 hours per week X 8 weeks). The sum of Level 3 and 4 may roughly correspond to a semester abroad in a Chinese-speaking community. Level 5 and 6 may each correspond to a year of advanced level course in the States (3 hours per week X 28 weeks), or together they correspond to an intensive summer abroad in a Chinese-speaking community.

The introductory stage (the first seven hours of class instruction) focuses exclusively on face-to-face spoken communication to attune the learner to the Chinese sound system. Basics about the writing system will be introduced toward the end of the introductory stage. In the next 60 hours (or the rest of the first semester), face-to-face spoken communication will continue to be the primary focus, but character scripts are introduced in written classes primarily as a review and gradually as an extension of what has been learned in spoken classes. In other words, the content of a written class overlaps with that of the preceding spoken class at the beginning level and gradually involves more variations from and extension beyond that of the preceding spoken class. In the next 70 hours (or the second semester), spoken and written courses will still be separated, but the content of written courses will be more of extension than of review of what has been learned in spoken classes. In other words, at the beginning, what the learner does in written classes are dependent on what the learner can say. Gradually, the learner will be exposed to a larger variety of content in written classes and what the learner gains from written classes substantiates his participation in spoken classes. Toward the advanced levels, what the learner does for a spoken class and for a written class complement each
other to the extent that doing them separately would severely reduce efficiency. Therefore, at advanced levels the learner’s preparation for spoken and written courses is no longer differentiated.

There are three important advantages for distinguishing spoken and written courses at the early stages of CFL learning. First of all, distinguishing spoken and written courses allows self-managed learning activities to focus on a few aspects at a time, without harming the integrity of communicative behavior. Learning to communicate in Chinese can be extremely overwhelming for English-speakers primarily because they do not share the stories that Chinese speakers grow up with and the Chinese semiotic systems are markedly different from English ones. Usually, the immediate challenges are perceived from the Chinese semiotic systems, such as the tones in speech sounds and the non-alphabetic writing system. In fact, speech is not dependent on the writing system. Not knowing how to write a character does not stop one from saying it in conversation. Therefore, the learner may temporarily ignore the Chinese characters while preparing for and participating in a spoken course. Once he has achieved a thorough understanding of the script and fluency in saying the lines from the spoken class, he will find preparing for the written class easier because the Chinese characters can now bring up concrete contexts to him. He can play with the characters by using them to represent what he is able to say in Chinese. He may also create variations of the script with chunks of the script. In class, he can test out what he can do and create with the characters, which are now meaningful units of sound and form for him.
Secondly, distinguishing spoken and written courses may allow the beginning learner a better chance to experience “flow” while learning (Csikszentmihalyi, 1990). As discussed in Chapter 3, two of the important features of the activities conducive to “flow” include (1) they set up specific goals and provide timely feedback and (2) they make the learner feel comfortable enough to set aside the information that is less relevant to the stated goal. By focusing on the sounds and written forms in separate classes at the beginning levels, the learner has a better chance to attend to the sense of a given script makes and learn Chinese more efficiently. For example, when preparing for a spoken class, he can first visualize the scene with the help of an English version of the script, the notes that explains the functions of the lines and a vocabulary list. Then he can work extensively with the audio file to imitate expert performances, without worrying about learning how to read and write the Chinese characters. The teacher’s feedback in a spoken class can focus on the learner’s oral performance, including pronunciation, smoothness of delivery and appropriateness of cultural behavior, which are fundamental for CFL learning.

Thirdly, distinguishing spoken and written courses can allow effective placement procedures. Learners come to a CFL curriculum with diverse prior learning experiences and demonstrable skills in Chinese. For example, learners from one high school program may be stronger in reading and relatively weaker in speaking. Learners from an ethnic Chinese background may have higher-level speaking skills with lower-level reading skills. Ideally, the curriculum can adapt to a learner’s demonstrable skills to optimize the instructional resource. In reality, due to constraint from available resources, such as
budget, personnel and facilities, learners (especially lower-level learners) are placed into pre-modeled levels. Dividing the curriculum into spoken and written courses permits a learner to be placed in one level in spoken course and another in written course. A heritage learner who had prior exposure to the spoken language but little experience with the writing system may be placed in a Level 2 spoken course but a Level 1 written course.

4.5.5 Materials and activities

A conversation-driven curriculum aims to teach communication (as opposed to any text book) and strives to cultivate effective autonomous CFL learners. Accordingly, course materials for a conversation-driven curriculum are designed primarily to help learners prepare for communication in class. Therefore, the materials must support self-managed learning. In particular, the materials prepared for learners at each level must be designed to assist the learner in reaching the learning objectives described in Table 4.2 for the level. Table 4.3 provides descriptions of ideal learning materials for spoken and written courses at different levels. Generally speaking, to support self-managed learning, the materials need to be pedagogically designed with suggestions on pacing, learning steps, and the objectives of conducting each step of learning. The suggestions must be provided in learner-friendly language. In addition, the materials must come with audio/video demonstrations of expert performance, notes that help the learner analyze expert performance, and exercises that help the learner check how well he is prepared for class.
Table 4.3 Ideal learning materials for spoken and written courses at different levels

<table>
<thead>
<tr>
<th>Length of class instruction</th>
<th>Ideal learning materials for a spoken course</th>
<th>Ideal learning materials for a written course</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 hr.</td>
<td>(1) Audio files of Chinese numbers 1-10, simple Chinese rhymes, and common instructional phrases accompanied with transcript in pinyin and explanations in the learner’s base language</td>
<td>(1) Transcripts of the audio files used in spoken course in Chinese characters;</td>
</tr>
<tr>
<td>3 hr.</td>
<td>(2) Learner-friendly descriptions of pinyin spelling and pronunciation conventions with examples accompanied with audio</td>
<td>(2) Learner-friendly descriptions of the components of Chinese characters and demonstrations of how to efficiently reproduce particular components and how to combine them to produce particular characters.</td>
</tr>
<tr>
<td>60 hr.</td>
<td>(1) Audio files and/or video clips of pedagogically constructed dialog performances accompanied with pinyin scripts and description of the scene and functions of particular lines in the learner’s base language</td>
<td>(1) Character scripts of the dialogs and variations of the dialogs, such as content questions based on the dialogs or narrations adapted from the dialogs</td>
</tr>
<tr>
<td></td>
<td>(2) Audio files that demonstrate how particular lines may apply to other scenes and help the learner develop fluency in producing the lines</td>
<td>(2) Demonstrations of how to efficiently write particular characters</td>
</tr>
<tr>
<td><strong>Level 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70 hr.</td>
<td>(1) Narratives adapted from dialogs performed in spoken course</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2) Linguistic artifacts from Chinese-speaking communities, such as public signs, menus, posters, and forms</td>
<td></td>
</tr>
<tr>
<td><strong>Level 3</strong></td>
<td>(1) Audio files and/or video clips of extended performances collected live from Chinese-speaking communities, accompanied with Chinese scripts, descriptions of the scene and functions of particular lines, and exercises that demonstrate how particular lines may be applied to different contexts</td>
<td>(3) Functional texts which learners may read or produce while living in a Chinese-speaking community, such as notes, memos, emails, simple online posts, etc.</td>
</tr>
<tr>
<td>140 hr.</td>
<td>(2) Video clips of Chinese films and sit-coms accompanied with Chinese scripts, and descriptions of the scene and the functions of particular lines mostly in the learner’s base language</td>
<td>(4) Chinese graphic novels or short stories (produced by and for native Chinese speakers) accompanied with audio files, notes on cultural references and linguistic structures, and pedagogically designed exercises that get the learner ready to retell particular chunks of a story</td>
</tr>
<tr>
<td><strong>Level 4</strong></td>
<td>(Cont’d)</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.3 Cont’d

<table>
<thead>
<tr>
<th>Length of class instruction</th>
<th>Ideal learning materials</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>for a spoken course</td>
</tr>
<tr>
<td>Level 5</td>
<td>80 hr.</td>
</tr>
<tr>
<td></td>
<td>(1) Video clips of news reports and talk shows on professional and social issues, accompanied with scripts and analyses of perspectives, viewpoints and discourse strategies, and exercises that demonstrate how particular lines and strategies may apply to different contexts</td>
</tr>
<tr>
<td></td>
<td>(2) News commentaries and professional publications accompanied with analyses of perspectives, viewpoints and rhetoric strategies, and exercises that demonstrate how particular rhetoric strategies may be used to present particular viewpoints</td>
</tr>
<tr>
<td></td>
<td>(3) Links to major Chinese news portals and web tools, and tutorials for learning with online resources</td>
</tr>
<tr>
<td>Level 6</td>
<td>80 hr.</td>
</tr>
</tbody>
</table>

To make the learner’s self-managed learning an integral component of the curriculum, class activities must hold the learner accountable for what he has done during preparation and prepare them for communication beyond the CFL program. In other words, the activities should avoid mere repetition of what the learner has done for preparation. For example, lengthy explanation in the learner’s base language about vocabulary and structures should be avoided in classroom instruction. Instead, class activities should engage the learner with responding to typical prompts in simulated contexts of communication to test his hypotheses about the use of vocabulary and structures. Since the growth of a learner in a conversation-driven curriculum is evaluated based on how much he can improvise his performance in novel scenes, CFL classes should go beyond checking preparation, and provide opportunities for the learner to (at least, partially) improvise his performance. Also, the contexts used to elicit performances in class should give the learner a concrete idea of how he may apply what he has learned.
from class to situations out of class. For example, to elicit a performance of introducing two people to each other, the learner may be put in a situation where he brings his Chinese friend to his Chinese teacher’s party or brings his classmate to a Chinese friend’s party. To elicit a performance of writing an email in Chinese, the learner may be put in a situation where he tries to request an appointment with his Chinese teacher or future employer.

Ideally, the activities in a class display a progression from rehearsed performances to improvised performances. Activities for rehearsed performances involve little variation from the sample script which the learner has studied during preparation; whereas activities for improvised performances will require the learner to adapt what he has practiced with varying levels of creativity. Tables 4.4 and 4.5 respectively provide sample activities for spoken classes and written classes at different levels. Activities listed for lower levels may also be used at higher levels since the sample scripts used at higher levels will be more challenging anyway. Also, some activities for rehearsed performances at lower levels (such as “orally narrate a scene”) may be used for improvised performances at higher levels. In fact, the activities for rehearsed performances toward the higher levels increasingly demand improvisation.
<table>
<thead>
<tr>
<th>Levels</th>
<th>Rehearsed performances</th>
<th>Improvised performances</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 10 hr.</td>
<td>(1) Count off! (2) Rhyme relay (students take turns chanting a rhyme line by line) (3) Drills on instructional phrases (4) Matching sounds with pinyin spellings</td>
<td>(1) Count the number of particular items (e.g., desks) in the classroom (2) Contextualized exercises (e.g., tell the room number when asked where one lives; respond appropriately to the teacher’s instructions) (3) Listen to an alternative version of a rhyme and represent it with pinyin</td>
</tr>
<tr>
<td>2 60 hr.</td>
<td>(5) Perform a (chunk of) dialog from memory (6) Perform variations of (parts of) the dialog following visual cues (7) Check comprehension of the dialog (8) Orally narrate the scene</td>
<td>(4) Perform a role in a skit with the teacher, who plays a different role (5) Follow-up Q &amp; A based on the skit (6) Orally narrate the scene of the skit (7) Act out an alternative version of the skit (e.g., one that requires a higher or lower level formality) (8) Interpretation exercises</td>
</tr>
<tr>
<td>3 140 hr.</td>
<td>(9) Dub a scene from a video clip (10) Orally describe a scene from a video clip (11) Q &amp; A about the scene (12) Narrate a plot from the perspective of one of the characters (13) Report results of a survey (conducted out of class)</td>
<td>(9) Casual discussion about the video (10) Respond to others’ comments (11) Share the stories that one is reminded of by watching the video clip (12) Ask questions about others’ stories to show interest (13) Brainstorm survey questions (14) Follow-up Q &amp; A based on survey reports</td>
</tr>
<tr>
<td>4 160 hr.</td>
<td>(14) Present one’s opinion on a pre-assigned issue (15) Lead discussion about a pre-assigned topic (16) Share research proposal</td>
<td>(15) Listen to a piece of latest news, summarize it and share comments (16) Simulated talk-shows (17) Comment on each other’s research proposals</td>
</tr>
</tbody>
</table>

1 Interpretation is not word-by-word translation. To do this activity, the teacher and a student act as two speakers who do not understand each other’s language (Chinese, English), but are attempting to communicate with each other. Two other students act as the interpreters. The interpreter’s task is to interpret the intention of the speakers. The interpreter may either repeat the speaker’s utterance in another language (e.g., What time?) or report the speaker’s intention (e.g., He asks about time to meet.). The students take turns acting as monolingual speakers or interpreters.
Table 4.5 Sample activities for written classes at different levels

<table>
<thead>
<tr>
<th>Levels</th>
<th>rehearsed performances</th>
<th>improvised performances</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7 hr</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>(1) Identify characters with particular semantic radicals or compositional structures</td>
<td>(1) Look up characters in a Chinese dictionary using radicals</td>
</tr>
<tr>
<td></td>
<td>(2) Check stroke order</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3 hr</td>
<td>60 hr</td>
</tr>
<tr>
<td></td>
<td>(3) Timed read-aloud of a familiar dialog presented as subtitles</td>
<td>(2) Complete the script of an alternative version of the dialog</td>
</tr>
<tr>
<td></td>
<td>(4) Respond to text messages for one of the roles in the dialog</td>
<td>(3) Pattern exercises</td>
</tr>
<tr>
<td></td>
<td>(5) Match what is heard with its character script</td>
<td>(4) Write scripts for a performance in a specified context</td>
</tr>
<tr>
<td></td>
<td>(6) Scan a narration adapted from the dialog for key information</td>
<td>(5) Organize personal information into a coherent paragraph of introduction</td>
</tr>
<tr>
<td></td>
<td>(7) Sequence scrambled lines into a coherent dialog or a narration</td>
<td>(6) Get information from Chinese linguistic artifacts (e.g., business cards, public signs, posters, etc.)</td>
</tr>
<tr>
<td></td>
<td>(8) Complete a dialog or a narration that is missing function words</td>
<td>(7) Adapt a model text to fit one’s own situation</td>
</tr>
<tr>
<td>2</td>
<td>70 hr</td>
<td>140 hr</td>
</tr>
<tr>
<td></td>
<td>(9) Identify spoken-style or written style expressions</td>
<td>(8) Discussions that relates the learner to the reading</td>
</tr>
<tr>
<td></td>
<td>(10) Rewrite spoken-style sentences using written style expressions</td>
<td>(9) Scan titles for reports on a particular event</td>
</tr>
<tr>
<td>3</td>
<td>140 hr</td>
<td>160 hr</td>
</tr>
<tr>
<td></td>
<td>(11) Q&amp;A about the assigned reading</td>
<td>(10) Skim through a news report for gist</td>
</tr>
<tr>
<td></td>
<td>(12) Tell a story based on illustrations</td>
<td>(11) Skim through an online forum for interesting posts and discuss it</td>
</tr>
<tr>
<td></td>
<td>(13) Tailor a narration to fulfill particular functions, such as a complaint or a request.</td>
<td>(12) Draft a response to an online post</td>
</tr>
<tr>
<td></td>
<td>(14) Adapt a narrative to a skit</td>
<td>(13) Poster presentation on a self-selected topic</td>
</tr>
<tr>
<td>4</td>
<td>160 hr</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(15) Recommend a Chinese article, website or book to peers</td>
<td>(14) Skim through a news commentary for the author’s perspective and viewpoints, and respond</td>
</tr>
<tr>
<td></td>
<td>(16) Lead discussion about a research paper</td>
<td>(15) Debate on a controversial issue</td>
</tr>
</tbody>
</table>

1 One example of pattern exercises at Levels 1 and 2 may be conducted as follows: the teacher prepares sets of sentences created out of target patterns and learned phrases. In class, the sentences are presented five at a time. The students first read aloud the sentences one by one. Then the teacher assumes a role and initiates a conversation. The students will select the most appropriate sentence among the five to respond to the teacher. At higher levels, the pattern exercises may involve sentence structures, cohesive devices or frames for constructing paragraphs.
In sum, the learning materials used in a conversation-driven curriculum are not restricted to conversation scripts. Depending on what the learner can do in Chinese, the materials may consist of mini dialogs, oral narratives or ten-page written passages. General principles for developing or adapting materials for a conversation-driven curriculum include (1) the materials are designed to help the learner reach specific learning objectives, which are described in learner-friendly language; and (2) they come with necessary resources (such as audio files, demonstrations and analyses of expert performances, and self-checking exercises) that support self-managed learning. The learning activities should be designed to orient students toward conversations or engage them in conversations. As we can see from Tables 4.4 and 4.5, the activities that orient students toward conversation, especially the ones suggested for lower levels, are not necessarily conducted in the format of a conversation. These activities are like scaffolds, which are put in place with the intention to merely support the emergence of necessary structures that would enable the learner to sustain a conversation on a specific topic with moderate effort.

4.5.6 Dynamic assessment

A conversation-driven CFL curriculum strives to help learners become able to sustain conversation in Chinese-speaking communities. Conversation is both the goal and the means to reach the goal. As a goal, sustaining a conversation is specific but indefinite. A conversation-driven curriculum avoids imposing one definite endpoint of development for all learners; instead, it embraces diversity in terms of paces and paths of development. The only fact that is assumed to be common among all learners is that learners are all
dynamic, complex systems, which are constantly evolving. As a means, conversation is a
dynamic, responsive process, through which new stories (memory structures) emerge.
What new stories emerge does not conform to any prescription or readily repeat previous
processes. Instead, it is contingent on multiple factors, including the learner’s individual
system and the environment in which it functions. Therefore, whether we would like to
learn about the attainment of the learning goal or the effectiveness of the means, the
target of assessment has to be the moment-on-moment performance of the learner’s
individual system – how readily it meets the requirement of sustaining the conversation.
The assessment needs to be dynamic to capture the dynamicity of the learning process.
Therefore, a conversation-driven curriculum adopts “dynamic assessment” (Liz, 1987;
1991; Sternberg and Grigorenko, 2002; Lantolf and Poehner, 2004).

Dynamic assessment (DA) abandons the traditional dualism between instruction
and assessment (Lantolf and Poehner, 2004). In DA, instruction and assessment are fused
together as the teacher and the learner work collaboratively in the learner’s “zone of
proximal development (ZPD)” (Vygotsky, 1978). Vygotsky conceptualized the ZPD as
“the distance between the actual developmental level as determined by independent
problem solving and the level of potential development as determined through problem
solving under adult guidance or in collaboration with more capable peers” (ibid., p.86).
Although it originated as a concept to understand child development, ZPD should be seen
as a consequence of learning for human being at all times. Learning awakens a variety of
internal developmental processes that are able to operate only when the person is
interacting with people in his environment (ibid, p.90, my italics). Therefore, the ZPD
alone does not determine the actual development. Rather, the actual development is determined by the interaction between the teacher, the learner and the task.

DA is concerned about the learner’s learning potential, which is a more stable and more informative outcome of learning. Indeed, the specific linguistic expressions and math formula we once memorized may fade away, but we can learn them again or learn similar things much more easily than if we had never learned those expressions or formula. This means learning makes us more potent learners and this enhanced potential does not fade because of forgetting certain expressions or formula. DA always looks into the future of the learner to see what he may achieve next, without concern for a predetermined endpoint (Lantolf and Poehner, 2004). The proleptic and probing nature of DA makes it a perfect fit for a conversation-driven curriculum, which aims to produce autonomous learners who can continue life-long patterns of learning the language through productive engagements with the culture and society.

DA requires the examiner to be involved in the assessment not only as the designer or evaluator, but also as a prober and helper. The examiner constantly presents the learner with tasks that are beyond what the examinee can accomplish without assistance. The examinee’s ZPD will change through the process of DA, so is the nature of the help the examiner provides. For example, a beginning CFL learner may not recognize the situations where he is expected to do certain things in a Chinese-speaking community. Therefore, the teacher will need to help him identify such situations. Once the learner recognizes these situations, the teacher will help him build a repertoire of strategies for responding in such situations and model the manners in which particular
verbal forms may be applied. In this sense, DA is a form of ongoing, interactive assessment, and feedback is provided in the form of assistance.

The operation of a conversation-driven curriculum makes DA highly plausible and effective. In a conversation-driven curriculum, the learners are expected to do some initial learning with the help of learning materials, toward specific objectives before class. This learning will reduce the gaps between different students’ ZPDs and the learners are more likely to be comfortable performing on the same stage. This will significantly increase the efficiency of class time, as well as of the CFL program. Through performing in class, some of the processes that are originally in the learner’s ZPD will become part of his independent developmental achievement, that is, he will achieve automaticity in acting in certain situations in a culturally appropriate manner. At the same time, learning from the feedback from the teacher and peers is likely to create new ZPDs. In a sense, every interaction in the class constitutes a step in DA.

Traditionally, we believed that the change resulted from learning equals to the result yielded from an assessment. In DA, however, the assessment itself is the change. When participating in DA, the interactions between the examiner, the learner and the task constantly change. Therefore, classroom instruction needs to be designed with an eye to assessing where the learner may go next and providing necessary assistance for him to realize his potential. In particular, instructional activities that merely test the number of items that a learner remembers or aim at increasing the number should be eliminated from class. Instead, classroom instruction should aim at enriching the learner’s repertoire of stories of doing things in a Chinese-speaking society.
The classroom experience should give the learner and the teacher concrete ideas of what the learner may possibly do and is able to do in a Chinese-speaking community. For example, after practicing greeting and ways of addressing people, the teacher may create a situation where the learner needs to get to know a particular Chinese person, such as a visitor to the class or a substitute teacher, and see how the learner act. If the learner can readily greet the person, inquire the last name and address the person appropriately, the teacher may extend the interaction a little by, for instance, requesting the learner to introduce one of his classmates. Depending on how the learner reacts, the teacher may have him repeat it as a demonstration of expected response or demonstrate the expected response herself.

In a conversation-driven curriculum, every interaction between the teacher and the learner in class is at the same time a form of instruction and a form of assessment. This follows that assessment does not mark a special point where the teacher and the learner stop to find out where the learner is or how he has got there. A living system never stops learning and it is impossible to specify the particular processes that have led a living system to its present state. Also, since the development of living systems is not linear or readily predictable, conclusions made from past life history may not explain any future. What is more worth assessing is the future development of the learner – how we may push him further without causing frustration. This requires the process to be monitored closely and feedback to be provided timely in the form of assistance. Therefore, traditional assessment approaches, which assume the future to be predictable from the past or give little or no feedback on the quality of the learner’s performance
until the assessment is complete, may not be compatible with a conversation-driven curriculum or the EOL model.

**4.5.7 Testing and grading**

We will still need to “quantify” and document the learner’s progress for various purposes, such as course grading and program evaluation. Also, some learners need “hard data” to help them recognize their progress. To document the learner’s progress, a key step is to identify the appropriate indicators. In a conversation-driven curriculum, the indicators of progress include (1) the variety and complexity of performances the learner knows how to enact, (2) the flexibility demonstrated in the learner’s performance in dynamic contexts, and (3) the effectiveness of self-managed learning. Therefore, testing and grading in a conversation-driven curriculum should aim at documenting the learner’s progress along these indicators.

**4.5.7.1 Documenting the increasing variety and complexity of performances**

To document the learner’s growth in terms of the variety and complexity of performances, the teacher needs to have the list of speech acts that are covered in the curriculum and the contexts where they occur. The variety of performances may be documented as the number of different speech acts the learner knows how to appropriately perform, whereas the complexity of performances may be documented as the complexity of the script (which increases as the number of moves and the abstractness of contexts increase). For example, in a first-year curriculum the speech act of “introducing someone” may occur in different contexts, such as (1) when students introduce themselves to each other in the first class, (2) when introducing a friend to
another friend, and (3) when calling someone one has not met before. To successfully handle Context (1), the learner only needs to tell his Chinese given name or full name. To appropriately handle Context (3), he will also need to tell his affiliation and position, and mention them before his name. For instance, he is expected to say “Wǒ shì Éhài’è Zhōuli Dàxué de xuěshēng XX (I am XX from the Ohio State University).”

Achievement tests may be used to obtain an estimation of the variety and complexity of performances that the learner knows. Achievement tests aim to “test the degree to which the students are learning discrete items presented by the curriculum” (Walker, 1996, p.216). This type of test is supposed to only demand the learner’s knowledge of what he has experienced through the preceding instruction. Achievement tests should aim to give the average learner a sense of achievement by focusing on what has been practiced in class. Also, the tasks involved in achievement tests are usually not authentic communicative tasks. Due to the item-based, inauthentic nature of achievement tests, such tests need to be brief though they may take place frequently. They may take place as spoken and written assignments, weekly or bi-weekly quizzes, and midterm and final-term exams. Spoken assignments may require the learner to record his responses to situations described in his base language. Written assignments may require the learner to compose summaries of or short responses to the text discussed in class or a similar text that he reads from out of class. Listening items in quizzes and exams may require the learner to listen to pre-recorded audio prompts and answer questions in his base language or select best options for the questions. Reading items may require the learner to complete a paragraph with particular function words that are missing. The content of the
listening prompts and reading passage should either be derived from the texts the learner has learned or be very related to the topic discussed during the preceding instruction. At the higher levels, reading and writing assignments may be integrated as a research project which involves consulting resources from outside the curriculum and writing up a report.

The results of achievement tests should give the learner a sense of achievement, and at the same time, expose the specific aspects and content that the learner needs more practice. From the results of achievement tests, the teacher can also learn about the gaps between teaching and learning, and adjust future teaching accordingly.

4.5.7.2 Testing learner flexibility

Gregory Bateson (1972) defines flexibility as “uncommitted potentiality to change” (p.497). The flexibility of a CFL learner may be demonstrated as responsiveness and cultural appropriateness in communication. To be responsive, the learner needs to react based on a good understanding of the context, which is constantly altered by the interaction with his interlocutor. In other words, his moves in the interaction must be taken based on what has been going on in the communication. To be culturally appropriate, the learner’s performance in the interaction needs to make his Chinese-speaking interlocutor willing to continue interacting with him in Chinese. This will involve conforming to Chinese customs. For example, when complimented on his Chinese language skill, it would be more appropriate to downgrade the compliment or return it instead of simply saying “Xièxié (Thank you).” Responsiveness and cultural appropriateness are interdependent in that a person cannot be culturally appropriate without being responsive. Responding in culturally inappropriate ways would be an
indication of lack of flexibility. Without training toward flexibility, a CFL learner tends to apply knowledge of his base culture to the performances he enacts in Chinese. For example, he may tend to speak to his Chinese teacher in Chinese casually as he normally does in English.

By definition, testing flexibility would require a dynamic process, such as a conversation. However, lower-level CFL learners are not really ready for real conversations. Also, uncontrolled natural conversation will be hard to grade toward the attainment of learning objectives. As an alternative, a “prochievement” oral interview is adopted to test learner flexibility. A prochievement test is an achievement test conducted in the form of a proficiency test, which assesses students’ general ability to communicate in a foreign language. Proficiency tests are not confined to a particular curriculum or set of materials. However, a prochievement test restricts the content to what has been covered by the curriculum by the time of the test.

To prepare for a prochievement oral interview, the teacher needs to identify a list of functions to be tested and create a context to integrate those functions into a coherent skit that is performable by the learner and the interviewer. In the skit, the interviewer may not play the role of a teacher, but the learner should be playing himself, for example, a student from an American university. Since the learner is not provided with the scripts of the skit he will be performing in the oral interview, the context of the skit has to be as simple as possible so that memorizing the context will not pressure the learner. The script of a good skit allows the learner to take initiatives in the interaction instead of simply answering questions. For example, the learner may be told that he is an intern in a
Chinese company and he would like to invite the assistant of his supervisor out because
the assistant has helped him a lot. Such a task will not only reveal how flexible he is
when delivering an invitation in a Chinese context, it also implicitly teaches the learner
how to be a nice person in a Chinese-speaking community. Reading tasks may be
designed as integral parts of the skit. For example, at certain points in the skit, the learner
will need to obtain information from or share his response to a written/print text. With
advanced level students, the whole interaction could be a conversation about a reading
task (the text and the reading experience) or a research project.

Like a proficiency test, an ideal interviewer for a prochievement oral interview is
a native Chinese speaker from outside of the curriculum (Walker, 1996, p.217). The
Chinese speaker needs to be trained to administer the interview. First of all, the
interviewer needs to be very familiar with the preliminary script. Secondly, since the
learner may not follow the preliminary script, the interview needs to be flexible enough
and orient the interaction back on track when possible. Thirdly, the interviewer should
resist her attempt to think of the interviewee as a CFL learner. In particular, she should
speak at a normal speed and not repeat her own words unless requested by the
interviewee. She may request clarification in the form of a recast, but she should not
directly teach the interviewee what he is supposed to say or indicate how well or how
poorly he is performing. In sum, the whole process should appear to be a natural
conversation to the interviewee and people outside of the curriculum.

The criteria for rating a learner’s performance in a prochievement oral interview
reflect how much the Chinese-speaking interlocutor is willing to continue interacting
with him in Chinese. It may be decomposed into five criteria, namely, listening comprehension, cultural appropriateness, smoothness of delivery, intelligibility of speech, and quality of content. Intelligibility of speech may be further decomposed to pronunciation and appropriateness of wording. Table 4.6 describes the criteria for the learner. It is adapted from Noda’s (2010) “Performance-oriented Oral Assessment: Rating Criteria Statement” (See Appendix B for the original rating criteria).

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listening comprehension</td>
<td>Did you readily understand what you hear?</td>
</tr>
<tr>
<td>Cultural appropriateness</td>
<td>Were your speech style, body language, and turn-taking well received by your interlocutor?</td>
</tr>
<tr>
<td>Smoothness of delivery</td>
<td>Was your speech smooth?</td>
</tr>
<tr>
<td>Pronunciation</td>
<td>Did your sounds, tones, intonation and pauses cause confusion to your interlocutor?</td>
</tr>
<tr>
<td>Wording</td>
<td>Did your choice of structures and vocabulary cause confusion to your interlocutor?</td>
</tr>
<tr>
<td>Quality of content</td>
<td>Did your ideas and perspectives appeal to your interlocutor? Did the information you provide satisfy your interlocutor?</td>
</tr>
</tbody>
</table>

Ideally, prochievement oral interviews (especially those with advanced learners) are video-taped and scored by multiple native Chinese speakers who are trained to use the rating scale but are not part of the CLF program or do not teach the interviewee. However, in reality such scoring processes may be too costly both in terms of time and budget. The Advanced Language Performance Portfolio System (ALPPS), created by the Ohio State
University provides an online platform where video clips of learner performances may be uploaded for public access. This may make recruiting native-Chinese raters easier and cheaper. However, since maintaining the platform costs money, such a platform may not be free for use. Therefore, before cheap and reliable online platforms are available, it would be more efficient for the teacher(s) in the CFL program to grade the prochievment oral interviews with lower-level learners.

4.5.7.3 Evaluating the effectiveness of self-managed learning

In a conversation-driven curriculum, the learner is expected to conduct self-managed learning before class and come to class ready to perform the target functions. The quality of the learner’s performance in class will reflect the effectiveness of his self-managed learning. Therefore, the effectiveness of self-managed learning may be documented by grading the learner’s daily performance in class based on a carefully created rating scale. Table 4.7 provides a sample rating scale for daily performance. It has been adapted from the one used at the Ohio State University (See Appendix C for the original). A 5-point scale is used instead of a 4-point scale for the convenience of calculation. However, like the 4-point scale, full-point in this scale does not indicate perfect or native-speaker performance. Full-point simply indicates that the learner has done the preparation highly effectively and his performance in class does not put burden on his interlocutors (primarily the teacher).
### Table 4.7 Rating scale for daily performance

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Distinguished: Performance that promises interaction with a native with no difficulty, discomfort, or misunderstanding; no base-language hesitation noise in speaking and no “foreignisms” in the written work; correction is self-managed.</td>
</tr>
<tr>
<td>4.5</td>
<td>Superior: Performance comprehensible to native speakers, but some non-patterned errors that would hinder smooth interaction with them; not all correction is self-managed.</td>
</tr>
<tr>
<td>4</td>
<td>Good: Performance comprehensible to a native, but evident weakness or patterned error; most correction is from instructor.</td>
</tr>
<tr>
<td>3</td>
<td>Average: Performance that requires much help from instructor.</td>
</tr>
<tr>
<td>2</td>
<td>Below average: Performance puts burden on interlocutor. To facilitate communication, an English-speaking Chinese native would avoid using Chinese with you.</td>
</tr>
<tr>
<td>1</td>
<td>Warm body: Evidently unprepared, unable to perform.</td>
</tr>
<tr>
<td>0</td>
<td>Absent</td>
</tr>
</tbody>
</table>

Since the long-term goal of a conversation-driven curriculum is to cultivate effective, self-managed CFL learners, in such a curriculum daily grades count a substantial part in the learner’s course grade (around 60 percent if home assignments are not graded separately). This is appropriate primarily because commitment to learning is a key to success and the bulk of the learner’s effort is inevitably exerted on daily preparation. To maintain a record of good daily scores the learner will have to make learning and practicing Chinese a habit. In this sense, daily grading helps foster good habits of a CFL learner. Once the learner is in the habit of learning Chinese, he is much less likely to do poorly in the achievement tests or prochievement oral interviews. Even if
he accidentally did poorly on one of these tests, the result would not have a significant impact on his final grade. Also, daily grading can help the teacher and the learner closely monitor the effectiveness of learning out of class. Depending on how the learner struggles in class, the teacher may give him specific instructions on how he should work with the learning materials out of class. Generally, the teacher needs to constantly remind the beginning learners to work with the audio files as much as possible and do it “noisily.” It is also important to remind the learners to actually perform the target functions or, at least, visualize or imagine themselves performing the target functions while practicing saying the lines aloud.

In sum, grades in a conversation-driven curriculum are expected to predict the learner’s readiness to carry on lifelong patterns of autonomous learning from engaging in conversations in a Chinese-speaking community. Grading in a conversation-driven curriculum is based on data obtained from different types of assessments. Achievement assessments are conducted frequently to give the learner a sense of accomplishment. Since data from such assessments is mainly for documenting and do not necessarily predict the learner’s performance in conversation or effectiveness in self-managed learning, they usually count a small portion (no more than 30 percent) toward the final grade. Daily grades promote learner commitment and reflect the learner’s effectiveness in self-managed learning, which is a major goal of conversation-driven curriculum. Therefore, they should count a significant portion (around 60 percent if home assignments are not graded separately) toward the final grade. Prochievement oral interviews reflect the learner’s performance in conversation, but it only takes place once
or twice a semester. Each prochievement oral interview may count five or ten percent toward a learner’s final grade.
Chapter 5 Case study: The implementation of a conversation-driven reading curriculum

This chapter reviews an initial attempt to develop and implement a conversation-driven curriculum and discusses the lessons learned from the implementation. The review and discussion will focus on the reading/writing component of the Chinese language program since it is less intuitive to conceptualize the role of reading and writing in a conversation-driven curriculum. It is worth noting that a conversation-driven reading/writing curriculum is not merely a component of the spoken curriculum. Rather, conversation is built into the curriculum to hasten the development of better reading and writing. The key features of a conversation-driven curriculum include: (1) it prepares learners for sustaining conversation in particular domains and cultivates autonomous learners; (2) its basic unit of learning is a performance, which has a fractal structure and combines with other performances to form more complex performances; and (3) it allows development at diverse paces and along diverse paths. In this sense, a conversation-driven curriculum teaches for ecological effectiveness, that is, it prepares learners for continuing lifelong patterns of learning the language through productive engagements with the culture and society.
The reading curriculum to be described in this section was designed for an actual program – an eight-week intensive and immersive summer study abroad program in China. It was implemented in parallel with a spoken program that was also specially designed for this program. The general approach of both curricula was to take advantage of the rich environment of the immersion program to promote learning. The first section of this chapter provides an overview of the program in which the reading curriculum was implemented. The second section and third sections describe the components of the conversation-driven reading curriculum and the actual implementation over an eight-week intensive summer study abroad program. The fourth and fifth sections report program participants’ feedback concerning the implementation and my reflection on the implementation and the feedback.

5.1 Program overview

The program is an eight-week intensive and immersive study-abroad program in China. It is a full-scholarship program sponsored by the US Department of State and recruits students from all over the United States. It has four institutes in China and each is hosted by a local university. Students are assigned to each institute based primarily on their pre-program ACTFL Oral Proficiency Interview (OPI)\(^1\) scores. The institute where the curriculum in question was implemented was composed of a total of 26 students who

\(^1\) Also known as Oral Proficiency Interview, OPI is a standardized procedure for the global assessment of functional speaking ability. It is a face-to-face or telephonic interview between a certified ACTFL tester and an examinee that determines how well a person speaks a language by comparing his or her performance of specific communication tasks with the criteria for each of ten proficiency levels described in the ACTFL Proficiency Guidelines 2012 – Speaking. - See more at: [http://www.actfl.org/professional-development/certified-proficiency-testing-program/testing-proficiency#sthash.kuGRCX14.dpufa](http://www.actfl.org/professional-development/certified-proficiency-testing-program/testing-proficiency#sthash.kuGRCX14.dpufa)
were tested from intermediate-low to advance-mid. Twelve of them were tested advanced mid or low, thirteen of them were tested intermediate high or mid, and one of them was tested intermediate-low. Each student was paired with a Chinese language partner (i.e., a college student from the host institution) whom they met every day for at least an hour in the afternoon. In the mornings, the students met in class for four hours – two hours for spoken classes and two for reading and writing classes.

The program was administered with an academic curriculum based on the performed-culture approach (Walker and Noda, 2010) and various co-curricular activities. The essence of the performed-culture approach is that a foreign language is learned by doing things in the target culture using the target language. Therefore, the academic curriculum and co-curricular activities were designed to jointly expand the students’ experiences in the culture and help them organize the experiences in efficient ways. To make the best use of the limited eight-week program time, the academic curriculum was designed so that students’ experiences in and out of class could be merged into an integral whole. The course materials and classroom instruction require intensive self-managed learning. Class is conceptualized as a time and space where students share and modify their intuitive understanding (hypothesis), to plan for applying what they have learned to related community activities, to rehearse necessary skills, and to explore communication moves in simulations and improvisations.

The program sponsor required four mandatory hours of classroom instruction every weekday. This large number of mandatory in-class instruction made the program extremely intensive. Since the performed-culture approach to learning Chinese
encourages approximately two hours of preparation for each hour of in-class instruction, the program ended up expecting students to spend a minimum of 60 hours per week on program-related activities. Students coped well with such intensity partially because the program provided full scholarship and they understood they were paid to study hard. Figure 5.1 demonstrates the estimated time distribution among various activities.

As demonstrated in Figure 5.1, the program expected students to spend a minimum of 30 hours per week on class preparation for the 20-hour weekly classroom instruction. Class preparation included working with the course materials, studying with
their language partners and conducting field tasks for reporting in class. Also, time spent on cultural excursions and committee work was usually related to class preparation. Therefore, on average, the minimum time students spent on preparation for every one-hour classroom instruction could amount to two hours.

The co-curricular activities aimed to engage the students in cultural excursions and program management. During cultural excursions, they visited local places of historical or societal interest as well as famous tourist attractions. The program required each student to work on one of the four program committees, namely Curriculum Committee, Health and Housing Committee, Events Committee and Newsletter Committee. Each committee had different responsibilities and was advised by one of the teachers. The Curriculum Committee was a liaison between students and teachers. The Health and Housing Committee was a liaison between students and housing administration, and took care of students' health and safety issues. The Events committee was mainly responsible for planning and organizing social events during the program as well as handling transportation for events and activities. The Newsletter committee was responsible for writing the bi-weekly program newsletter and its distribution. These newsletters highlighted what took place during the program.

The co-curricular activities were integral components of the program in that they are mutually complementary with the academic curriculum, which contained a spoken curriculum and a reading curriculum. For example, participation in the cultural excursions and committee work could allow students to gain concrete experiences necessary for understanding much of the texts involved in the academic curriculum.
Practices in spoken classes could prepare students with the strategies and language necessary for negotiating with local people, which was part of their committee responsibilities. Some of the reading and writing tasks were designed to enable students to make the most out of cultural excursions. Other reading and writing tasks were designed to equip students with topics that could sustain their conversations with local people. Also, some of the students’ written assignments could feed the biweekly newsletters.

The spoken curriculum was built around a set of localized materials and the instruction was performance-based. The localized spoken materials included extensive elements from the community where the instruction was taking place and course activities engaged learners in personally performing daily life events in the community. The goal was to enable students to become active participants in cross-cultural communication and create usable memories. Students were expected to go beyond acquiring knowledge and developing opinions about what and whom they encounter in China, and aim at developing skills involved in accomplishing tasks in a Chinese community. The two-hour spoken classes were designated for students to rehearse for field tasks, report on their field experiences, discuss them and receive feedback.

Spoken classes were distinguished into two types: application and development. In a spoken application class, students gave oral reports on their observations and personal experiences in the local community, discussed them and received feedback from the teacher and other classmates. In a spoken development class, students rehearsed the lines and strategies necessary for accomplishing field tasks in the local community.
Students were supposed to come into a spoken development class ready to perform the functions assigned from a target text and apply them to alternative contexts prepared by the teacher. The target text contained audio files and accompanying performance scripts featuring the experiences of two American learners, Daniel (周丹锐) and Jenny (郑妮), who studied in the same host institute over a summer. The scripts covered situations that learners needed to handle immediately upon arrival, such as finding bus routes and meeting language partners, as well as communicative situations that required more sophisticated knowledge of the people, places, and local customs, such as planning cultural activities and conducting interviews in the local community.

5.2 The conversation-driven reading curriculum

As discussed in Chapter 3, a curriculum is a preliminary script for a language program (the prologue of a lifelong learning career of the Chinese language). In a broad sense, the curriculum accounts for everything the program participants do during the program. In a narrower sense, it describes the goal and available resources (such as course materials, personnel and technology) and suggests instructional steps and pacing. In this section, I first provide an overview of the reading curriculum, which included a core curriculum and a location-specific complementary curriculum. Then I describe the materials used for each of the curricula. Finally, I introduce the suggested steps of instruction based on one unit of learning with the reading curricula and discuss how conversation is built into each step.
5.2.1 An overview

Since the students came from diverse backgrounds and we wanted to make sure the curriculum was fresh for every student, we had to design a new set of materials for the program. This provided a perfect opportunity for us to experiment a conversation-driven reading curriculum. Since the target learners were mostly intermediate-high or above, the reading curriculum was build primarily to extend what they learn from the spoken curriculum. In particular, we developed the reading curriculum with the following three objectives in mind:

(1) To enhance the experience and effectiveness of reading and writing by promoting conversation in and out of class;
(2) To cultivate strategies for continued development of language and culture skills through guided self-managed learning; and
(3) To accommodate learner diversity by allowing flexibility in class activities and course assignments.

We selected topics that were familiar to Chinese natives and relevant to the learners. The topics were also important for understanding Chinese perspectives and learning the presentations of the social issues. Therefore, the curriculum required students to use what they had read to connect themselves with the local community through conversation at various occasions, such as daily encounters, cultural events and online forums. It also advised the students to pay special attention to the characteristic shumianyu (i.e. written style Chinese) elements and practice applying them to their written responses to the reading materials.
From the reading curriculum, students should gain experiences that complement the spoken curriculum with extensive background knowledge and vocabulary support. Such knowledge and vocabulary were crucial for students to engage in more extensive and substantial communication with local people. Combined with the communicative strategies they practiced in spoken classes, such knowledge and vocabulary should enable students to appear intelligent to Chinese participants in cross-cultural communication and to gain opportunities to socialize with local intellectuals and develop the potential for lasting relationships with them. In design of the reading curriculum, we not only considered students’ intellectual growth, but also kept the teachers’ intellectual growth in mind. Since conversation is a collaborative win-win endeavor, we also expected that the teachers could gain fresh perspectives from their students’ contributions to class.

The reading curriculum contained an integrated core curriculum and a location-specific complementary curriculum. We designed both curricula with the purpose of building in conversation. The reading assignments in both curricula provided the students with common knowledge necessary for sustaining a conversation with various local people. However, the focuses of the core and complementary curricula were slightly different. The core curriculum focused more on better reading, whereas the complementary curriculum focused more on better conversation. The integrated core reading curriculum used Chinese texts that have been produced by and for a Chinese-speaking community and engaged students with reading, talking and conducting research about social issues. Through talking and conducting research about the issues, students were expected to gain more background knowledge which would enable them to read
better on related topics. The location-specific complementary curriculum required students to locate and evaluate local social resources using various web tools and explore those resources in person. Through browsing information online and exploring local social resources in person, students were expected to gain knowledge necessary for successfully getting things done in the community and yield usable memories. By performing the location-specific reading tasks, students could become more knowledgeable about local resources and events and better prepared for the field tasks that were assigned by their spoken classes.

5.2.2 Course materials used for the reading curriculum

5.2.2.1 Materials used for the core curriculum

Selected Readings from the Internet (SRI)\textsuperscript{1} was the core material used for the reading curriculum. SRI integrates reading, talking, writing and researching activities. The 23 articles included in the textbook are all extracted intact from online news websites or forums and organized into four units. Each unit contains five to six news reports or commentaries about one of the four topics, including (1) Chinese Youth and Traditional Culture; (2) Transportation and Daily Life; (3) Environmental Issues and Economic Development; and (4) Sino-US Relations. We selected these topics because they are locally-concerned, globally-relevant and continually-current. With such topics, conversation can be more easily and extensively built into the reading curriculum. Because the topics are locally-concerned, average local people will have something to

\textsuperscript{1} Jianfen Wang, (the researcher), as part of a development team at The Ohio State University, developed this textbook for the program reviewed in this chapter.
say. Because they are also globally-relevant, the students will have something to contribute by relating the issues to a broader context. The topics are continually-current so that the stories emerge from conversing about these topics will not become out of date too soon. Instead, they are likely to be recalled and updated during future readings and conversations.

Each unit opens with a topic overview, followed by the five to six articles, and closes with a unit review in the form of a contextualized application exercise. The first article is the core article, which features some preliminary description and discussion of the topic of the unit. We suggest that the teacher lead the discussion of the core article to bring everyone on the same page. The remaining four or five articles are arranged according to ascending levels of challenge. We suggest that students sign up for leading a discussion on the article of greatest interest.

Following each article, we provide five post-reading activities to guide the students’ self-managed learning out of class. The first activity provides questions to help students reflect on their reading experience and analyze the perspective and rhetorical strategies of the article. The second activity highlights some key expressions and sentence structures which learners may want to build into their own repertoire of Chinese language. It also provides a context for students to apply those expressions and structures to a structured composition task. A sample context for structured composition can be found in Appendix D.

The third activity reminds the learner to do a reading-performance watch. In this context, a reading-performance specifically refers to a performance that involves a person
directly interacting with the writing system. This activity is a creative application of performance watch, which, according to Cornelius (2015), consists of observing and analyzing a culturally-situated communicative event in terms of how contextual factors such as time, place, and the social roles of speakers and audience contribute to the meaning that is established by the verbal and non-verbal communication (p. ii). Since the actual process of reading is invisible, what we expect students to “watch” and report is native Chinese readers’ observable reactions to the article. The word “watch” is quotation-marked because simply watching a Chinese person read is not enough to gain access to his or her reaction. Rather, they have to conduct the performance watch though conversing with native Chinese readers about the article. To guide the students’ observation during their conversations and reflection after the conversation, we provide a sample worksheet (See Appendix E) in the textbook. The worksheet allows students to jot down notes as they read on their own and reminds them of asking about their language partners’ reading experiences during their conversations.

The fourth activity suggests that students construct a written summary of the article, including a brief response to it. Only the core article is followed by a fifth activity, which students should work on throughout the unit. This activity requires students to select a relevant topic, conduct a mini research project by doing oral surveys among native Chinese speakers, give an oral presentation to share the findings, and write a research report. The introduction to the textbook includes specific requirements for the mini research project. These requirements include the following:

a. Specify a research topic and research subjects.
b. Design two to five relevant interview questions.

c. Find your subjects and conduct your oral survey. Keep notes of their opinions and how they express them.

d. Analyze the data and construct a survey report according to the Survey Report Template in the appendix.

e. Prepare an oral presentation to share your findings.

To guide the report writing, we have attached a template for the written report (See Appendix F) to the textbook. The template specifies the organization and the possible content to construct under each section.

Between every two units, there was a section named “好奇宝宝俱乐部 (hàoqībǎobao jùlèbù, Curious Learners’ Club)”. This is an enrichment activity designed for curious learners who would like to explore the websites and the local community to find out more about Chinese culture and society on their own. A sample cue is available in Appendix G.

To guide self-managed learning, the textbook includes detailed English instructions for learners on how to use each section of a unit to optimize their learning experience. It also includes a Chinese introduction to inform the teachers of what they should expect students to bring to class and to prepare their lessons with the purpose of building onto what the students already know. Since the articles are extracted intact from the Chinese media, we expect the average learner to encounter unfamiliar or even unconventional expressions at a considerable frequency. However, we want students to study the articles on their own before they come to class. Therefore, the textbook

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1 The phrase “宝宝(bǎobao)” is usually used to refer to “a baby.” However, since the term “好奇宝宝” can be used to refer to anyone who asks a lot of questions, it is translated as “Curious Learners,” instead of “Curious Babies,” to avoid confusion.
provides (in the introduction) a list of useful online tools, which students may use for various purposes. These online tools include the following:

- **a. CAVO Vocabulary Tutor**: [http://cavo.nealrc.org/Public/Modules/vfa/vfa.php](http://cavo.nealrc.org/Public/Modules/vfa/vfa.php)
- **d. 百度百科(Baidu-pedia)**: [http://baike.baidu.com/](http://baike.baidu.com/)

### 5.2.2.2 Materials used for the location-specific complementary curriculum

The location-specific reading curriculum was guided by *Task-Based Reading and Writing*. It involves eight weekly tasks on separate sheets. We distributed the task sheets separately on a weekly base. Table 5.1 is an overview of the eight tasks. As shown in Table 5.1, each of the first seven tasks requires the students to locate different social resources available in the community using a Chinese website, explore the resource in person and share findings in class through conversations with or without written handouts. The first task, for example, involves locating the place the learner plans to visit on the first weekend, using the Chinese web tool Baidu Map ([http://map.baidu.com](http://map.baidu.com)). On the task sheet, the description of the task is preceded by two other sections, namely, “Background Knowledge” and “Pre-task Activities.”

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1 Like the textbook used for core curriculum, this material was also developed by the researcher specially for the program reviewed in this chapter.
Table 5.1 Overview of the eight location-specific task

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 1 (prior to departure)</td>
<td>Get around the city using “百度地图” <a href="http://map.baidu.com/">http://map.baidu.com/</a></td>
</tr>
<tr>
<td>Task 2 (during Week 1)</td>
<td>Look for a restaurant using “大众点评” <a href="http://www.dianping.com/">http://www.dianping.com/</a></td>
</tr>
<tr>
<td>Task 3 (during Week 2)</td>
<td>Look for a tourist site using “马蜂窝” <a href="http://www.mafengwo.cn/mdd/">http://www.mafengwo.cn/mdd/</a></td>
</tr>
<tr>
<td>Task 4 (during Week 3)</td>
<td>Look for a cultural event using “豆瓣” <a href="http://www.douban.com/">http://www.douban.com/</a></td>
</tr>
<tr>
<td>Task 5 (during Week 4)</td>
<td>Plan an overnight trip using “去哪儿” <a href="http://travel.qunar.com/">http://travel.qunar.com/</a></td>
</tr>
<tr>
<td>Task 6 (during Week 5)</td>
<td>Look for an apartment using “58 同城” <a href="http://hz.58.com/">http://hz.58.com/</a></td>
</tr>
<tr>
<td>Task 7 (during Week 6)</td>
<td>Look for an internship using “58 同城” <a href="http://hz.58.com/">http://hz.58.com/</a></td>
</tr>
<tr>
<td>Task 8 (during Week 7)</td>
<td>Review: create a brochure to share tips about local life</td>
</tr>
</tbody>
</table>

A sample task sheet is available in Appendix H. The “Background Knowledge” section presents a few questions to activate the learner’s prior knowledge. Depending on the task, this section may also include a list of necessary vocabulary. The “Pre-task Activities” section includes hands-on exercises that familiarize the students with the website. The actual task is described with specific instructions on what the students need to do and what they should bring to class. For example, to report the first task, students need to orally explain their trip plans for the first weekend, including where they are going, why they are going there, a description of the bus route and estimated cost in case other classmates would like to join.

The final task is the final project for the location-specific curriculum. It requires students to create an electronic brochure with tips for living and studying in the host city.
and campus. To accomplish the task, the students need to apply the skills and synthesize the information they have gained from the previous tasks. They should submit their brochures as PowerPoint slides, PDF or WORD documents.

5.2.3 The conversation-driven steps of instruction

This section provides an overview of the instructional steps suggested for the core and the location-specific curriculum to build in conversation. Figure 5.2 demonstrates the general instructional steps for each unit of the core curriculum and Figure 5.3 demonstrates the general instructional steps for each location-specific task. In both figures, the blocks on the left demonstrate the general steps. The transparent blocks indicate in-class activities, whereas the solid blocks indicate the activities that students should conduct out of class. The phrases to the right of the blocks describe what the student does during the step.

As shown in Figure 5.2, the instruction of each unit in the core curriculum follows six steps, which either prepare the learner for anticipated conversations or engages him in conversations at a certain level (with his language partner, with the class, or with people out of the program).
The instruction of each unit begins with a 30-minute-or-so topic overview in class. Following the topic preview, the learner studies an article on his own and then conducts some initial conversation with Chinese people, usually the language partners. Then, he returns to class the next day to share his thoughts during the initial reading and his observations from the initial conversation. Through the sharing and discussion, the learner begins to form questions for his research project of the unit. The instruction of each unit culminates with a contextualized application exercise or a research project or

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1 Classes were 55 minutes each. Except for the first topic-preview, which occurred on the Tuesday of the first week and did not include a written quiz, the other three topic previews all occurred on Mondays and were preceded by a 20-minute written quiz based on the previous unit.
both. The contextualized application exercise provides a specific situation where the learner enters into a conversation about a current social issue in China with a particular audience, such as his host parent or a neighboring passenger on the train. The teacher plays the role of the particular audience. The research project assignment engages the learner in conversations with local people out of the program. The learner first conducts oral surveys with people out of the program in public places. Then he leads a discussion about his findings at a public book café. The discussions are open to the public. The first and the last steps in Figure 5.2 recur for every unit whereas the other three steps recur for every article.

Figure 5.3 Instructional steps for one location-specific task

1 We did not require students to conduct a research project every other week. Students in the intermediate group conducted a research project during each four-week session, whereas the students in the advanced group conducted one research during the first four-week session and two during the second four-week session.
As shown in Figure 5.3, each location-specific task is conducted following four steps. Each task begins with a 15-minute introduction in class. After the introduction, the students do the hands-on pre-task exercises and perform the task out of class following the instructions in the task sheet. The students have an entire week before they share their task reports in class. Each learner engages in conversations of his own interest as he performs the task out of class and reports his work in class.

The instruction at both the intermediate and the advanced levels followed the suggested steps for both the core curriculum and the location-specific curriculum. More details about the actual implementation of these steps are provided in sections 5.3.3 and 5.3.4, where pacing and classroom instruction are reviewed.

5.3 The actual implementation of the reading curriculum

The implementation of the curriculum will be reviewed from five aspects, namely (1) learner placement, (2) teacher training, (3) pacing and assignments, (4) classroom instruction, and (5) course assessments. This section describes these five aspects with separate headings.

5.3.1 Learner placement

Reading curriculum was implemented at two slightly different levels. For the convenience of discussion in this dissertation, I refer to the two levels as “advanced” and “intermediate.” The twelve participants who were tested advanced mid or low in the pre-program OPI test constituted the “advanced group.” The remaining fourteen students who

1 We also conducted comparatively brief training with the students and their Chinese language partners. More details about this is provided in the “pacing and assignment” section.
were tested intermediate constituted the “intermediate group.” The two groups used the same set of materials and the same overall pacing. The slight difference in the implementation at the two levels lies in the amount of course assignment associated with the core reading curriculum and the actual number of supplementary articles discussed. This will be discussed in Section 5.3.3.3.

5.3.2 Teacher training

The host institute recruited teachers from their own faculty members and graduate students and assigned teaching responsibilities to them. The intermediate group had the same teacher throughout the eight-week program. The teacher was a Ph.D. candidate at the host institute, majoring in applied linguistics. She had some experience teaching Chinese to foreign students (mostly from places other than United States) at the host institute. The advanced group had two different teachers for each of the four-week session. Both teachers had earned their doctoral degrees in fields related to Chinese and were faculty members at the host institute at the time of the program. Both teachers were in their thirties. The teacher for the first four weeks used to teach in the Princeton in Beijing Chinese study abroad program over the summers of 2008 and 2009. The teacher for the second four weeks was the supervisor of the Chinese International Education program at the host institute. This teacher had experience teaching Chinese to international students, but never implemented a curriculum developed by a U.S. institute.

Since few of the teachers had experience implementing a Chinese language curriculum developed by a U.S. institute and none of them participated in developing the curriculum.

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1 For more information about the “Princeton in Beijing” program: http://www.princeton.edu/pib/
curriculum to be implemented,\textsuperscript{1} the site director (i.e., the author of this paper) conducted a one-week teacher training prior to the onset of the program. During the week immediately before the start of the program, the teachers (including the four other teachers who taught the spoken courses) met with the site director two hours a day to go over the program arrangements and get familiar with the academic curriculum (including the syllabi, the course materials, weekly schedules and grading policies). Toward the end of the training, each teacher prepared a lesson plan for one class period and conducted demo teaching for one activity from the lesson plan.

During the first two weeks of the program, I managed to sit in every class to keep track of how the curriculum was received by the students and to provide feedback for the teachers. From the third week on, due to changes in schedule, I was only able to sit in the reading classes. Since the two groups had reading classes at the same time, I usually spent one hour observing each of the classes. An online platform was established for the convenience of collaboration and further training. Using the online platform, the teachers (including the site director who taught spoken classes) could share resources and post instant comments to keep each other updated with emerging challenges and possible solutions. Therefore, teacher training continued throughout the program.

\textsuperscript{1} The academic curriculum (including the syllabi, the course materials, suggested pacing and assignments) was jointly developed by the directors of the four sites of the program, with the guidance of experts in East Asian language pedagogy at The Ohio State University. These experts included Professors Galal Walker, Mari Noda, and Xiaobin Jian. Their graduate students also participated in developing the spoken course materials.
5.3.3 Pacing and assignments

Since the course materials were specially designed for the eight-week program, pacing was quite straightforward. Both the intermediate and the advanced groups followed the instructional steps described in Section 5.3. For both groups the eight weeks were equally distributed among the four units in the core curriculum and the eight tasks in the location-specific curriculum. The implementation unfolded in four two-week (20-hour) cycles. Table 5.2 below is a pacing chart based on one two-week cycle. It provides an overview of the major activities in each of the two class hours of a day.

Table 5.2 Pacing chart based on one two-week cycle of learning

<table>
<thead>
<tr>
<th>Day</th>
<th>1st hour</th>
<th>2nd hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>Written quiz on previous unit</td>
<td>Location-specific Task 1 report and Task 2 introduction</td>
</tr>
<tr>
<td></td>
<td>Topic preview of new unit</td>
<td></td>
</tr>
<tr>
<td>Tuesday</td>
<td>Core article: content discussion and structure discussion</td>
<td>Core article: written summary Sigh-up for discussion leading</td>
</tr>
<tr>
<td>Wednesday</td>
<td>Core article: oral summary Preparation for discussion leading in small groups</td>
<td>Core article: structured composition</td>
</tr>
<tr>
<td>Thursday</td>
<td>Flexible hours</td>
<td>Flexible hour</td>
</tr>
<tr>
<td>Friday</td>
<td>- hours flexibly scheduled for</td>
<td>Flexible hour</td>
</tr>
<tr>
<td>Monday</td>
<td>a. discussions about the supplementary articles</td>
<td>Location specific Task 2 report and Task 3 introduction</td>
</tr>
<tr>
<td>Tuesday</td>
<td>b. structured compositions based on those articles</td>
<td>Flexiblle hour</td>
</tr>
<tr>
<td>Wednesday</td>
<td>c. critiquing research plans and</td>
<td>Flexible hour</td>
</tr>
<tr>
<td>Thursday</td>
<td>d. sharing findings from research</td>
<td>General review of the unit</td>
</tr>
<tr>
<td>Friday</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As shown in Table 5.2, eighteen of the twenty class hours during a two-week cycle focused on activities related to each unit in the core curriculum and the second hour on Mondays were dedicated to the location-specific tasks. The first hour on the first Monday of each two-week cycles designated for a written quiz on the previous unit and a topic preview of the new unit. The next four hours, that is, class hours on the first Tuesday and Wednesday, were spent on activities related to the core article of each unit. Students usually signed up for leading discussions about one supplementary article by the end of the third hour (i.e., on Tuesday). The last of the twenty hours was spent on a general review of the unit in the core reading curriculum. The remaining twelve hours were flexibly scheduled for discussions about the supplementary articles, structured compositions based on those articles, critiquing research plans and sharing findings from research. Usually two class hours were designated for each supplementary article – one hour for discussion and one for structured composition.

Although the actual implementation of the reading curriculum with the two groups followed the same overall pacing and instructional steps, slight differences lay in how the two groups spent the flexible hours dedicated to the core curriculum. This was due partially to the different requirements in terms of assignments and partially to the interests of the students and the teachers. For example, we required intermediate-level students to conduct two research projects throughout the program while the advanced-level students had to conduct three research projects. Whereas the intermediate group opted not to discuss the optional section (“Curious Learners’ Club” section) in class, the advanced group spent one hour on it every other week. Also, since the intermediate group
had more students (14 students), they discussed four supplementary articles each unit; while the advanced group (12 students) only discussed three supplementary articles each unit.

5.3.4 Classroom instruction

Students met two hours daily in class for reading and writing instruction. The twenty-six students were divided into two groups: the advanced group (12 students) and the intermediate group (14 students). Each group was taught by a different teacher recruited from the host institution. The two groups used the same set of materials at slightly different paces. As described above, the pacing difference only concerned the core reading curriculum. This section provides a review of the instructional steps took place in class.

Class hours spent on the core reading curriculum were distributed among four major types of activities: (1) topic preview; (2) article content discussion; (3) structured composition; and (4) research related discussion. Except for the first topic-preview hour which occurred on the Tuesday of the first week and did not include a written quiz, all the other three topic previews occurred on Mondays and were preceded by a 20-minute written quiz based on the previous unit. The written quiz was designed to help students consolidate the key expressions and structures by responding to contextualized written tasks. A sample written quiz is available in Appendix I.

During the topic preview, the teacher first engaged students with a brief discussion about the topic of the unit to make the relevance of the readings explicit. Most
of those questions were designed to activate students’ prior knowledge about the topic and invite them to form questions about the situation in China. This would lead them to a scanning exercise where they were presented with descriptions of four to five reading needs and the titles of the articles available in the unit. The teacher would ask the students to assume one reading need at a time and scan the titles to decide which one(s) may meet the need. Before the scanning exercise, the teacher would have students go through a bilingual vocabulary list with nine to fourteen expressions necessary for doing the scanning exercise. After the students finished scanning, the teacher would invite them to share their reasoning behind selecting particular articles for a certain reading need. If there was significant disagreement on a certain title, the group would browse the actual article for more clues. At the end of the topic preview hour, the students could get a general idea of what each article was about.

Content discussions about individual articles (except for the core article of each unit, which was led by the teacher) were led by the students who had signed up for the article. These students (no more than four) would prepare for leading the discussion with their language partners. As leaders of the class discussion, they would pose questions of their interest for their classmates and the teacher. They would also invite their classmates to share questions or interesting findings from their conversations with their individual language partners. The discussion would last for about 25 minutes. During the discussion, the teacher would primarily play the role of a conversation partner and share her opinions or stories as personal perspectives. When needed, the teacher would help students
rephrase their sentences to follow Chinese conventions or demonstrate the proper pronunciation of incorrectly pronounced words.

Structured composition was preceded by a teacher-led structure discussion. The teacher would expose the students to more examples of the highlighted expressions and structures. Most of the examples were extracted from the Internet or Chinese-language corpuses by the teacher as part of class preparation. For each example, the teacher would check comprehension and draw students’ attention to the emotional implications of the target expressions by asking questions. The teacher was also expected to create contexts to elicit students’ uses of the target expressions. The time spent on the structure discussion varied from article to article. It also varied between the two groups due to the students’ and the teachers’ prior learning and teaching experiences. However, we expected the total time spent on content and structure discussions to be restricted to 70 minutes so that there would be time for students to do the structured-composition tasks in class. Before asking the students to write the composition, the teacher would first make sure the students comprehend the context of the composition and project a list of structures they could use on the screen. While students were working on the composition, she would walk around to provide help to individual students.

We made the structured composition an in-class activity for three reasons. Firstly, we did not want the composition task to take up students’ time for exploring the local community out of class.¹ Secondly, we expected that writing a structured composition

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¹ The sponsor of the program firmly required that students receive four hours of instruction “inside four walls.” To allow students ample time to conduct field work and study with their language partners, we
would keep the students concentrated after three and a half straight hours of classroom instruction. Thirdly, doing the composition task in class would not only allow students to get individualized help from the teacher, but also allow the teacher to make her feedback concerning the composition available on the following day. Over the summer, this arrangement did not work out as expected. Toward the second half of the program, the teacher of the advance group left the structured composition as home assignment and used this hour to finish up structure discussions left over from the previous hour. The teacher of the intermediate group, who managed to have the students finish the composition in class, found it hard to allow enough time for structure discussion.

There were two types of research-related discussions. One type involved sharing and critiquing research plans. Students would take turns to briefly describe his or her research topic and interview questions and invite others to comment and give suggestions. For each research-project assignment, we designated one hour for this type of discussion. The other type of research-related discussions usually occupied two class hours in a roll. Students would take turns to give a 6-minute oral presentation on findings from their research. Each presentation would be followed by a 9-minute Q&A session. The second type of discussion during the fifth and seventh weeks was conducted as rehearsals for presentations at cultural events at a public book café, where students led discussions about their research topic with audience from off-campus.

scheduled all the four class hours in the mornings. Reading and writing were usually scheduled for the third and fourth hours. The structured composition usually took place during the fourth class hour of the day and the students could be quite exhausted.
One hour on Mondays were designated for the task-based complementary curriculum. This hour was divided into two parts. During the first part, students shared their reports on the previous task. Some of the tasks required oral presentations with PowerPoint slides. Some of the tasks required a small written project for sharing. During the second part, the teacher released the task for the current week with a pre-task orientation. The students would receive a task sheet (primarily in Chinese) with background knowledge for accomplishing the task, hands-on pre-task exercises and directions on task report. A sample task sheet is available in Appendix H. During the pre-task orientation, the teacher led a background discussion with the students to bring them all onto the same page. The discussion would help students understand what the target website was for and make sure they were familiar with the vocabulary they need to know to navigate the website. As mentioned earlier, we assigned the first task through email before the program started. Since the first Monday was designated for program orientation, students reported on the first task on the first Tuesday, when the second task was released. This allowed their products of the final task to be shared in class on the eighth Monday.

5.3.5 Course assessment

As discussed in Chapter 4, the long-term goal of a conversation-driven curriculum is to cultivate autonomous learners, who can effectively manage their own learning. The curriculum requires students to come to class ready to perform, which entails an average of two hours’ preparation for each one hour of class. Since the bulk of the learner’s time and effort is exerted on self-managed daily preparation, it is important to evaluate the
effectiveness of their self-managed learning and provide timely feedback concerning this part of learning. Also, commitment to learning is a key to success. It is important that the course assessment rewards sustained commitment.

To evaluate the effectiveness of learner self-managed learning and promote sustained commitment to course work, we adopted the daily grading system which had been used in the Chinese and Japanese language programs at The Ohio State University. We graded students’ performances in class activities daily based on the four-point scale described in Table 5.3.

Although the criteria were mainly based on the smoothness of communication and the cultural appropriateness of language use and behaviors, full-point does not indicate perfect or native-speaker performance. It simply indicates that the learner has done the preparation highly effectively. Daily grades, together with the teacher’s comments, were uploaded daily to an online grading system. At the beginning of the program, each student was registered for a separate account with the system. Therefore, each student could log on the system to check his or her own grades and the teacher’s comments at anytime.
Table 5.3 Four-point scale for grading daily performances

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Performance promises interaction with a native with no difficulty, discomfort, or misunderstanding; no base language hesitation noise in speaking, no telltale “foreignisms” in the written work. Errors, if any, are self-corrected. Active participation in class discussion.</td>
</tr>
<tr>
<td>3.5</td>
<td>Performance promises interaction with a native with little difficulty, discomfort, or misunderstanding; occasional noticeable errors that would hinder smooth interaction with a native speaker. Occasional “foreignisms” is identified. Errors are mostly self-corrected. Contribution of a few relevant comments during discussion.</td>
</tr>
<tr>
<td>3</td>
<td>Performance demonstrates evident weakness or patterned errors, which required some help from the interlocutor. Contribution of 1 or 2 relevant comments during discussion.</td>
</tr>
<tr>
<td>2.5</td>
<td>Performance is labored and requires a lot of help from the interlocutor. No relevant comments during discussion.</td>
</tr>
<tr>
<td>2</td>
<td>Performance puts a burden on the interlocutor (a native would avoid using Chinese with you or shift to English to lessen the workload). No relevant comments during discussion.</td>
</tr>
<tr>
<td>1</td>
<td>Evidently unprepared (warm body point). No comments during discussion.</td>
</tr>
<tr>
<td>0</td>
<td>Absent.</td>
</tr>
</tbody>
</table>

Students accumulated points throughout the program. The accumulation of daily grades counted approximately sixty-six percent\(^1\) towards their final grades for the reading and writing course. The remaining thirty-four percent was constituted of the points accumulated from weekly reading-performance watch reports, biweekly quizzes, final written research report and final brochure project. Table 5.4 below shows a breakdown of final grades.

\(^1\) This number is much smaller than that of the spoken curriculum (80%) mainly because the reading curriculum involved written assignments which had to be graded separately. Students’ performance on some of the written assignments, such as the reading-performance watch reports and quizzes, written research report, and final brochure project, could hardly be evaluated through classroom interaction.
Table 5.4 Breakdown of final grades

<table>
<thead>
<tr>
<th>Daily Grades</th>
<th>160 points (66%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily performance (4 points/day)</td>
<td>160 points (66%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Assignments</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading-performance Watch Reports</td>
<td>16 points (7%)</td>
</tr>
<tr>
<td>Quizzes</td>
<td>16 points (7%)</td>
</tr>
<tr>
<td>Written Research Report</td>
<td>24 points (10%)</td>
</tr>
<tr>
<td>Final Brochure Project</td>
<td>24 points (10%)</td>
</tr>
<tr>
<td>Total</td>
<td>240 points (100%)</td>
</tr>
</tbody>
</table>

So far, I have reported on the design and the implementation of the conversation-driven reading curriculum. Next, I share my findings from the participants’ feedback concerning their experience teaching or learning with the curriculum during the summer program in China.

5.4 Feedback from participants

Participants’ feedback was obtained from two sources: personal conversation with the participants throughout the program and post-program online surveys. Both sources focused on the core reading curriculum although no questions involved in personal conversations or the surveys were explicitly directed at the core curriculum. In this section, I first account for the lack of explicit feedback concerning the location-specific complementary curriculum. Then, I describe the two sources of feedback that focused on the core curriculum.

In retrospect, the lack of comments on the location-specific curriculum is not surprising. It is very likely that my respondents did not think comments on the location-specific tasks relevant to the personal conversations or the survey questions. Firstly, the
personal conversations throughout the program focused on the challenges and complaints. The location-specific tasks only took a very small portion of class time, and the preparation for that portion of class may have been so well integrated with students’ life out of class that they took it for granted. Secondly, the survey questions were designed with the core curriculum on mind though it did not explicitly mention it. The questions focused on what the participants usually did with their language partners to prepare for a reading/writing class. On the one hand, it is likely that students did not request their language partners for help with the location-specific tasks since the tasks assumed independent work. Even if they did ask their language partners for help, it would not be often since the tasks were only assigned once a week. On the other hand, the participants may not have viewed the location-specific curriculum as part of the reading curriculum since many of the tasks required oral presentations as final products.

However, the lack of explicit feedback concerning the location-specific curriculum is unlikely to indicate indifference on the part of the participants. Based on my field observation, students were well-prepared for reporting their tasks on Mondays and no teachers or students complained about having the location-specific component. In fact, one student wrote in his feedback for curriculum committee during the second week “I have [sic] also liked the weekly tasks because they familiarize me with Hangzhou.” Another student, upon returning from a weekend trip to Beijing with his friend, excitedly told me that he was able to use the website learned from the program to find good restaurants in Beijing. The rest of this section describes in separate sub-sections the two sources of feedback that focused on the core curriculum.
5.4.1 Feedback obtained from personal conversations

As the academic and resident director of the summer program, I was able to observe classes and obtain preliminary feedback from personal conversations with the teachers and the students. Since the conversations were conducted in response to issues emerged from the on-going processes of teaching and learning, the feedback from this source was not systematic. However, it is exactly the emergent nature of this source of feedback that makes it invaluable. On the one hand, it is dynamic. It could capture the dynamics among the learners, teachers, and the curriculum throughout the program. On the other hand, it contains more details. Since it was first-hand and was obtained while the teaching and learning was in process, I was able to ask follow-up questions concerning particular comments as well as the adjustments.

The fragmentary feedback suggests that the teachers were generally positive about the substantive language practice the curriculum had designed for students. The teacher with the advanced group (with 12 students) did not report any problem keeping up with the suggested pacing. During the first four weeks, the students in the advanced group had enough time to finish their structured composition in class as scheduled. However the teacher with the intermediate group (with 14 students) felt much pressure keeping up with the suggested pacing, that is, two weeks per unit. They could have covered fewer supplementary articles in each unit, but due to the large group size, a minimum of four articles were necessary to keep the number of discussion leaders of each article under four, which was the maximum number suggested by the curriculum.

1 For the last four weeks, the advanced group had a new teacher, who decided to spend more class time on structure discussion and left written composition as a home assignment.
The students focused on classroom experiences in their feedback. The advanced students preferred the teacher to allow them more free discussion about the readings. At the beginning, their teacher would spend time explaining the organization of the articles and the main purpose of each part of the article and she also led the discussions of all the supplementary articles. As a result, the students felt that they did not get enough time to share their personal perspectives in class. Both groups felt that the explanation of the highlighted expressions and sentence structures in class was rushed. The intermediate students attributed this to the large group size, rather than the large number of new expressions. The fact that the students mentioned insufficient explanation of the expressions and sentence structures may indicate that they were aiming at understanding everything they read.

I communicated students’ feedback to the teachers. The teacher of the advanced group lectured less for “the authors” of the articles and invited students to take turns in leading the discussions of the supplementary articles in Unit 2. However, for the intermediate group, substantial adjustment did not seem to take place in pacing. The students seemed to get used to the fast pace. In fact, toward the end of the program, when I asked students in person how they liked their reading texts, students from both groups pointed out that their reading could have included more topics and fewer articles under each topic. In other words, they felt too much redundancy among the texts, which was deliberately designed to help them consolidate the expressions commonly used for talking about the topic. On the one hand, this implies that the students no longer felt bad about not understanding everything they read and began to feel comfortable with
knowing what they were ready for. On the other hand, the articles collected under each topic could have been more diverse in terms of perspectives.

Generally, the preliminary feedback from personal conversations seems to suggest that an ideal implementation of the reading curriculum would require either the group size to be reduced or the pace to be slowed down for the intermediate-level group. Reducing the size of the group was not allowed by the available personnel resources. Slowing down the pace would entail either to cover fewer topics or cover fewer articles under each topic. In fact, the course material allowed for flexible coverage. Neither group was expected to cover all the articles available in the material under each topic. However, since the students signed up for discussion-leading on their own and they were willing to sign up for discussing different articles, the intermediate group (14 students) ended up covering one more article from each topic than the advanced group (12 students). In retrospect, the curriculum could have required each student to lead a discussion every other unit, instead of every unit. This way, only seven students would need to sign up for discussion leading for each unit. If two or three students lead one discussion together, they would only need to cover three supplementary articles from each unit.

**5.4.2 Feedback obtained from survey results**

**5.4.2.1 Surveys and respondents**

To obtain more systematic feedback regarding the participants’ experience teaching and learning with the reading curriculum, I conducted two online surveys a month after the program ended. One survey (Appendix J) was sent to the 26 students and the 30 language partners to see if they actually engaged in conversations while preparing
for reading/writing classes. It was English-Chinese bilingual and it requested the respondents to provide short narratives in their native language about (1) what they did with their language partners to prepare for reading and writing classes and (2) what they believed to be the most effective and in what way. Another survey (Appendix K) was sent to the three teachers who participated in the implementation to learn about their experience teaching with the curriculum. It mainly requested the teachers to provide short narratives about (1) what they usually did to prepare a lesson and how much they enjoyed it and (2) what they did in class and how they felt about it.

Table 5.5 below shows the three categories of participants, the number of participants invited, the number of responses received and the response rate. Two (67%) out of the three teachers,\(^1\) nineteen (73%) out the 26 students and twenty-two (73%) out of the 30 language partners responded. The response rates were quite encouraging in the light that the survey was anonymous and was conducted a month after the program ended, when the participants were not obligated to respond to the surveys.

<table>
<thead>
<tr>
<th>Participant Categories</th>
<th>Number of participants invited</th>
<th>Number of responses received</th>
<th>Response rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers (Ts)</td>
<td>3</td>
<td>2</td>
<td>67%</td>
</tr>
<tr>
<td>Students (Ss)</td>
<td>26</td>
<td>19</td>
<td>73%</td>
</tr>
<tr>
<td>Language partners (LPs)</td>
<td>30</td>
<td>22</td>
<td>73%</td>
</tr>
</tbody>
</table>

\(^1\) The third teacher, who taught the advanced group during the second four-week session, told me that she did the survey, but for some reason, her response did not show in SurveyMonkey, the online survey platform I used.
Among the 19 student respondents, 11 were from the intermediate level and eight from the advanced level. The respondents who reported that they did not use their time with language partners to prepare for reading/writing classes were excluded from the analysis. These included one student from the intermediate group, two from the advanced group and two of the Chinese language partners. Therefore, the analyses in the rest of this section is based on the 16 students (10 from the intermediate group and 6 from the advanced group) and 20 language partners who reported to have prepared for reading and writing classes with their language partners.

5.4.2.2 Coding

Except for a couple of identification-oriented questions, which had options to select, all the survey questions required short essay-responses. The questions were so designed to avoid indications of any activities that they were expected to have done. Therefore, the labels for activities appear in the analyses were added by the researcher based on the activities that were most frequently mentioned or described in the respondents’ narratives. Respondents did not all use the exact words for the activities that were assigned the same label in this analysis. Table 5.6 below shows the labels used for the four most popularly reported activities and the sample wordings used by student respondents and language partners. Students’ responses were in English whereas the language partners’ responses were originally in Chinese. The English translation was provided by the researcher who is a native Chinese speaker and fluent in English.
<table>
<thead>
<tr>
<th>Labels of activities</th>
<th>Sample wording used by students</th>
<th>Sample wording used by language partners (English by the researcher)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading together</td>
<td>“She would read it to me and I would interrupt her for questions”  “We would skim the passage together”  “I would read the article together with my language partner”</td>
<td>“通读课文(go through the text)”  “我逐句讲解课文内容 (I would explain the text sentence by sentence)”</td>
</tr>
<tr>
<td>Pronunciation</td>
<td>n/a</td>
<td>“修正读音(correct pronunciation)”  “纠正他的发音(correct his pronunciation)”</td>
</tr>
<tr>
<td>Comprehension</td>
<td>“I would summarize it for her to ensure that I understood the full meaning”  “we would do the comprehension questions to make sure that it was all clear”</td>
<td>“针对课文的一些段落一些语句给她提出问题或者进行相关的讲解 (ask her questions or provide explanations about particular paragraphs or sentences)”  “划分文章结构，然后整理归纳文章的主要观点(work out the organization of the article, and then summarize the main points)”  “要求他简单复述文章的大意和作者的主要观点，指明作者的态度等 (ask him to briefly summarize the gist of the article and the author’s main points and attitude)”</td>
</tr>
<tr>
<td>Discussion</td>
<td>“using the reading as a prompt for discussion,”  “talking about the article with my language partner,”  “having a normal conversation about the topic.”</td>
<td>“讨论文章主题并由这个话题展开，说说自己的看法以及与之相关的一些时事现象 (discuss the issue and extend beyond the issue to talk about our own viewpoints and other related social phenomena)”  “针对文章涉及的方面我们一起讨论，比较美国和中国的不同。学生也会提问，了解我对这些问题的看法 (we would discuss the aspects mentioned by the article, compare American and Chinese perspectives. My student would also ask about my viewpoints on the issues)”</td>
</tr>
</tbody>
</table>
Generally, the activities that I labeled as “reading together” included skimming through the text together with the language partner and having the Chinese language partner to read the text aloud. The activities that I labeled as “pronunciation” included cases where language partners reported to have corrected the American students’ pronunciation. “Comprehension” activities included asking and answering content questions, summarizing parts or the whole of the article and explaining difficult words and sentences occurred in the article. “Discussion” activities included exchanging viewpoints on the issue concerned in the article and other related issues.

5.4.2.3 Survey results and discussion

In the students’ and language-partners’ narratives, three common activities were most frequently mentioned as what they did when preparing for reading and writing classes. These activities were reading together, comprehension, and discussion. Figure 5.4 below compares the popularity of these three activities reported by the students (Ss) and language-partners (LPs).
One interesting disconnect between the students’ and language partners’ responses is that whereas seven out of the 20 language partners reported to have corrected the students’ pronunciation, no students mentioned pronunciation in their narratives. Also, the percentage of language partners who reported to have helped students with comprehension is much greater than the percentage of students who reported the same kind of activity. These ramifications may indicate a difference in how American students and Chinese language partners weigh the things they have done. It might be that language partners, as native Chinese speakers, are more concerned about “the correct” understanding of the text than the students are. This seems to corroborate with my earlier observation: the advanced-level learners were more interested in sharing their own responses to the article than listening to their teacher’s explanation of the organization of the article and the main purpose of each part of the article.
Figure 5.5 demonstrates a comparison between the activities mentioned by intermediate and advanced students.

![Bar chart comparing activities reported by intermediate and advanced students](image)

**Figure 5.5** Comparing activities reported by intermediate and advanced students

Reading together was much more popularly reported by intermediate-level students than by advanced-level students, whereas the situation with discussion was almost the exact opposite. Such a significant contrast was not expected but understandable. The two groups had been reading from the same pool of articles. Many of the articles might have been too challenging for intermediate-level students. Three students from each group explicitly mentioned that reading the article on their own before
meeting their language partners was a more efficient use of their time with their language partners. One intermediate level student described a change in the way she studied with her language partner:

“In the beginning of the program, we frequently did the readings together because I found the readings to be very difficult. However, I found that this may not have actually been a great use of my time with my language partner because I preferred to use my time with my language partner practicing my speaking skills. So, instead I would frequently do the reading on my own, and then if I didn't understand any specific section, I would ask my language partner about that section. Or, I would use the reading as a prompt for discussion, i.e. about air pollution, traffic, US-China relations.”

The comment well illustrates the learner’s growth during the course of the program. She not only became more confident reading the articles on her own, but also discovered more effective strategies for self-managed learning. The design of the curriculum expected both aspects of growth.

Figure 5.6 shows a comparison between the learning activities (with language partners) that were reported as being effective by the two groups of students.
In Figure 5.6, “comprehension” is split into two – summarizing and comprehension Q&A. This is because in their narrative for effective activities, students specifically referred to summarizing paragraphs or articles. Comparing Figure 5.6 with Figure 5.5, we notice that all the students who reported to have discussed with their language partners believed discussion an effective activity. By contrast, most of the intermediate students who reported to have read together with their language partners did not find it effective.

From Figure 5.6, we can also see that advanced students seemed to more willing to report effective activities. This may indicate that they have had more positive experience learning with the curriculum. Intermediate students, on the other hand,
seemed to have had less positive experience learning with the curriculum. Most of the intermediate students reported that they read the texts together with their language partners to reduce the amount of time they would have to spend looking up vocabulary; however, they did not think that reading together with their language partner was an effective activity. Also, due to the limited amount of time with their language partners, it was likely that the intermediate students did not get to enjoy discussing the topics the way most of the advanced students did.

The teachers’ feedback seems to tell a consistent story with the students’ feedback. One question in the online survey for teachers asked them to rate their overall satisfaction with students’ class preparation. The teacher of the advanced group rated “very satisfied,” which was the highest rating, whereas the teacher of the intermediate group rated “satisfied,” which was one level below “very satisfied” and one level above “dissatisfied.” This may indicate that the teacher of the advanced group, like her students, also had more positive experience using the curriculum. This can be more obviously seen in their different perceptions of the biggest challenge during the program. The teacher of the intermediate group found the lack of class time the biggest challenge, whereas the teacher of the advanced group felt great challenges from making the structure discussion more interactive and interesting. Therefore, whereas the teacher of the advanced group was looking for more effective ways to conduct the discussions, the teacher of the intermediate group was trying to keep up with the schedule.

Table 5.7 summarizes the activities teachers reported to have usually done in class and have believed necessary. The teacher of the intermediate group mentioned
identifying key words for summarizing the main idea of the article, discussion beyond the article, and explaining language points, such as checking comprehension of the language points and contrasting similar expressions. The teacher of the advanced group also mentioned discussion and explaining and practicing language points, but she did not elaborate on her response.

<table>
<thead>
<tr>
<th>Labels of activities</th>
<th>Teacher of the intermediate group</th>
<th>Teacher of the advanced group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifying key words</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Discussing beyond the article</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Explaining language points</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Practice language points</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 5.7 Class activities reported by the teachers as being necessary

One notable point is that the teacher of the intermediate group spent class time checking students’ comprehension of the text by asking them to identify key words, which she reported to be challenging for the students and thus time-consuming. This might have made the students feel inefficient in class and it might be one reason why most of the intermediate students did not find reading together with their language partners effective. It might also be the reason why many of the intermediate students spent their time with the language partner on comprehending the text, rather than on exchanging their own viewpoints on the reading.
As for what they usually did to prepare for a lesson, both teachers reported to have used other resources, such as online corpus, dictionary and online papers, to prepare for structure discussion. Only the teacher of the advanced group reported to have read relevant articles to prepare for content discussion. As for how they felt about their own class preparation, both teachers mentioned it as a process of learning and enjoyed doing it. The teacher of the advanced group specifically mentioned that she learned about the topics from preparation and class discussions. Both teachers mentioned that lesson preparation deepened their understanding of language points. However, the teacher of the advanced group also finds creating suitable sample sentences for structure discussion a burdensome process. The course materials could have included tutorial for key structures or included sample sentences in the teacher’s manual.

Overall, the teachers and both the intermediate and the advanced groups of students generally reported discussion as being necessary and effective. However, the feedback from the advanced students and their teacher was more positive than the feedback from the intermediate students and their teacher. When the students’ feedback and their teachers’ were considered in relation, we see cyclic causal relationships between what students did as class preparation and what the teacher did in class. Most of the advanced students reported to have read on their own before meeting with their language partners and discussing the article during their meeting. Consequently, they might have been more prepared to verbalize their thoughts about the article in class, which well met their teacher’s expectation. Therefore, for these students, their
preparation and class activities formed a virtuous cycle – both the students and teacher enjoyed what they were doing in and out of class.

By contrast, most of the intermediate students reported to have read together with their language partners and obtaining help with content comprehension. This might be because the articles or the preparation tasks were too challenging for them. On the one hand, the course material did not provide a ready-set vocabulary list, nor did it include tutorials for linguistic structures though sentences containing useful structures were identified in post-reading exercises. The students were expected to create their own personal vocabulary list and study the sentences on their own. These tasks may have been more time-consuming and ineffective for the intermediate-level students. On the other hand, the teacher’s expectation as demonstrated in class activities may have promoted the students’ dependence on the linguistic structures. Students prepared for class to meet the needs of class activities. The teacher of the intermediate group reported to have asked the students to identify key words from the text to summarize the main idea of the article in class. According to the teacher, students’ performances at this task never met her expectation mainly because the key words identified by the students were too diverse. The teacher attributed students’ failure in identifying the “real” key words to a lack of comprehension of the articles. This might have been why she was not completely satisfied with the students’ preparation for class. The students, who sensed the teacher’s dissatisfaction, were pressured to spend more time out of class on comprehending the articles so as to meet their teacher’s expectation. Since a thorough comprehension of the articles was beyond the students’ language proficiency, the teacher’s expectation may
have effected a somewhat vicious cycle – the students tried hard to meet their teacher’s expectation but constantly failed, rendering a frustrating experience on the parts of both the students and the teacher.

Such reciprocal effect is prevalent in ecology. In an educational context, the interactions between the students and the teacher in the classroom have powerful impact on the ecology that is constituted by these interactions. The behavior of the individuals promotes the habits of each other. If what the teacher does in class implies that a text has only one “correct” interpretation, the students will try to look for that interpretation. If the students keep failing in providing the “correct” interpretation, the teacher is likely to get anxious and provide more explanations of the words and expressions used in the article to help students. The impact of such interactions between the teacher and students extends beyond the classroom and affects the way students prepare for their lessons. It may also extend beyond the implementation of the curriculum and affect the students’ and the teacher’s views of reading at large.

5.5 Reflection on the implementation

Due to the small sample size and the limited time of curriculum implementation, the survey was not intended for conclusive results. Rather, it was intended to gain some insights on the participants’ experiences with the reading curriculum, especially their response to the conversation component in the curriculum, and identify future steps toward improving the conversation-driven reading curriculum.
5.5.1 “Conversation-driven” as an effective approach to teaching reading

As expected, the implementation of the core reading curriculum did achieve a great impact among the participants in that the activities they reported in the survey were all related to the core curriculum. Also, the fact that all the respondents who reported to have discussed with their language partners also reported discussion as being effective indicates a positive role played by conversation. Although statistical evidence of the effectiveness of conversing about reading was not obtained, the fact that students reported it as being effective could indicate two things: (1) they found conversing about reading a memorable experience and (2) they could easily recall moments of learning from that experience.

Also, the fact that the majority of the students reported to have discussed the readings with their language partners before class may indicate their commitment to the core reading curriculum. In addition, quite a few students reported that it was a more efficient use of time with their language partners discussing the reading than reading the articles together. This may indicate favorable changes in their learning strategies. These learners have discovered more effective strategies for self-managed learning. Therefore, judging from the participants’ reaction to the course activities during the program and their responses to the survey, a conversation-driven reading curriculum is promising in terms of enhancing the experience and effectiveness of reading and in terms of cultivating effective strategies for self-managed learning.
5.5.2 The gaps revealed by the implementation

However, the implementation of the core reading curriculum had different impacts on intermediate and advanced groups. Overall, the advanced students and their teacher had a more positive experience with the curriculum than the intermediate group. Such results are intriguing because the students’ diverse background in terms of prior learning experience, language proficiency and area of interest were anticipated while developing the curriculum. The curriculum was designed to accommodate different proficiency levels and interests. However, the feedback from the actual implementation may reveal gaps between the guiding principles and the actual design and between the design and the actual implementation.

5.5.2.1 The gap between the guiding principles and the actual design

The core reading curriculum was designed for intermediate-mid and intermediate-high learners to develop Chinese language learning skills through reading, talking, writing and researching activities. It aimed to prepare learners for advanced Chinese language learning with confidence. In particular, the guiding principles included (1) enhancing the experience and effectiveness of reading and writing by promoting conversation in and out of the classroom; (2) cultivating autonomous learners through guided self-managed learning; and (3) embracing learner diversity by encouraging individual learners to get what he is ready to take and interested in taking.

In designing the material for the core curriculum, we selected topics that were locally-concerned, globally-relevant and continuously-current to promote conversation in and out of class. Tasks were designed to engage learners in reading news and news
commentaries about the topics, discussing the topics, conducting practice research projects out of class, and giving public oral presentations at local bookstores. To cultivate autonomous learners and embrace learning diversity, the course materials were pedagogically designed – they suggested steps for self-managed learning and class instruction, described the learning objectives for each step, and provided instructions on how to use the material during each step. Instead of providing a readily-made list of vocabulary for each article, the material suggested an online vocabulary analyzer for the learners to create their personal vocabulary lists. In each unit, only the core article was required for every student. The supplementary articles may be covered selectively depending on the students’ interests. Also, discussion and research tasks were primarily student-led.

In retrospect, there was a significant gap between the guiding principles and the actual design in that the scaffolding available from the materials was insufficient for efficient self-managed learning. Although the material suggested learning steps, described learning objectives and provided instructions on how to study toward the objectives, there was a lack of tutorial on linguistic forms, especially for the intermediate group. Since the news reports and commentaries were taken intact from Chinese websites, they may be overwhelming for intermediate students who had little or no experience learning with authentic texts. Many of the students from the intermediate group reported that they have spent much time working with online dictionaries or their language partners to remove the obstacles presented by the unfamiliar expressions.
In designing the curriculum, the students were not expected to use language partners as dictionaries. Instead, they were expected to read the articles on their own and then share their responses to the reading with their language partners. From working with their language partners, they were expected to obtain native perspectives and learn how certain viewpoints were presented in Chinese. However, due to the lack of scaffolding, many intermediate-level learners ended up reading the article together with their language partners, focusing primarily on comprehending the linguistic forms. This was a serious problem with the design because the lack of scaffolding may promote undesired learner behavior. The learner may develop dependence on his language partner or a sense of incompetence for self-managed learning instead of developing autonomy and confidence in self-managed learning. Therefore, it is crucial for the learning materials to provide sufficient support for self-managed learning. For example, tutorials could be provided for key vocabulary and structures. The tutorials may include sample sentences accompanied with audio files, comprehension questions, form-based as well as application-oriented exercises. Sample responses to the questions and exercises could be made available using an interactive online program. If such tutorials had been available, the students would not have relied on their language partners for comprehending the articles.

5.5.2.2 The gap between the curriculum design and the actual implementation

Before the curriculum was implemented, a gap between design and implementation was anticipated since the curriculum was designed for a change in literacy instruction. Whereas foreign language teachers and students have long believed
that language is learned by mastering the written forms of that language and that reading is to decode messages from written texts, the curriculum reviewed here proposes an alternative. Rather than viewing writing as the key to better reading, this curriculum emphasizes the facilitative role of conversation for both reading and writing. The role of the teacher in class was construed primarily as an interested and knowledgeable conversation partner, rather than an authority of knowledge. The teacher’s task was not to provide the authoritative interpretation of the authors’ intentions; rather, her task was to orchestrate resources in the classroom and facilitate conversation so that everyone could come up with a personal understanding of the role the text plays in social life. For example, are the readers disappointed, irritated, amused, or provoked by the text? What aspects of the readers and the text constituted such effects?

As an attempt to bridge the gap, we provided a one-week training for the teachers and a ninety-minute orientation for the students and the Chinese language partners. However, since all the participants were completely new to the curriculum, the training was only preliminary.¹ It may not be enough for the participants to implement the process-oriented ideas (as opposed to mastery-oriented ideas) behind the curriculum

¹ During the one-week or ten-hour pre-program teacher training, altogether three hours were designated for implementing the reading curriculum. During the first two hours, I introduced to the teachers the objectives, the components, pacing and grading of the reading curriculum and demonstrated how to conduct topic preview in class. In the last hour, which was two days after the first two hours, the teachers each did a micro-teaching on structure discussion and received feedback from me and another expert. Content discussion, or conversation, was not demonstrated or practiced during the teacher training sessions.

Prior to the beginning of the program, the Chinese language partners received a ninety-minute orientation on how to participate in the program. At the orientation, I demonstrated how they were expected to help students with their reading. I showed them a post from social media and had them talk about their impressions of the language and content. Then asked them to explain what in the posts had left them those impressions and encouraged them to tell related stories. This process was repeated with a quote from a Chinese political leader’s speech. At the onsite orientation for the students, I did the same thing and reminded them to use what they read to elicit stories from their language partners.
design. Most unfortunately, the concept of conversation, which was the key to successful implementation of the curriculum, was not emphasized or elaborated during the training. Many of the participants might have misunderstood conversation as any interpersonal exchanges. The teachers tended to be too eager to help the learner “understand the author’s intentions” to be aware of what the interactions in their classrooms were producing.

When a native Chinese teacher insists on looking for the author’s “real” intentions in writing the article, conversation is unlikely to take place between the teacher and her CFL students. This is because both the teacher and the students would assume that the native Chinese teacher has a much better chance to know the author’s real intentions. Consequently, the CFL students would depend on either the text or the teacher for “best” interpretations. This was very likely the situation with the intermediate group reviewed here. The fact that the teacher of the intermediate level reported dissatisfaction with the key words identified by students implies that she believed the ones identified by herself were the “real” key words the author had on mind. This kind of belief may have put the teacher at a more powerful position than the students who are learners of Chinese language. By insisting that students, if they “really” comprehended the article, should be able to identify key words that matched the teacher’s expectation, the teacher was imposing her own agenda upon the students, rendering the interaction a non-conversation.

In a conversation, any key words identified by the students should be considered valid as long as the students can tell stories to justify their choices. What the teacher, as
an equal participant in the conversation, is expected to do is to comment on the students’ stories and tell her own stories to justify the comment. The students should be encouraged to decide on their own whether or not to change their minds in the light of the teacher’s and classmates’ comments. However, this seemed not to be the case with the intermediate group during the curriculum implementation based on the types of activities reported by the students, their language partners and their teacher.

With the advanced group, by contrast, conversation seemed to have been more successfully built into the curriculum. Many of the respondents from the advanced group reported to have used reading as a prompt for discussion with their language partners. These students also reported to have read the article ahead of time and conversed about it with language partners to be the most effective activity. Their teacher also reported to have looked for relevant articles online to prepare for content discussion in class. Therefore, it was likely that the teacher brought in fresh information and perspectives from outside of the assigned article. This might have signaled the students that they were expected to bring in fresh stories to class discussion. One easy way for the students to get fresh stories and at the same time rehearse telling stories in Chinese was to converse with their language partners about the article. Interaction based on such mutual expectations of each other’s stories is the essence of conversation.

Generally, the lower the students’ language level, the more dependent they are on their teacher and the less likely they will negotiate the curriculum with their teacher. This seemed to be evident in the implementation of the curriculum reviewed here. Although conversation eventually played its role in the advanced group, it was not the case at the
beginning of the implementation. During the first two weeks, the teacher was very concerned about the students’ grasp of the authors’ “real” intentions in the articles. She led the discussions of all the articles and spent time asking students to identify specific information from the articles. It was after the students requested in their course feedback for more sharing of personal perspectives that the teacher opened up more ground for conversation. By contrast, no intermediate students requested for more discussion in the course feedback. What they requested was more structural explanations. This was likely due to their general lack of confidence in their command of Chinese language. They might have attributed their struggles in discussion to inadequate vocabulary and grammar, so they were more anxious about learning vocabulary and grammar from the articles. Naturally, they would believe their teacher, a native Chinese speaker, had the authority to explain “the meaning of” the words and grammar in the article.

5.5.3 Potential steps toward bridging the gaps

Based on the discussions above, to bridge the gaps between the principles of a conversation-driven curriculum and successful implementation of such a curriculum, both the course materials and the teachers play crucial roles. When the materials are well designed with effective elements for training self-managed learners and the teachers are appropriately trained to enforce self-managed learning and facilitate conversation in class, the curriculum is very likely to produce the desired type of learners, namely, learners who feel ready to carry on lifelong patterns of learning Chinese through productive engagements in the culture and society. However, judging from the feedback obtained
from the implementation in question, both support for self-managed learning in the materials and training for the teachers seemed to be insufficient.

5.5.3.1 Enriching the resources available from the course materials

The materials used in the reading curriculum reviewed here suggested learning steps, described objectives for each step and provided instructions on how to use the material during each step. However, there was a lack of scaffolding activities that could prepare the students, especially the intermediate-level students, for reading the articles or applying the featured linguistic structures to conversation or composition. For example, there was little vocabulary support during the pre-reading phase. The teachers were expected to provide vocabulary when necessary during the warm-up discussion. However, depending on the interest and proficiency level of the group and the preparedness of the teacher, the vocabulary occurred during the warm-up discussion may or may not readily prepare students for reading the articles in the unit. The intermediate-level learners definitely needed tutorials for key vocabulary and sentence structures. Also, the course material relied on the teachers for developing drills and exercises for the key sentence structures. This not only put burden on the teachers, but also made it hard for the learners to self-study the structures.

To bridge the gap between the pedagogical principles and the materials, it is necessary to enrich the resources available from the course materials. On the one hand, sufficient support for self-managed learning need be provided for the learners. For example, there could be tutorials for key vocabulary and structures. The tutorials may include sample sentences accompanied with audio files, comprehension questions, form-
based as well as application-oriented exercises. Sample responses to the questions and exercises could be made available using an interactive online program. With such tutorials, the learner can study the linguistic structures on their own and obtain some preliminary feedback concerning their understanding of the article before class. On the other hand, a teacher’s manual with concrete suggestions on class procedures, activities and supplementary resources would help the teachers digest the preprogram training and enforce the expectation of the curriculum more readily.

5.5.3.2 Providing substantial training to program participants

The training and orientation sessions prior to the implementation of the curriculum reviewed here mainly familiarized the participants with the general goal and organization of the program. The teacher training also involved introducing the course materials, explaining the schedule and grading policy, and some preliminary demonstration and practice of featured class activities, such as eliciting performances of target functions in a spoken class and leading discussions on structures in a reading class. However, the training failed to facilitate effective discussions about some key principles, such as the concept of conversation and the idea of teaching students to do things in the Chinese-speaking community instead of teaching the text. As a result, the teachers (especially the teacher of the intermediate group) tended to focus on helping the learners get the “author’s real purpose.” Such a focus oriented the reading toward comprehending the linguistic forms as much as possible, rather than toward facilitating conversation.

To bridge the gap between the curriculum and its implementation, it is necessary to provide substantial training for all the participants in terms of both quantity and quality.
Learner training can be done partly through pedagogically-designed course materials and partly through teacher’s guidance in class. It follows that teachers need to be trained on how to cultivate the desired type of learners through course management and teaching. To appropriately define and effectively cultivate the desired type of learners, the teachers need a constructive understanding of how learners learn and how course materials play their roles in learning. Ultimately, what they need is a constructive understanding of communication because learning takes place through communication, which involves not only people, but the entire physical and social learning environment as well. Human communication constitutes an ecology of literacy (EOL).

Teacher training for implementing a conversation-driven curriculum, therefore, has to be designed with two interrelated objectives: (1) to help the teachers see how the processes involved in teaching and learning constitute an ecosystem and (2) to help them understand how an ecosystem of literacy is sustained by conversation and threatened by a lack of conversation. The achievement of these objectives relies on an understanding of two key features of EOL.

One key feature of an ecosystem is that the behavior of the individuals in it inevitably promotes habits of each other. Therefore, on the one hand, the teacher needs to know how to generate a shift of mindset among the students toward an EOL in the CFL program at the program and course orientations. On the other hand, the teacher needs to behave in a way that promotes the kind of habits among the students which, in turn, can promote ecologically-friendly behavior of the teacher. For example, if the teacher positions herself as a knowledgeable participant in classroom interactions and avoids
imposing her own interpretation of a text onto the students as if it is “the” correct one, the students will be more likely to view fellow classmates’ contribution to the interactions as equal opportunities to learn. Otherwise, the students would only view what the teacher says as learning resources. Also, if the teacher, as an equal conversation partner, shares her true reaction to a reading as personal perspectives, the students are more likely to feel encouraged to do the same. When students are emotionally engaged, reading and conversation can become more meaningful and learning can be more efficient.

Another key feature of an ecosystem concerns diversity and the complex interdependencies between individuals at the group level and between different literacy processes at the individual level. The more complex an ecosystem is, the more resilient and durable it is as a whole and the less impact a collapse of one will have on others. For example, in a class, if one student or the teacher has no stories to share about a certain topic or does not feel like sharing, the group will still be able to learn from the stories other individuals share. If everyone is genuinely interested in each other’s stories, and most importantly, if the teacher’s behavior promotes such a habit, it is unlikely anyone in the class would refuse to participate in the conversation. At the individual level, the adaptability of the organism of language is increased by engaging in diverse processes of literacy as attempts to keep up with the changes in the ecosystem. These processes of literacy may include gesturing, listening, speaking, reading and writing.

In sum, teacher training needs to make the teachers aware of how conversation is crucial for sustaining an ecology of literacy both at the group level and at the individual level. Conversation, due to its collaborative and productive nature, is a pleasurable
engagement and people generally enjoy engaging in it. The more individuals join the conversation, the more complexity the ecology gains. In the program reviewed in this chapter, we encouraged students to engage their language partners with conversations about their readings. With the research projects and public presentations at local bookstores, students engage in conversations with people from the broader local community. These activities were attempts to increase the resiliency and durability of the classroom ecosystem of literacy by merging it with the broader local ecosystem of literacy. At the individual level, conversation coordinates various literacy processes toward memory construction. Before enacting a conversation, the individual will read the article and, as an aid of memorizing, he may draft summaries or questions. The next chapter summarizes how a CFL program may make a learner more and more literate through engaging him in increasingly sophisticated (in terms of script) and diversified (in terms of modes) conversation throughout the program.
Chapter 6 A conversation-driven approach to designing CFL curricula

In the first chapter, I proposed a systemic view of communication based on an extensive review of influential literature in the fields related to language, culture and mind. In this systemic view, communication behavior is mutually triggered in the communicating systems by the changes in their environment, and an understanding is constructed on the fly in the systems of individual organisms as their internal information structures reorganize in response to the changes. The systemic view of communication demands that we view language as a self-sustaining organism, which coevolves with the communication-related processes (i.e., processes of literacy) that give rise to it. Language facilitates communication by providing a dynamic context, which tells the communicating systems among what set of alternatives their next moves must be taken (Bateson, 1972, p.289). The actual moves of the systems reduce alternative moves that can be taken for the next step, and specify how communication may continue or conclude.

Based on the systemic view of communication and an organic view of language, this dissertation proposes that CFL teaching can be more effective if it aims at facilitating the emergence and growth of knowledge structures that can self-sustain in a Chinese-speaking environment. Since such structures emerge only if the individual personally acts
in a Chinese-speaking environment and participates in the processes of communication typical of the environment, the CFL program needs to provide an environment conducive to the generation and sustainment of such typical processes of communication. Viewing the processes of communication as constituting an ecosystem of literacy (EOL), this dissertation proposes an EOL model for designing systemic CFL curricula, which can orient communication in a CFL program toward an ecology of literacy.

In this chapter, I first provide a concrete illustration of an ecology of literacy in a CFL program to demonstrate how the evolution of literacy is driven by prototypical conversation. Then I discuss how “conversation-driven” can be a promising approach to building CFL curricula toward an EOL in a CFL program and summarize the guiding principles of the conversation-driven approach. Finally, I suggest future steps toward systematic implementation of conversation-driven CFL curricula – a crucial step toward an ecology of literacy in a CFL program.

6.1 The evolution of literacy in an EOL-model CFL program

An ecology of literacy (as discussed in Chapter 2 and Chapter 3) is a system that sustains itself by the diverse and interdependent communication processes that bring texts into being. Since the processes in a Chinese-speaking community are too diverse and complex for the novice CFL learner to readily perceive useful patterns, the primary task of a CFL program is to highlight the useful patterns by sampling the processes that can help learners effectively construct a foundation for self-sustained development in a natural Chinese-speaking community. This dissertation has identified prototypical
conversation (that is, a form of face-to-face spoken communication) as the most fundamental communication process in an ecology of literacy because it is highly productive in terms of knowledge structures and the only agent required for running a prototypical conversation is an individual in a recognized social context. In any given ecology of literacy, prototypical conversation lays the foundation for the other more advanced processes of literacy, such as making sense of and producing written texts, to emerge and evolve. The evolution of literacy in an EOL-model CFL program may be illustrated by Figure 6.1, which is an adaptation of Gould’s (1994, p.86) illustration of the evolution of life on the Earth (See Appendix L for Gould’s original illustration).

![Figure 6.1](image) The evolution of literacy in a CFL program
In Figure 6.1, the upper graph represents the beginning of an ecology of literacy, where prototypical conversation lays the foundation for more complex forms of communication to evolve. The lower graph represents the distribution of complexity in a full-fledged CFL program. The vertical dimension indicates the frequency that new ideas emerge from the mode of communication, whereas the horizontal dimension indicates the complexity in terms of the processes involved in the mode of communication. The bar on the left represents the “left wall” of communication with minimal complexity, that is, mimicking, a performance in which a person imitates another person’s performance to achieve a purpose in a given context. Mimicking falls on the completely rehearsed end of the continuum of rehearsed and improvised performances discussed in Chapter 4.

In any given CFL program, literacy arises next to the “left wall” of its simplest conceivable and preservable form of communication - mimicry. Mimicry remains the most common and most frequently occurring form of communication. Often, differences arise in the context to cause variation to the process of mimicking, extending the right tail in the distribution of complexity. For example, if, as part of mimicking, one needs to refer to an object that it is no longer present, he will have to create a way to fill up the gap. He may map it onto a gesture, a drawing or a verbal description – or use a combination of these tactics. The creative nature of this process distinguishes itself from mimicking as prototypical conversation.

The emergence of prototypical conversation marks the beginning of literacy. It is the simplest form of productive communication that the constraints of biology and culture will allow. Prototypical conversation does not involve the manipulation of a writing
system, which is not part of our biological body. Complexity drifts up (Gould, 2002) and the complex forms of communication, such as written communication, occur less frequently than prototypical conversation and other electronically-assisted forms of spoken communication, such as video/voice calling and texting. The complex forms of communication would not have been possible without prototypical conversation. The complex forms of communication rely on the participants’ prior experience of prototypical conversation for concretizing the context and anticipating responses. For example, if a learner has not personally experienced enough prototypical conversations in Chinese, he will not be able to respond to a Chinese story in a way that is coherent with the Chinese-speaking community. Nor will he be able to imagine how the native Chinese speakers would respond to the way he tells a story when he leaves a message or writes an article in Chinese.

As illustrated by the graph in Figure 6.1, the range of literacy increases over time as average complexity drifts upwards. For example, at the beginning of a CFL program, a prototypical conversation may only involve the teacher and the learners greeting each other in Chinese. Gradually, a prototypical conversation will involve ideas that allude to the participants’ experiences in other conversations as well as communication in more abstract contexts, such as reading and writing. For example, the teacher and the learners may converse about a conversation they had with other people, a book they read, or a video they watched out of class. On the other hand, the prototypical conversations in and out of the program enrich the teacher’s and the learners’ knowledge structures, which can facilitate their reading and writing. For example, this dissertation would not have been
possible without the numerous preceding conversations I had with my teachers, my colleagues and my students. That is how prototypical conversation drives the ecology of literacy in a CFL program toward diversity and complexity.

6.2 Conversation-driven as a promising approach to an EOL in a CFL program

Since the evolution of literacy (communication processes) in a CFL program is driven by prototypical conversation, CFL language curricula should be guided by the principle of conversation-driven activities. As an application of the EOL model to designing CFL curricula, I proposed a conversation-driven CFL curriculum in Chapter 4, based on a four-year college-level program. The curriculum employs sustaining conversation as its specific but indefinite goal and as the means to achieve the goal. In particular, the goal of the conversation-driven curriculum is to prepare the learner for sustaining conversation in particular domains so that they can carry on lifelong patterns of learning Chinese through productive engagements with the Chinese society and culture. The approach can be roughly characterized as “Fake it until you make it,” with “it” referring to any of the conversations the learner as a foreign person may encounter when they work and live in a Chinese-speaking community.

I reviewed an initial attempt to design and implement a conversation-driven CFL reading curriculum in Chapter 5. Based on the participants’ performance during the program and their feedback, the students and teachers generally welcomed the conversation-driven reading curriculum. The majority of the students have reported to have found conversing about the readings an effective way to learn Chinese and some of
them explicitly described how their learning behavior had favorably changed over the course of the program. This indicates that “conversation-driven” as an approach to teaching CFL deserves serious exploration. This section summarizes the fundamentals of the conversation-driven approach.

6.2.1 Emergence and evolution of conversation in a CFL program

Figure 6.1 also provides us a way to understand how the conversation concerning a particular topic gets more and more complex and productive throughout a CFL program. Figure 6.2 is a more straightforward illustration of how a given series of conversation gains complexity (in terms of the variety and number of processes it entails) as the teacher and the learner engage in various scaffolding activities in spoken courses (to the right of the spiral) and written courses (to the left of the spiral). The spiraling line traces the patterns by which conversation grows over time. The horizontal dimension of the spirals indicates the complexity of conversation and the vertical dimension of the spiral structure indicates the progress of time. The three dotted lines (from bottom to top) respectively mark the transition from the initial stage to beginning level, from beginning level to intermediate level, from intermediate level to advanced level. As indicated by the starting point of the spiraling line, conversation does not demonstrate any complexity until the second half of the beginning level, when the learner begins to enact partially-improvised extended dialog performances. These dialog performances may be creative combinations of the mini dialogs he has memorized.
The phrases to the right of the spiral describe the major scaffolding activities in spoken courses and those to the left describe the major scaffolding activities in written courses. The relative position of each activity indicates its initial occurrence in the curriculum. The activities occurred at lower levels may recur at higher levels, with less teacher assistance. In fact, systematic withdrawal of teacher assistance is the essence of “Fake it until you make it.” The growth of learner autonomy in conversation is, to a large extent, realized through systematic and gradual withdrawal of teacher assistance.
Withdrawal of teacher assistance may be demonstrated in course materials, classroom instruction, and co-curricular activities. For example, the course materials for higher-levels will use less pinyin and less explanation in the learner’s native language. Even the course schedule will gradually use more Chinese. Toward the higher level, classroom interactions will extend further beyond what the learner has practiced with course materials and demand the learner to apply what he has prepared more creatively. As the learner moves to higher levels, he will autonomously participate in more and more co-curricular activities in Chinese.

Systematic withdrawal of teacher assistance in classroom instruction displays the following pattern. First of all, from the very beginning, the teacher should start reducing the use of the learner’s native language as much as possible and confine English to specially designated sessions. Secondly, as the learner begins to read character scripts, she should reduce the use of pinyin texts. Thirdly, as the learner begins to read and draft mini narratives, she should gradually withdraw her assistance in concretizing the context. The context is the most concrete to the learner in face-to-face spoken communication and least concrete in reading and writing. Therefore, at the beginning level, what the learner reads is restricted to what he can say and understand in Chinese. As the learner gains more experience in face-to-face spoken communication and reading in Chinese, he may be able to read texts that extend beyond what he has learned from spoken courses because he can now concretize the context based on his prior experiences of communicating in Chinese. Fourthly, as the learner gains proficiency in Chinese, the teacher should reduce the use of prescribed course materials and encourage the learner to participate in
preparing course materials. Finally, to cultivate creativity, the teacher may start reducing modeling or the use of model responses in the intermediate-high level courses, providing only a native response to what the learner says or writes. In sum, as the teacher withdraws her assistance, the learner not only develops autonomy but also develops creativity – the ability to contribute novel elements or respond to novel situations. This creativity is the most distinguishing feature of conversation.

6.2.2 Cultivation of learner autonomy and creativity in conversation

The overarching principle of the conversation-driven approach is to show the confidence to participate in a social event, otherwise known as “Fake it until you make it.” In practice, a conversation-driven curriculum is designed to provide systematic assistance as the learner develops autonomy in sustaining conversation in Chinese. “Systematic assistance” includes “systematic withdrawal of teacher assistance.” In a sense, the growth of learner autonomy in conversation is realized through systematic and gradual withdrawal of teacher assistance. To withdraw assistance without frustrating the learner demands creativity on the part of the teacher.\footnote{The biggest demand on the teacher’s creativity is the need to present opportunities to perform target culture behavior (Walker and McGinnis, 1995).} Therefore, the progress of processes in a conversation-driven curriculum may be observed as increased learner autonomy (demonstrated in self-managed learning, in sustaining conversation with native Chinese speakers, and in constructive responses to feedback) and increased teacher creativity (demonstrated in the design of classroom instruction, co-curricular activities, and the
ability to provide constructive feedback). Figure 6.3 models the progress of a conversation-driven curriculum.

![Figure 6.3 The progress of a conversation-driven curriculum](image)

Figure 6.3 is an adaptation of Figure 4.4, which focused on the growth of the learner in a CFL program as a performer. Like Figure 4.4, the parallelogram in the middle of Figure 6.3 represents a CFL program, which is construed as an interface between the learner’s native community and a Chinese-speaking community. The only difference between Figure 6.3 and Figure 4.4 is what the upward and downward triangles that constitute the parallelogram represent. In Figure 4.4, the triangles represent rehearsed performances and improvised performances, and the degree of darkness indicates the changing ratio of improvised elements in the performances. However, here in Figure 6.3, the upward triangle represents teacher assistance and the downward triangle represents
learner autonomy. The degree of darkness indicates the changing level of creativeness in the learner’s and the teacher’s work (the texts\(^1\) resulted from their activities during the implementation of the curriculum). The creativeness of the learner’s work is demonstrated in the quantity and quality of improvisation in the performances he enacts in and out of class. Accordingly, the creativeness of the teacher’s work may be demonstrated through the ways she elicits performances (including those out of class) from the learner and provides feedback concerning the learner’s performances. As the program moves to higher levels of instruction, not only does the ratio between the amounts of learner autonomy and teacher assistance become larger and larger, but the level of creativeness also increases in both the learner’s and the teacher’s work. Therefore, in Figure 6.3, both the upward and downward triangles get darker and darker toward higher levels.

Table 6.1 is a summary of the kinds of work in which creativeness is demonstrated at different levels of a conversation-driven curriculum. The kinds of work listed in lower levels may be repeated at higher levels, but they will demonstrate increased level of creativeness.

\(^1\) Note that in this dissertation (Chapter 2), texts are broadly construed as assemblages of events – dynamic processes. Both the learner and the teacher are seen as texts in constant becoming.
<table>
<thead>
<tr>
<th>Hours of class instruction</th>
<th>The level of creativeness demonstrated in learner’s work</th>
<th>The level of creativeness demonstrated in teacher’s work</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in learner’s work</td>
<td>in teacher’s work</td>
</tr>
<tr>
<td>Level 1</td>
<td>Little: Mostly item-based mechanical practice on the sounds, and basic written symbols (toward the last three hours of this stage)</td>
<td>Little: Mostly modeling tones, pronunciation, and character writing and demonstrating strategies for producing particular sounds and basic written symbols</td>
</tr>
<tr>
<td></td>
<td>Little: Mostly modeling tones, pronunciation, and character writing and demonstrating strategies for producing particular sounds and basic written symbols</td>
<td></td>
</tr>
<tr>
<td>7 hr</td>
<td>3 hr</td>
<td>60 hr</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Little to minimal:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mostly acting out pedagogically constructed dialogs from memory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Locating answers to content questions from character scripts of the memorized dialogs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Writing performance scripts for familiar scenes</td>
</tr>
<tr>
<td>Level 2</td>
<td>Minimal to average:</td>
<td>Minimal to average:</td>
</tr>
<tr>
<td>70 hr</td>
<td></td>
<td>Enacting scenes that have not been readily rehearsed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Narrating dialogs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Converting dialogs into narratives and vice versa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Responding to Chinese artifacts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Providing information through text messages, written notes and simple emails</td>
</tr>
<tr>
<td>Level 3</td>
<td>Average: Telling stories in spoken and written contexts and answering follow-up questions</td>
<td>Average: Eliciting extended story-telling and asking follow up questions</td>
</tr>
<tr>
<td>140 hr</td>
<td></td>
<td>Responding to other’s stories</td>
</tr>
<tr>
<td>Level 4</td>
<td>Average: Eliciting extended story-telling and asking follow up questions</td>
<td></td>
</tr>
</tbody>
</table>
Table 6.1 Cont’d

<table>
<thead>
<tr>
<th>Hours of class instruction</th>
<th>The level of creativeness demonstrated in learner’s work</th>
<th>The level of creativeness demonstrated in teacher’s work</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 5</td>
<td><strong>Average to high:</strong></td>
<td><strong>Average to high:</strong></td>
</tr>
<tr>
<td>80 hr</td>
<td>Summarizing other’s viewpoints and arguments, and critiquing</td>
<td>Eliciting arguments and critiquing reasoning</td>
</tr>
<tr>
<td></td>
<td>Stating one’s own viewpoints and arguments</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 6</td>
<td><strong>High:</strong></td>
<td><strong>High:</strong></td>
</tr>
<tr>
<td>80 hr</td>
<td>Forming research questions</td>
<td>Prompting research questions</td>
</tr>
<tr>
<td></td>
<td>Making research plans</td>
<td>Critiquing research plans and reports</td>
</tr>
<tr>
<td></td>
<td>Presenting findings</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Responding to unrehearsed questions</td>
<td></td>
</tr>
</tbody>
</table>

At the initial stage (approximately the first 10 hours of classroom instruction), since the learner has little or no knowledge of Chinese language and society, the self-managed learning and the teacher’s assistance will mostly be oriented toward building an “inventory” of knowledge of Chinese language and society in the learner’s system. The learner’s work is mostly item-based mechanical practice on the sounds and basic written symbols, such as common strokes, radicals, and characters for numbers and for the expressions of classroom instruction. Little creativity is required or demonstrated in terms of manipulating the Chinese semiotic systems. Accordingly, in the first ten hours of classroom instruction, teacher assistance will focus on presenting common social contexts, modeling pronunciation, tones, and character writing, and demonstrating strategies for producing particular sounds and characters. Providing such feedback
requires little creativity on the part of the teacher. As the learner begins to act out rehearsed dialog performances in relation to perceived Chinese contexts, both the learner’s and the teacher’s work will get a little more creative. For example, the teacher will create contexts to elicit variations of the memorized dialog performance and the learner may create scripts for familiar contexts.

As learners move beyond Level 1 with functional knowledge of the sound and writing systems and Chinese conversation, they will enact more scenes in Chinese and will gradually be encouraged to improvise appropriate performances. By Level 2, the learner will be enacting scenes that he has not readily rehearsed, narrating dialogs, responding to Chinese artifacts, such as public signs, menus, posters and forms, and providing information through text messages, written notes and simple emails. The work on these tasks will demonstrate notable elements of creativeness. Accordingly, more creativity is also required on the part of the teacher. On the one hand, she will need to create contexts to elicit (partially) improvised dialog performances from the learner, including creating co-curricular activities that provide the learner with opportunities to use Chinese out of class. On the other hand, she will provide feedback concerning the learner’s performances in a variety of forms \(^1\) to maintain a Chinese-speaking environment.

As the learner moves on to the intermediate levels (Levels 3 and 4), he will be improvising in more extended performances such as extended conversations, where he needs to narrate his own experiences and respond to other’s stories. The role played by

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\(^1\) See Table 3.2 in Chapter 3 for the descriptions of six major types of feedback.
course materials in CFL learning will gradually shift from providing models for rehearsal to providing prompts for conversation. Accordingly, the teacher will present contexts to elicit extended rehearsed performances from the learner and tell her own stories as prompts for conversation when necessary. Both the learner’s and the teacher’s work will demonstrate a much higher level of creativeness at the intermediate levels, but not as high as their work at the advanced levels. At the advanced levels, the teacher and the learner will primarily be working with sophisticated Chinese artifacts, such as novels, extended news reports, commentaries, and/or academic publications from the learner’s domain of study. The learner is expected to perform the learning tasks creatively and critically. Accordingly, the teacher will set an example of an enthusiastic researcher and prompt the learner to explore more broadly and think more profoundly about the issues in question.

6.2.3 Support for development at diverse paces and along diverse paths

The illustration in Figure 6.1 also applies to the growth of a CFL learner as he becomes more and more literate in a Chinese-speaking community. For the learner to become highly literate in Chinese, his enactment of prototypical conversation should not only lay a foundation for continued Chinese learning, but also always dominate his experience in Chinese. The conversation-driven approach strives to create an environment where prototypical conversation drives the other communication processes, such as making sense of and creating written texts. The common goal of both the teacher and the learner is to sustain conversation.

To sustain conversation is specific enough to serve as a legitimate learning goal because it points out a specific direction for the learner and the teacher to work after. As
discussed in Chapter 4, the direction is that the learner needs to appear intelligent to his Chinese-speaking interlocutor in the given conversation so that the latter is willing to continue conversing with him. At the same time, to sustain conversation is an indefinite goal in that there are as many different ways to sustain conversation as there are different individuals. The learner is allowed to take diverse paths toward the goal. Diverse paths inevitably result in diverse paces of development. Therefore, the conversation-driven approach supports diverse paths and paces of learner development.

The support for learner development at diverse paces and along diverse paths is achieved through (1) chunking content into units of performances and (2) fusing instruction and assessment into teacher-student interactions. These are elaborated in separate sections below.

6.2.3.1 Chunking a process into units of performances

Since CFL curricula based on the “acquisition” of static products of communication, such as particular words, sentence structures or customs, tend to set universal stages and standards for the progress of language learning, they allow little diversification in terms of learner development. In order to support diverse paths and paces of language development, the conversation-driven approach takes the dynamic processes of communication as the content of teaching and learning. To learn a process, the learner must personally enact the process. Since a person’s activity in communication constitutes a structural whole (cf. Pike, 1967; Bateson, 1972) and it is integral to the activities of larger systems (such as classroom interactions), learning to communicate cannot be reduced to “mastering” the sum of a communication event’s products (such as
words, sentence structures and cultural facts). Therefore, instead of decomposing the processes into their products, the conversation-driven approach preserves the totality of communication by chunking them into units of performances (which involve the learner personally enacting communication in specific contexts).

The basic unit of teaching and learning in a conversation-driven curriculum is, therefore, a performance (which involves the learner personally enacting communication). As discussed in Chapter 4, performances range from rehearsed, to partially-rehearsed, to improvised. Conversation falls on the improvised end. To learn to converse in Chinese, the learner must personally enact conversation in Chinese. Therefore, the conversation-driven approach allows the learner to “fake” conversations with the assistance of course materials and the teacher until he can converse in Chinese without a teacher’s assistance. In particular, the learner begins with primarily enacting rehearsed performances, where the learner “fakes” conversation, and gradually increases improvised elements in the performances. As the learner moves along the program, the performances he enacts should be increasingly diverse and complex. Altogether, the performances that the learner enacts in the CFL program should constitute a useful sample of the contexts that the learner may encounter in a Chinese-speaking community as a foreign person. Consequently, what the learner gains from a conversation-driven curriculum is primarily an efficient system of useful stories that enables him to “read minds” (understand others’ stories and predict the impact of his storytelling on others) when participating in conversations in a Chinese-speaking community. Repeated patterns of words and
sentence structures constitute a secondary but desirable outcome. These patterns can, in turn, drive future conversation.

6.2.3.2 **Fusing instruction and assessment in teacher-student interactions**

Since a conversation-driven curriculum is comprised of dynamic processes, in which what the learner knows is demonstrated through what he is doing, effective assessment of learning in a conversation-driven curriculum has to be based on observations of what the learner is doing. The conversation-driven approach adopts “dynamic assessment (DA)” (Liz, 1987; 1991; Sternberg and Grigorenko, 2002; Lantolf and Poehner, 2004), which has been informed by Vygotsky’s theory of ZPD (as discussed in Chapter 4). DA fuses instruction and assessment in teacher-student interactions. It is conducted to assess the student’s learning potential so that the teacher can plan her assistance in future interactions with the student. DA always looks into the future of the learner to see what he may achieve next, without concern for a predetermined endpoint (Lantolf and Poehner, 2004). The teacher constantly presents the learner with tasks that are beyond what the student can accomplish without assistance.

As discussed in Chapter 4, in DA the teacher interacts with the student on a one-on-one basis and provides feedback in the form of assistance. Therefore, the learner is allowed to test out his own hypothesis about the performance and receive individualized feedback. For example, a more advanced learner may attempt to provide a more extended response, whereas another learner may only be able to respond succinctly, or with phrases. The teacher’s attention will focus primarily on how well the learner has understood the context and provide feedback concerning the appropriateness or
acceptability of the performance in the given context to native Chinese speakers. Depending on the quality of the responses, the teacher may help the student who provides an extended response improve organization, while helping the other student elaborate on his response or connect the phrases to make coherent sentences. If a learner’s response varies from the model (either by mistake or on purpose), but is also acceptable in the given context, the teacher will react to the response and let everyone know that it is an acceptable alternative. If the alternative is very commonly used among Chinese-speakers, the teacher may have the whole class repeat it.

In sum, with dynamic assessment, the teacher works to make every student feel comfortable performing from his own perspective at his own level. At the same time, the teacher’s interactions with other students expose the class to different perspectives and approaches to effectively acting in a given context. The teacher does not insist that every student in a class perform at the same level of sophistication or approach the performance from a uniform perspective. In this sense, a conversation-driven curriculum may effectively accommodate learner diversity.

6.3 Conclusion

In this dissertation, I have proposed an ecology of literacy (EOL) as a systemic model for designing CFL curricula. As an application of the EOL model to CFL curriculum design, I proposed a conversation-driven curriculum based on a four-year college-level program. In the reflection of the initial implementation of part of the curriculum, conversation-driven emerged as a promising approach to teaching Chinese
language toward an ecology of literacy in a CFL program. Therefore, in this final chapter, I summarized three guiding principles of the conversation-driven approach, namely, (1) conversation as emergent and co-evolving with other modes of communication, (2) the cultivation of learner autonomy and creativity in conversation, and (3) the support for diverse paths and pacing of learner development.

The EOL model rejects the view of literacies as end-point abilities. Instead, it sees literacies as emerging communication processes, which constitute a self-sustaining system. The communication processes are dynamic, complex and stochastic. They constantly give rise to new contexts and texts, such as communities of speakers, readers and writers, which become integral to the total system. The communication behavior of a speaker, a reader or a writer constitutes a structural whole (Pike, 1967; Bateson, 1972), which is integral to the behavior of its environment (larger systems). Such behavior is too complex and relational to be decomposed into verbal and nonverbal elements, without harming its totality, or be analyzed as sequences of knowing and doing, without controversies, hence the emphasis on the unity of text and context. Therefore, the EOL model is based on a systemic view of communication, in which knowing and doing are fused into the unity of an effective reaction in a given context.

Viewing literacies as dynamic communication processes, the conversation-driven approach sees the CFL learner as an emerging agent of communication processes. He constantly becomes more literate in Chinese through participating in the increasingly diverse and complex communication processes in the CFL program. A learner’s progress in a CFL program is demonstrated as his autonomy in sustaining increasingly complex
and productive conversations in Chinese. The organization of a CFL program is expected to create an environment where the events in it gradually demand more productive conversation, in which the participants not only need to improvise their responses, but also need to increasingly refer to their experiences with other modes of communication, such as reading and writing.

The most distinctive and advantageous feature of the conversation-driven approach is its goal – to sustain conversation in Chinese in a given domain. Since a conversation often takes place in a specific context, sustaining conversation as a goal points out specific directions for the teacher and the learner to collaborate moment to moment. Since conversation may unfold in an infinite number of different patterns depending on who the participants are, sustaining a conversation as a goal accommodates learner diversity. Learners come to a CFL program with diverse prior experiences and they are pursuing diverse domains, we cannot reasonably expect them to develop along the same path or at the same pace. In this sense, the constructivist conversation-driven approach accommodates different paths and paces of learner development within the framework of Chinese culture. It thus has a significant advantage over the approaches that are based on a reductionist view of communication. Since the reductionist view of communication assumes that teachers and learners only or primarily respond to the linguistic forms, which have definite forms, the approaches based on the reductionist view tend to set the same standards for all learners at a given stage of learning.
6.4 Areas for future research

This dissertation is an initial step to describe a systemic model for designing CFL curricula. It is limited in many ways, and much research remains to be done from now on. In this section, I name five important areas for future research.

Firstly, we need more cross-disciplinary collaboration to explore the pedagogical implications of findings from fields that concern human development, such as biology, psychology, cognitive science, cultural studies, neural science, information theory, and systems theory. In proposing the complex, systemic view of communication in Chapter 1, I have drawn heavily from a number of different disciplines: biology, developmental psychology, neuropsychology, the neurosciences, cognitive linguistics, phenomenology, and philosophy of mind. This approach can be extremely risky since I cannot claim expertise in all these fields. While no one can be expert in all these areas, we can base our pedagogy on what experts in these fields have discovered. Therefore, we need more cross-disciplinary research projects to generate conversation between pedagogues and researchers from disciplines that pertain to human communication. Since the current reductionist views of communication inform the majority of CFL programs, incorporating modern research into CFL pedagogies is a must for the 21st century.

Secondly, research needs to be conducted to gain insights on the merits and defects of the EOL model and the conversation-driven approach proposed in this dissertation. The thoughts on the EOL model and conversation-driven approach in this dissertation are preliminary and may be overly optimistic or idealistic. For example, class sizes in some CFL programs may be too large for the teacher to interact with learners
primarily on a one-on-one base. Learners in some CFL programs may be too young or too busy with work to do much preparation before class. Also, the conversation-driven curriculum reviewed in Chapter 5 was designed for and implemented in a particular immersion CSL context. We still need to learn about how students in domestic CFL program would respond to the conversation-driven approach. To improve the model and better understand what it can do in the field of CFL teaching, we need extensive classroom-based and program-based studies to learn about the teachers’ and the learners’ experience in EOL-model programs. Such data will help us adjust the model to different learning contexts and develop a variety of effective approaches to CFL teaching.

Thirdly, research may be conducted to study CFL teachers’ readiness to implement the EOL model or the conversation-driven approach, and the design of effective teacher training models. The EOL model and the conversation-driven approach are based on the construal of literacy as dynamic communication processes that sustain themselves by bringing texts into being and giving them various existences. The approach also takes a dynamic, systemic view of text and reading. In this view, the traditional “text” (the object) and the reader only constitute two of the many parts of the text that gives rise to the sense that affect us in reading. Reading is about sense, which “expresses not what a text means or is, but rather its virtual potential to become” (Masny, 2013, p.341). Sense is an event that emerges from the dynamics between text (the assemblage of events that involve the reader and the “text”) and context (the total system of events). Its product is transformation of both the reader and the “text” (object).
The systemic, dynamic view may be too abstract and counter-intuitive to many practitioners in the current field of CFL teaching. They may need the concrete experience of applying the view to CFL teaching and see how it works. Also, language teachers range from novice to expert in terms of their general understanding and practice of teaching. Adapting from Walker and McGinnis (1995), an expert CFL teacher is a person who is most able to assist learners in understanding the strategies and tactics of interacting with Chinese culture, and one who is also responsible for negotiating her own way toward expertise. Expertise in teaching is achieved through intensive attention toward integrating theory and practice in the conduct of teaching (Walker and McGinnis, 1995). Team teaching, with a novice teacher co-teaching a course with an expert teacher, may be a promising format for helping the novice teacher gain a more profound view of what it means to be an expert. Research could explore models of team teaching that are and productive in terms of the professional growth of both the mentor and the novice teacher.

Fourthly, research may also explore the design of materials and activities that can facilitate the conversation-driven process. Course materials in an EOL-model program are designed primarily for the learner, who is expected to come to a CFL class ready to perform the functions he has learned with the help of course materials. Therefore, course materials need to be pedagogically designed with learner-friendly instructions on how to

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1 Walker and McGinnis (1995) insightfully point out two “good reasons” why teachers who are being trained rarely want to go beyond the presentation of practice. The first reason is that “the theories have not been thought out or adequately articulated in terms of foreign language learning.” This dissertation makes an attempt to articulate “the theories” in terms of CFL learning. The second reason is that “teachers generally have too limited a view of what it means to be an expert.” To gain a profound view of expertise, teachers must work with experts, observing what they do and what they achieve, and inquiring into their rationale for doing things in particular ways.
use them and with sufficient resources for practice and self-checking. The beginning level is the most crucial. It should set the teacher’s mind for teaching the learner to communicate (as opposed to teaching the textbook) and set the learner’s mind for learning to be oriented toward a Chinese-speaking context (as opposed to learning the linguistic forms only). An EOL-model curriculum would require a high level of redundancy (in terms of linguistic forms) between the written and spoken materials at the beginning level and gradually reduce the level of redundancy toward the higher levels.

However, few existing CFL course materials for beginners readily meet the need of an EOL-model program. For example, the four volumes of *Integrated Chinese* (3rd edition) (Liu and Yao, 2008) integrate listening, speaking, reading, and writing and are accompanied with video clips, audio files, structural learning resources, character workbooks and teacher’s manuals. However, this set of materials adopts a form-based approach and presents sentence structures as formula rather than as functions. The available resources may help the learner decode the dialogs, but cannot help him get ready for performing in simulated scenes. The four volumes of *Chinese: Communicating in Culture* (Walker and Lang, 2004) and accompanying video and audio resources may well meet the needs of a beginning-level spoken course. However, currently, this set of material does not contain sufficient resources for a written course. The lack of recycling of forms through written courses may severely constrain many of the desired processes in an ecology of literacy. Therefore, research and development is needed to adapt the currently existing materials or develop new ones to meet the need of an EOL-model CFL program at all levels of Chinese language learning, primarily the beginning level.
Last but not least, further research could orient itself toward the application of an EOL model to developing CFL curricula for learners from different age groups, especially K-12 learners. The conversation-driven curriculum in Chapter 4 has been proposed with college-level learners in mind. However, the EOL model is readily applicable to K-12 Chinese language programs. In fact, it could be more readily implemented with young beginners since they do not yet have any entrenched reductionist views of communication. Therefore, implementing the EOL model with young beginners may actually sow a seed of a dynamic, systemic view of communication at the beginning of their career of Chinese language learning. This would lay a sound foundation for systemic implementation of the EOL model. The learners’ demand for approaches that are consistent with a dynamic, systemic view of communication may push more practitioners in the field of CFL teaching to explore the application of an EOL model (that is based on 20th and 21st century understanding of human communication) to CFL teaching and learning.

The five areas of research suggested above are focused on Chinese language teaching and learning. In fact, an EOL-model for curriculum design may be applied at larger scales. For example, the curricula of a school or an academic program may all be designed to constitute a self-sustaining system of literacy. Language curricula could play a crucial role by incorporating the learner’s experiences in content courses into lower-level language curricula and merging the advanced-level language curricula with content courses. For example, advanced-level language learning may be conducted through content courses on Chinese language, literature, history, or politics.
Bibliography


Appendix A: LMI and AMI in a foreign language learning environment

(Extracted from Walker, 1996, p.191)
Appendix B: Performance-Oriented Oral Assessment: Rating Criteria Statement

(Noda, 2010, course handout)

**Delivery**: Are you smooth with your speech and in your interaction?

4: Very smooth and fluent communication with appropriate behavior, including hesitation noises and back channeling strategies (e.g., echo question in Japanese), in the given context. Shows initiative in interaction.
3.5: Smooth speech delivery, yet shows lack of readiness and initiative. There are some false starts and a few times the interlocutor has to wait patiently for speech.
3: Hesitant, slow speech delivery that would make an unsympathetic interlocutor impatient and frustrated.
2: Very slow and hesitant speech that would make even a sympathetic interlocutor impatient and frustrated.
1: Utterances are so paned that no communication can take place.
0: No utterances -- ungradable.

**Content**: Are you using what you have learned to the fullest extent?

4: Shows comfortable command of most of the patterns, vocabulary, collocation and interaction strategies that have been studied; uses them creatively and confidently to deal with new contexts.
3.5: Shows command of the learned materials, but there is some indication of avoidance (or non-use) of certain structures or vocabulary.
3: Uses some of the learned strategies and expressions in a more familiar contexts, but fail to apply them in new contexts.
2: Speech that is most of the time short and simple with few attempts to use complex structures or certain types of vocabulary.
1: Very minimalistic in speech with little use of newly learned materials. The interlocutor often has to put words in the student's mouth to continue communication.
0: No utterances -- ungradable.
**Socio-cultural Appropriateness:** Is your Japanese appropriate to the context provided?

4: Very appropriate in speech (including selection of speech style) and behavior in general, including non-verbal communication (body language, turn-taking, etc.). Shows careful, appropriate consideration to cultural/contextual information in each interaction.

3.5: Most of the times appropriate, with few interactions that might be considered rude, strange, stiff, or inappropriate to the given context.

3: Repeated behavior that result in miss-communicating own intentions.

2: Some interactions that would be considered rude, strange, or inappropriate, with a few that might offend the interlocutor.

1: Interactions that are most of the time irrelevant to the given situation, or rude to the interlocutor.

0: No utterances -- ungradable.

**Accuracy:** Is your speech structurally well formed?

4: Very few structural errors in communication. Most, if no all, of the errors are self-corrected.

3.5: Few errors that might cause misunderstanding in communication. Overall comprehensible with contextual help and work on interlocutor's side.

3: Many errors in structure, including some that would most likely hinder communication even with contextual help.

2: Speech causes communication breakdown due to incoherent structure. Shows serious lack of structural knowledge.

1: Speech consists of unstructured sets of words or expressions that are not meaningful in the given context. (“word salad”)

0: No utterances -- ungradable.

**Pronunciation:** Does your speech sound Japanese/Chinese?

4: Native-like speech sounds, including accent and intonation, which are very clear to understand and would make the interlocutor very comfortable.

3.5: Sporadic errors in pronunciation, accent, or intonation which are not patterned (regular) and have minimum hinderance to communication.

3: Some patterned errors in pronunciation, accent, or intonation, which would affect interaction negatively, either through misinformation or by making the target native uncomfortable, if it were not for a sympathetic listener.

2: Patterned errors or frequent errors, even if not patterned, in pronunciation, accent, or intonation, which would affect interaction negatively, either through misinformation or by making the target native uncomfortable.

1: Speech sounds that would be very difficult to comprehend by a native speaker or cause annoyance to conversation partners.

0: No utterances -- ungradable.
**Listening Comprehension:** Are you understanding what you hear?

4: Quick and accurate understanding of intentions with no major obstacles in interaction. There are few cases that require repeating the questions, etc.
3.5: Some miscomprehension that affect communication, or a few utterances that need to be repeated to be understood.
3: Some repeated inability to comprehend the conversation partner’s intentions.
2: Many errors in comprehension with a few serious ones that would stop the flow of conversation and/or might make the completion of a given task unattainable.
1: Unable to comprehend most of the speech by the interlocutor; very difficult to maintain a conversation.
0: No utterances -- ungradable.

**Overall Communicative Effectiveness:** Do you and your conversation partner exchange information, ideas, perspectives, and feelings in a productive manner?

4: The two people exchanged information, ideas, perspectives, and feelings freely and effectively.
3.5: Some miss-communication or bumpiness, which is readily repaired by the student.
3: Some repeated difficulty in communication that required the conversation partner to do guess work or tolerate the lack of comprehension.
2: Many obstacles to keeping smooth conversation. Much burden placed on the conversation partner.
1: Unable to work together to have productive communication.
0: No utterances -- ungradable
Appendix C: Daily grade rating scale

Daily grade rating scale used in the CFL program at The Ohio State University
(Extracted from Chinese 1101.01 syllabus, Autumn 2013)

4 = Performance that promises interaction with a native with no difficulty, discomfort, or misunderstanding; no hesitation noise in speaking and no “foreignisms” in the written work; correction is self-managed.

3.5 = Performance comprehensible to native speakers, but some non-patterned errors that would hinder smooth interaction with them; not all correction is self-managed.

3 = Performance comprehensible to a native, but evident weakness or patterned error; most correction is from instructor

2.5 = Communication requires much help from instructor.

2 = Performance puts burden on interlocutor. To facilitate communication, an English-speaking native would avoid using Chinese with you.

1.5 = Barely prepared, little competency evident

1 = Evidently unprepared, unable to perform

0 = Absent
Appendix D: Sample context for structured composition

学而时习之 1.2

请根据以下提示写一段话，尽可能多地用到本部分列出的结构。

有人在网上发帖说“网络使人与人之间的关系变得疏远（shūyuǎn）了”，你不同意这个说法，所以回帖辩论。

Imagine that you have just read an online post arguing that “The Internet has made interpersonal relations less intimate.” Draft a response arguing the opposite.

The target structures for the context above included the following. The students could use all or a minimum of a number of them specified by their instructor.

(1) 所谓……，就是……
(2) 以……为代表的
(3) 为……提供……
(4) 先后经历了……
(5) 无论是……还是……，都……
(6) 即便……，也……（反而……）
(7) 虽然……但（是）……
(8) ……并没……，反而……
# Appendix E: Report of reading-performance watch

| Fact file of the article | Title:  
Author:  
Source:  
Time of publication: |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scripts</strong></td>
<td>Me</td>
</tr>
<tr>
<td><strong>Content</strong></td>
<td></td>
</tr>
<tr>
<td>- What’s it about?</td>
<td></td>
</tr>
<tr>
<td>- Was it interesting?</td>
<td></td>
</tr>
<tr>
<td>- Why/ Why not?</td>
<td></td>
</tr>
<tr>
<td><strong>Language</strong></td>
<td></td>
</tr>
<tr>
<td>- Is it impressive?</td>
<td></td>
</tr>
<tr>
<td>- Why/ Why not?</td>
<td></td>
</tr>
<tr>
<td><strong>Roles</strong></td>
<td>Assumed author</td>
</tr>
<tr>
<td>- Background?</td>
<td></td>
</tr>
<tr>
<td>- Purpose of writing?</td>
<td></td>
</tr>
<tr>
<td><strong>Reader</strong></td>
<td></td>
</tr>
<tr>
<td>- Background?</td>
<td></td>
</tr>
<tr>
<td>- Any emotional reaction?</td>
<td></td>
</tr>
<tr>
<td>- Best reason for reading this article?</td>
<td></td>
</tr>
<tr>
<td><strong>Setting</strong></td>
<td>1. Where did the reading happen?</td>
</tr>
<tr>
<td></td>
<td>2. When did the reading happen?</td>
</tr>
<tr>
<td></td>
<td>(What did the reader do before and after reading the article?)</td>
</tr>
<tr>
<td></td>
<td>3. Who was the audience for the act of reading (present or not present)?</td>
</tr>
</tbody>
</table>
From discussion and comparison, I have learned …
(e.g., points of view, expressions, strategies of reading / talking about the article)

<table>
<thead>
<tr>
<th>What am I confused about?</th>
</tr>
</thead>
</table>

| What am I going to do? |
Appendix F: Template for written report

标 题 (Title)

研究背景与问题 (Research Question)
这个部分可以是一、两个段落，包括以下内容:
- 简短地介绍你的研究动机 (Briefly describe your motivation to do the research.)
- 说明研究的社会意义 (Explain the significance of the research.)
- 阐述研究问题（可以包含对结论的假设）(Describe your research question. You may include your hypothesis about the findings.)

研究方法 (Method)
这个部分可以分以下两个小标题:
- 研究对象: 介绍研究对象 (Describe your subjects)
- 研究方法: 描述收集数据的方法 (Describe your method of data collection)

数据分析与讨论 (Data and Discussion)
这个部分可以包括以下内容:
- 描述你要分析的数据 (Describe the data you are to analyze and discuss)
- 介绍对数据分类的方法和目的 (Explain your method of categorization)
- 结合采问题讨论数据 (Discuss the data in relation to your interview questions)

结论 (Conclusion)
这个部分可以包括以下内容:
- 结合研究问题（及假设）总结研究发现 (Summarize your findings)
- 提出疑问或进一步研究的方向 (List any questions that emerge from the research and what could be done in future research)
Appendix G: Sample “Curious Learners’ Club”

好奇宝宝俱乐部（一）

好奇宝宝们！下面这十个词你都听说过吗？快上网查个究竟吧！它们背后有怎样的故事？为什么是它们当选 Top Ten？

2013年互联网十大热词

2013年互联网十大热词及年度汉字，由互动百科联合中国文化促进会、中国新闻周刊、中国移动手机报、中国汉字听写大会、搜狐新闻客户端共同发布，以盘点年度热点、反映时代特色、记录社会形态为目标，结合全年网民的关注度、年终投票，最终由专家评议产生后，于2013年12月23日正式发布：中国梦、土豪、雾霾、中国大妈、单独二孩、斯诺登、比特币、嫦娥三号、房姐、大黄鸭入选2013年互联网十大热词。

（来源：百度百科 http://www.baike.com/wiki/）

问问你的中国朋友们，看他们认为还有哪些词有资格候选。
任务之二：杭州美食

背景知识

1. 你吃过中国的哪些地方风味？你对那些地方风味的菜有什么印象？以下词汇供参考。What local flavors have you tasted in China? What are your impression them? You may use the following expressions to describe them.

<table>
<thead>
<tr>
<th>口味(kǒuwèi)</th>
<th>taste; flavor</th>
<th>烹饪方法(pēngrèn fāngfǎ)</th>
<th>cooking methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>酸甜(suāntián)</td>
<td>sour and sweet</td>
<td>蒸(zhēng)</td>
<td>steamed</td>
</tr>
<tr>
<td>酸辣(suānlà)</td>
<td>sour and spicy</td>
<td>煎(jiān)</td>
<td>fried</td>
</tr>
<tr>
<td>麻辣(málà)</td>
<td>hot and spicy</td>
<td>炒(chǎo)</td>
<td>stir-fried</td>
</tr>
<tr>
<td>香辣(xiānglà)</td>
<td>spicy</td>
<td>炸(zhá)</td>
<td>deep-fried</td>
</tr>
<tr>
<td>鱼香(yúxiāng)</td>
<td>spicy</td>
<td>焖(dùn)</td>
<td>stewed</td>
</tr>
<tr>
<td>清淡(qīngdàn)</td>
<td>light-flavored</td>
<td>烤(kǎo)</td>
<td>roasted</td>
</tr>
<tr>
<td>舌(kū)</td>
<td>bitter</td>
<td>水煮(shuǐzhǔ)</td>
<td>poached</td>
</tr>
<tr>
<td>臭(chòu)</td>
<td>smelly</td>
<td>凉拌(liángbàn)</td>
<td>cold and dressed with sauce</td>
</tr>
</tbody>
</table>
在下面的表格中列出三道你最喜欢的中国菜的名字，给老师和同学们介绍那道菜的主要材料（如：海鲜、牛肉、蔬菜等）、烹饪方法和口味，并说明它属于中国哪个地方的风味。List three of your favorite Chinese dishes. Introduce their main ingredients, cooking methods and taste, as well as the origin of each dish.

<table>
<thead>
<tr>
<th>名称</th>
<th>主要材料</th>
<th>烹饪方法</th>
<th>口味</th>
<th>所属地方</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>3.</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

2. 选择餐馆的时候，你通常会优先考虑哪些因素？为什么？Which are the major factors that would affect your decision when selecting a restaurant?
   （1）价格
   （2）口味
   （3）餐馆的用餐环境和服务
   （4）餐馆的地理位置和交通
   （5）其他

3. 你用过或听说过“大众点评”网吗？

大众点评 [http://www.dianping.com/](http://www.dianping.com/) 提供了各个城市的商户信息、消费点评及消费优惠等信息服务，同时也提供团购、餐厅预订、外卖及电子会员卡等 O2O（Online To Offline）交易服务。

 ![大众点评](http://www.dianping.com/)

准备活动

请你去“大众点评”的“杭州站” [http://www.dianping.com/hangzhou](http://www.dianping.com/hangzhou)，从“最佳餐厅”列表中找几家又便宜又好的餐馆，读一读其他消费者的点评，找出一家你觉得最值得一去的餐馆，记录以下信息，以便给同学们推荐。Follow the link to Dazhong Dianping. From the “最佳餐厅” list, identify a few restaurants that are cheap but nice. Read the customer reviews and select your favorite one among them. Be ready to share the following information about your favorite restaurant in class.
<table>
<thead>
<tr>
<th>序号</th>
<th>内容</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>餐馆名称：________________________________________________</td>
</tr>
<tr>
<td>(2)</td>
<td>餐馆类型：（如：火锅、自助餐、家常菜……）</td>
</tr>
<tr>
<td>(3)</td>
<td>餐馆地址：_______________________________________________</td>
</tr>
<tr>
<td>(4)</td>
<td>订座电话：________________________________________________</td>
</tr>
<tr>
<td>(5)</td>
<td>乘车路线：________________________________________________</td>
</tr>
<tr>
<td>(6)</td>
<td>人均消费：________________________________________________</td>
</tr>
<tr>
<td>(7)</td>
<td>推荐原因：___________________________________________</td>
</tr>
</tbody>
</table>

**提交任务**

请你准备 2—3 张幻灯片，做一个 2 分钟左右的口头报告，给老师和同学们推荐一家杭州的餐馆。报告的时候主要介绍餐馆名称、类型和推荐的原因。可以引用其他顾客的点评。记得把你的报告中所涉及的生词做成汉英对照的生词表（含拼音），发给每个同学。

Please prepare 2-3 PowerPoint slides to do a 2-minute mini-presentation, recommending a restaurant to your teacher and classmates. You may cite customer reviews to support your recommendation. Remember to prepare a copy of Chinese-English vocabulary list (with pinyin) for every classmate.
Appendix I: Sample written quiz

读写小测验（一）

一、 你的朋友不理解划线部分的意思，你可以用方框里的那个表达来解释每个词？把相应的序号写在划线的词下方。Your friend does not understand the underlined phrases. Which expression can you use to explain each underlined phrase? Please write the corresponding letter under each phrase. (0.5 分 X 6 = 3 分)

A. 一点也不值钱
B. 学习别人好的方面来弥补自己不好的不足
C. 保持着原来的重要地位
D. 完全接受西方的观念
E. 无法想象，也不能理解
F. 有很多，而且到处都有
G. 感到十分得意

例：肯德基在中国开店超过1000家而沾沾自喜。G
1. 国产电影在他们眼里一文不值。
2. 在中国众多的传统节日中，只有春节还稳坐江山。
3. 中小学生对乔丹和贝克汉姆的崇拜让他们的父母都感到不可思议。
4. 中西方文化均有弱点，只能互相取长补短，平行发展。
5. 中国青年并不是全盘西化，传统文化仍然根深蒂固。
6. 现在认为中西方文化融合是社会发展的必然趋势的年轻人比比皆是。

二、 根据你对《中国青年带着传统面对西方文化》的理解，选择适当的表达完成对话。Please select proper expressions to complete the following dialogs based on your understanding of the article “中国青年带着传统面对西方文化:” There is one distraction in each group of expressions. (1 分 X 7)
1. 引起……的关注，包括……在内的，在……的协助下，连皮毛都算不上，带着传统面对西方文化，表明

记者：现在，________中国的青年人________的几乎所有人都承认西方文化对中国青年的生活方式和价值观确实产生了影响。那么你觉得这种影响到底有多大？

张燕：我们都承认西方发达国家在很多方面比我们先进，那些先进的文化产品很容易________我们________，但是，我对七个不同城市的几百名青年的调查结果________，青年人并不是完全接受西方的外来文化。应该说，他们是________。________。

记者：张燕，我注意到你的调查范围特别广，包括了七个地理位置不同的城市中的几百名青年人。你一个人是怎么完成这么大的范围的调查的？

张燕：其实我并不是一个人完成的，是________同学________完成的。

2. 虽然……但是……，融合、扑面而来

记者：现在，中国与西方文化，尤其是美国文化的接触更加频繁。您认为这对中国文化会不会是一个挑战？我们是不是应该截击西方文化对中国青年人的冲击？

胡守文：________西方文化的进入对中国文化是个挑战，________不要一说西方文化就害怕。我认为中西方文化________是社会发展的必然趋势。

三、（附加题/Bonus points）简答

请简短说明中国青年对待西方文化的态度，并举例支持你的观点。Briefly describe Chinese youth's attitude towards Western culture and cite concrete examples to support your opinion.

计分方法：内容（包括观点和例子）2分，语言（包括准确性和连贯性）2分

Grading criteria: 2 points for content (incl. opinion and examples) and 2 points for language (incl. accuracy and coherency)
Appendix J: Survey questions for students and their Chinese language partners

The following questions were delivered in Chinese and English through SurveyMonkey.com.

1. 在 CLS2014 项目期间，你是否跟语伴一起准备了读写课？During the CLS2014 program, did you prepare for reading/writing classes with your language partner?
   ○ 是 Yes
   ○ 否 No

2. 在 CLS2014 项目期间你所在的读写班是哪个？Which reading class were you in during CLS2014?
   ○ 一班 Class 1
   ○ 二班 Class 2

3. 请描述你跟语伴一起准备读写课的时候所做的主要活动？Please describe the activities you did with your language partner as preparation for reading/writing classes.

4. 以上学习活动中对你帮助最大的有哪些？请依次列出，并简要说明那些活动的效果。Among the activities you mentioned above, which ones do you think were the most effective? Please list them below and briefly tell in what ways those activities were helpful.
Appendix K: Survey questions for instructors

The following questions were delivered in Chinese through SurveyMonkey.com.

1. 在 CLS2014 项目期间您所教的读写班级是哪个？
2. CLS2014 项目期间，为上好一节读写课，您一般做哪些课前准备？（如有查阅资料，请详细说明其用途）
3. 以上准备工作中，有没有您觉得是一种享受或学习，而不只是负担的？如果有，请列举，如果没有，请写“无”。
4. 读写课堂内的活动中，您觉得那些是必要的，或是对学生最有帮助的？最好能简要说明理由。
5. 您对学生课前准备的情况感到满意吗？
   ○ 非常不满意
   ○ 不满意
   ○ 满意
   ○ 非常满意
   ○ 其他（请说明）
6. 在实施 CLS2014 读写课程的过程中，您遇到的最大的困难是什么？您是如何克服的？
7. 其他反馈（如：你对于读写教材或课程安排的改进建议、话题的选择、学生课外任务，等等）

English translation of the above survey questions:

1. Which group did you teach during CLS2014?
2. What did you do as preparation for conducting a successful lesson? (If you consulted external resources, please indicate your purpose.)
3. Did you find any of the preparation tasks mentioned above enjoyable? If yes, please list them. If no, please write “none.”
4. Which in-class activities did you find necessary or especially helpful for students? Please briefly explain.

5. Were you satisfied with students’ class preparation?
   ○ Very dissatisfied
   ○ Dissatisfied
   ○ Satisfied
   ○ Very satisfied
   ○ Other (Please indicate)

6. While implementing the CLS 2014 reading curriculum, where were the biggest challenges for you? How did you overcome them?

7. Other comments (E.g., your suggestions for improving the course material or schedule, selection of topics, and home assignments, etc.)
Appendix L: The evolution of life on the Earth

(Extracted from Gould, 1994, p.86)

PROGRESS DOES NOT RULE (and is not even a primary thrust of) the evolutionary process. For reasons of chemistry and physics, life arises next to the ‘left wall’ of its simplest conceivable and preservable complexity. This style of life (bacterial) has remained most common and most successful. A few creatures occasionally move to the right, thus extending the right tail in the distribution of complexity. Many always move to the left, but they are absorbed within space already occupied. Note that the bacterial mode has never changed in position, but just grown higher.