SECOND LANGUAGE ACQUISITION OF TEMPORALITY AND PASSIVE VOICE: A CASE STUDY OF A CHINESE CHILD LEARNING ENGLISH IN MAINSTREAM CLASSROOMS IN THE UNITED STATES

by

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(Under the Direction of Don McCreary)

ABSTRACT

Using as data the writings produced by a Chinese child learning English in mainstream classroom in the United States during the age of 11;11 – 13;11, this project investigated this particular child's acquisition of English temporality and passive voice constructions. Two research approaches are adopted. Employing form-to-function approach, it replicated the Aspect Hypothesis, studied the extent to which he used verbal inflections to encode tense, grammatical aspect, and explored the functions of the various passive structures that he used. Using function-to-form approach, this project revealed the various morphosyntactic means he used to encode simple present/past tense, present/past future tense, present/past progressive aspect, present/past perfect aspect, simple present/past passive voice, present/past future passive voice, present/past progressive passive voice, and present/past perfect passive voice. For each of these functions, the general developmental trend was described and the non-target forms were investigated.

In terms of the functions of the four verbal inflections, this project reached the following conclusions. First, “-zero” was unrevealing at lower stages but was used to satisfy the syntactic/tense/aspect requirements at higher stages. Second, “-s” was more bound to the number of the sentence subject than to grammatical tense/aspect or lexical aspect. Third, “-ing” was influenced by lexical aspect before this subject became very proficient in this language. Finally “-past” was mainly used to mark tense, grammatical aspect, and other syntactical requirements.

In terms of the forms that this child used to encode the grammatical functions, this project arrived at the following conclusions. First, he used uninflected forms to encode many tense/aspect/passive functions. Second, he often misused the present tense/aspect/voice structures for their past counterparts or the other way around. Third, he was more confused by tense differentiations than by those of aspect/voice. Finally, the varieties and the amount of non-target forms are related to the degree of semantic/syntactic complexities, the possible lack of explicit explanations and intensified drills, and the possible interference of his mother tongue.

INDEX WORDS: Tense, Aspect, Lexical Aspect, Passive voice, Aspect Hypothesis, Second Language Acquisition, Morphosyntactic Means, Pragmatic Means, Lexical Means, Language Transfer

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DEDICATION

To the memory of my father, Xinming Han

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INTRODUCTION

How temporality is encoded in human languages is an interest topic. For a single event, it can be completed or in progress; for two events, their temporal relationship can be sequential or topological, as illustrated in (1.1) - (1.5):

(1.1) I **arrived** a moment ago. (*Completed*)

(1.2) I **am opening** the package now. (*In progress*)

(1.3) I **opened** the package before she **came back.**
(*Before/after*)

(1.4) She **was crying** when **I saw** her. (*Enclosure*)

(1.5) While she **was typing, I was reading**. (*Simultaneity*)

How grammatical voice is encoded in languages is also interesting. Grammatical voice indicates the relationship between the action or state expressed by the (logical) predicate verb and the (potential) subject of the same clause. When the subject is the agent, the verb is said to be in the active voice; when the subject is the theme, the verb is said to be in the passive voice. The words “potential” and “logical” are used to cover grammatical voice in non-finite structures, as displayed by (1.6) – (1.7):

(1.6) I want this to **be done** as soon as possible.

(1.7) Having **bullied** other people for such a long time, he
couldn’t bear **being bullied** by others.

Temporality and grammatical voice are among the most ubiquitous and important concepts expressed in languages: every sentence that we encounter or produce expresses these concepts. They are also among the most difficult areas to be acquired by second language learners. It is often the case that after many years of studying and living in the United States, many international students still cannot express these concepts properly with regard to their forms, functions, and the contexts in which they occur.

1.1 ENCODING TEMPORALITY AND THE PASSIVE VOICE

The most typical means employed by the languages in the world to express temporality are pragmatic means, lexical means, and morphosyntactic means (Dietrich, Klein, & Noyau, 1995; Meisel, 1987; Schumann, 1987). It is my point of view that except for lexical means, they are also the most typical means to encode the passive voice.

1.1.1 Pragmatic means

Pragmatic means refer to extralinguistic contexts such as the common knowledge shared by the communicators and situational contexts, as in (1.8) – (1.9):

(1.8) Do you know when World War II **broke out**?

(1.9) Two **Killed** in a Head-on Collision (*A newspaper heading*)

The past temporality of (1.8) is dictated by the shared knowledge that the time at which World War II broke out is in the past; while the situational context that (1.9) is a newspaper headline, the auxiliaries of which are often omitted, makes the implied passive voice understood.

According to Braidi's account (1999, pp. 145-147) of Givon (1979; 1993), some languages have completed and others are still on the way of grammaticalization, the process by which languages develop grammatical morphology in place of paratactic

constructions to perform semantic functions, such as tense, aspect, mood, passiveness and causativeness. Under this view, Chinese, which is still in this process, relies on pragmatic means along with lexical means to encode tense (one type of temporality), as in (1.10), and marginally relies on pragmatic means to express the passive voice, as in (1.11):

(1.10) 很多 人 **死** 于 文 革。
many people **die** *during culture revolution*
'Many people died during the Cultural Revolution.'

(1.11) 树 **吹** 断 了。
tree **blow** *break* *-le* (perfective marker) 'The tree was (has been) broken by the wind."

The base form of "die" was used in (1.10), though its past form should have been used by logic. However, the incongruity between the linguistic form and the real temporal situation is removed by the common knowledge that the Cultural Revolution took place before this claim was made. Similarly, the passive voice of (1.11) was encoded without using morphosyntactic devices by resorting to the common sense that it is the wind that breaks the tree rather than the other way around.

In comparison, English, a language that has completed its grammaticalization process, relies on grammatical morphology to express temporality and the passive voice. However, there are certain occasions on which pragmatic means do play an important role in expressing temporality, as in (1.12) and (1.3):

(1.12) The problem **was/is** discussed in chapter 2 above. (Leech, 1987, p. 12)

(1.13) We **return/shall return** to this topic in the next chapter. (Leech, 1987, p. 12)

The situational contexts of (1.12) and (1.13) dictate the selection of the corresponding tenses: if the book is treated as a whole, the simple present tense is used, otherwise, the past tense is used for (1.12) and the future tense for (1.13), respectively (Leech, 1987, p. 12). In the same book, Leech gave an account of how the simple present tense and the simple progressive aspect are used by radio commentators for fast-moving sports and leisurely sports respectively:

> It has been noticed that whereas radio commentators for fast-moving sports (football, tennis, boxing, etc.) tend to use the Simple Present (*Greaves* SHOOTS *for a goal…; Mrs. King* SERVES…; *Walker* DUCKS…), those describing more "leisurely" sports (cricket, rowing, gold) rely more upon the Progressive Present: *Morris* IS RUNNING *up to bowl*; *Oxford* ARE ROWING *well*…; this is not surprising, since in such sports it is more difficult to see the stages of the march or contest as having no duration. (Leech, 1987, p. 19) [All emphases are original]

Dittmar (1992) suggested that second language learners' grammatical development is a type of grammaticalization process undertaken by natural languages: pragmatic means are favored by beginning second language learners to express temporality and morphosyntactic means are used by advanced learners. This claim is supported by Meisel (1987), Schumann (1987), and Dietrich et al (1995). According to these studies, pragmatic means resorted to by second language learners during their early phases of acquisition are implicit: relying on the scaffold set up by the interlocutor and the

audience's inferential ability to find out the temporal references, juxtaposing the events chronologically, and contrasting several events of the same kind (Table 1.1).

Table 1.1 Pragmatic means employed by beginning second language learners to express temporality

Study	Pragmatic means	Example and/or comment
Schumann (1987, pp. 35-37)	Serialization (Juxtaposing several events in chronological order)	1. My husband uh, marry. 2. First wife pass away. 3. And come back in Mexico and marry me. These three events were mentioned in the actual order in which they occurred.
	Implicit reference (temporal reference inferred by hearer contextually)	The same above-listed examples. The temporal references of these events can be inferred by the hearer/reader from the fact that they occurred before the time of utterance.
Meisel (1987, pp. 212-214)	Scaffolded discourse (Slobin 1981)	The learners merely has to pick the right point of reference among the several suggested by the native interlocutor.
	Implicit reference	e.g. meine schwester klein meine mutter ni arbeit "My sister small my mother not work" The hearer/reader is assumed to be able to infer that the temporal reference is in the past
	Contrast two or more events	Related to implicit reference
	Order of mentioning follows the natural order	Same as Schumann's serialization.
Dietrich et al (1995, p. 26)	PNO (principle of natural order)	Same as Schumann's serialization.

Pragmatic means are not used as often to express the passive voice as to express temporality because the active voice counterpart can perform the same ideational

function. Thus the less advanced language learners often avoid using the passive voice, which is one of the reasons for the rarity of the passive structures in the production of beginning and intermediate second language learners.

1.1.2 Lexical means

Lexical means refer to all of the means that do not rely on pragmatic contexts or tense-aspect-voice markers, which can be further classified into three devices: 1) lexical semantics, 2) adverbial phrases, and 3) adverbial clauses.

The first device exploits the fact that the semantic components of some nouns, verbs, and adjective automatically describe the linear or topological temporal relationships between two events, as illustrated by (1.14) – (1.17):

(1.14) The wedding was **followed** by the reception.

(1.15) The wedding is **prior** to the reception.

(1.16) The **precedence** of speech over writing is an accepted fact.

(1.17) The **coincidence** of these two events is out of my expectation.

These and other words capable of expressing the temporal relationship between two events are summarized in Table 1.2.

The second device is the use of adverbial phrases, which are either single words or a group of words strung together modifying the predicates. To distinguish them from non-finite temporal clauses, adverbial phrases in this dissertation are defined as containing no verbs. Some of the typical examples are given as (1.18) – (1.21):

(1.18) This has happened **before.**

(1.19) I shall deal with this **tomorrow/later**.

(1.20) **From now on**, I need to be careful.

(1.21) She was born on **February 1, 1965**.

These and other common temporal adverbial phrases are summarized in Table 1.3:

Table 1.2 Words capable of expressing the temporal relationship between two events

	Before	**Simultaneous**	**After**
Noun	anteriority, precedence, predecessor, prediction, priority	coincidence, simultaneity, co-occurrence	posterity, succession, successor, sequel
Verb	antecede, antedate, anticipate, precede, predate, result in, give rise to, lead to	co-occur	follow, precede, predict, postdate, succeed, result from
Adjective	anterior to, earlier, preceding, previous, prior to	simultaneous	consecutive, following, posterior to, subsequent, successive

Table 1.3 Temporal adverbial phrases

Single words	yesterday, today, tomorrow, later, ago, before, recently, lately, already, yet, just, again, often, always, seldom, never, previously, simultaneously, subsequently
Word strings	in 1967, on Mondays, at 2 o'clock, all along, from 1967 to 2005, from now on, last Wednesday, the day before yesterday, in the past, day in and day out, by the end of this semester, till early this morning

Adverbial clauses, the third device, include both finite and non-finite adverbial clauses in this dissertation. They express the relationships between the temporal reference of the adverbial clauses and that of the main clauses. The finite adverbial clauses contain independent predicates (finite verbs) and are introduced by conjunctions, as in (1.22) – (1.27). The non-finite adverbial clauses, instead of having complete predicates, take the

form of infinitives, present/past participles, or gerunds and do not have to be introduced by conjunctions, as illustrated by (1.28) – (1.32).

Finite temporal adverbial clauses:

(1.22) He was reading a book **when I saw him**.

(1.23) I want to get some gas **before the price goes up**.

(1.24) He went home **after everybody left**.

(1.25) I got an idea **as soon as I saw him**.

(1.26) He was reading a book **while his classmates were listening to the instructor**.

(1.27) I am happy **as long as you are with me**.

Non-finite temporal adverbial clauses:

(1.28) He left **before shutting off the lights**.

(1.29) He left **before her coming back.**

(1.30) **After cleaning everything up**, I left.

(1.31) **Upon seeing him**, I got an idea.

(1.32) **While crossing the street,** he met his ex-girlfriend.

As shown by the above examples, non-finite adverbial clauses are the condensed forms of finite adverbial clauses. They sound more formal and are more difficult to master than finite adverbial clauses, which is one of the reasons that make them appear late in the production of second language learners.

Before I move on to morphosyntactic means, I will summarize the strengths and weaknesses of pragmatic means and lexical means in expressing temporality and the passive voice.

Their foremost strength is that they reduce redundant temporal markings. For example, the inflectional marking on the verb of (1.33) is redundant, since it is common knowledge that the time of the breaking out of that war is in the past. Ideationally, (1.33) is the same as (1.34).

(1.33) I don't know when World War II **broke** out.

(1.34) * I don't know when World War II **breaks** out.

Similarly, the inflectional marking on the verb of (1.35) is redundant as well, since the adverbial phrase clearly says that the time for which this claim was made is before the time of utterance. Ideationally, (1.35) is the same as (1.36).

(1.35) World War II **broke** out on September 1, 1936.

(1.36) * World War II **breaks** out on September 1, 1936.

That (1.34) and (1.36) sound ungrammatical and distracting to us is simply because we are used to morphosyntactic tense-aspect marking.[1] Speakers of Chinese and similar languages simply do not distinguish "break out" from "broke out" morphosyntactically; they use the base form for both instead. This advantage of pragmatic and lexical means makes it possible for beginning language learners to fully utilize their limited linguistic resources to be understood without having to produce grammatically perfect sentences. However, such usefulness is quite primitive. First of all, except for some special cases, they play little or no role in expressing the passive voice. Second, their roles in expressing temporality are limited by the following factors.

To begin with, encoding temporality via scaffolded discourse presupposes the co-presence of the interlocutors involved, as "the learner merely has to pick the right

[1] As pointed out by Dr. Langston in his comments, the sentence 'World War II **breaks** out on September 1, 1936.' would be acceptable in the right context.

point of reference among the several suggested by the native interlocutor' (Meisel, 1987, p. 213). Secondly, the implicit reference method, except for some well-known historical events, requires the presence of the hearer as well. More often than not, even the presence of the hearer does not help, as his/her temporal inference does not always match that intended by the speaker, which may fail to produce the correct interpretation of the intended temporal reference. Lastly, though serialization does not require the presence of the hearer, it works only for the foreground clauses (those serving as the backbone) of pure narratives. It cannot work for narratives that are woven with both foreground clauses and background clauses (those providing side-remarks and supplementary information), nor does it provide a clear temporal reference for non-narrative genres in which the clauses are not threaded by the temporal theme. The hypothetical ungrammatical examples of (1.37) – (1.39) illustrate these points. Please note that all of the clauses of these examples lack proper tense-aspect marking, which simulate the possible production of a beginning language learner.

(1.37)

(1) * We **go** to Ben Burton Park.

(2) * We **put** our picnic cloth over a table.

(3) * We **place** our food on it.

(4) * We **take out** our camera and take some pictures.

(5) * We **eat up** our food.

(6) * We **come back**.

(7) * We **transfer** the pictures to our computer.

This is a pure narrative. The time for which the claim is made of clause (1) is before that of clause (2), which is in turn before that of clause (3), and so on, thus creating a straightforward linear temporal chain. With a little inference, the audience can figure out the temporal references of this narrative, even though the clauses lack tense-aspect marking altogether. However, such pure narratives exist few and far between in real situations. Instead, fuller narratives that are dispersed with background clauses providing reverse-order reports, comments on the ongoing events, and supplementary information are much more common, as in (1.42) below. The italicized clauses are background clauses. Again, all of these clauses are ungrammatical.

(1.38)

(1) * We **go to** Ben Burton Park.

(2) * *We **prepare** for this trip for several days.*

(3) * We **put** our picnic cloth over a table.

(4) * *We **buy** this cloth in China.*

(5) * We **place** our food on it.

(6) * *There **are** Chinese food and Korean food.*

(7) * We **take out** our camera and take some pictures.

(8) * *That **is** a Kodak digital camera.*

(9) * *We **buy** it at amazon.com.*

(10) * *The hands **move**.*

(11) * *But we **enjoy** those pictures.*

(12) * We **eat up** our food.

(13) * We **come back**.

(14) * We **transfer** the pictures to our computer.

The italicized clauses are not in the same temporal line of the backbone of the narrative; serialization of them gives us no idea of their temporal references; thus it is far from capable of handling real narratives containing both foreground and background clauses. Serialization cannot help the audience to anchor the temporal references of non-narrative genres, such as description, explanation, argumentation, etc.

In comparison with implicit pragmatic means, explicit lexical means are more powerful in encoding temporality.

To begin with, the weakness of using lexical semantics alone is that it has no way of anchoring the time between two events and the time of utterance, which can be illustrated by (1.39)- (1.41), which are all ungrammatical.

(1.39) * A hot debate **follow** his speech.

(1.40) * A hot debate **follow** his speech last evening.

(1.41) * A hot debate **follow** his speech tomorrow evening.

By exploiting the lexical meaning of “follow”, example (1.39) only indicates the precedence of his speech over that specific debate, but without proper tense-aspect marking, it says nothing about whether the debate and his speech have taken place or not. With an even more explicit means – the adverbial phrases or adverbial clauses, this problem can be solved. For example, with the help of the adverbial phrase, “last evening”, though still ungrammatical, (1.40) unambiguously tells us that both the debate and the speech have taken place. Similarly, the adverbial phrase “tomorrow evening” of (1.41) makes it clear that they have not taken place yet.

Although adverbial phrases or adverbial clauses can tell us whether the occurrence of an event is in the past, present, or future, they are weak or even useless in telling whether an event is in progress or completed. For instance, in terms of temporal reference, the ungrammatical (1.42) only tells us that Max's watering of his garden took place in the past. We have no idea whether the garden-watering was in progress at that time or was over, since it is perfectly possible that the speaker intended to communicate (1.43) or (1.44):

(1.42) * Max **water** his garden 1 o'clock yesterday.

(1.43) Max **was watering** his garden at 1 o'clock yesterday.

(1.44) Max **had watered** his garden by 1 o'clock yesterday.

In sum, pragmatic means and lexical means on their own cannot accurately express all of the temporal references. Except in some special cases, pragmatic means are very weak in encoding the passive voice and lexical means have almost no use.

1.1.3 Morphosyntactic means

Morphosyntactic means in this dissertation refer to using verbal inflections or particles with or without auxiliary verbs to encode temporality (tense and aspect) and the passive voice. Due to the scope of this dissertation, I will not cover the topic of modality, although it is difficult to distinguish it from future tense. At the outset, I will introduce two different definitions of tense and aspect and how they will be used in this dissertation.

The conventional and frequently quoted definitions of tense and aspect were given by Comrie as "grammaticalised expression of location in time" (1985, p. 9) and "different ways of viewing the internal temporal constituency of a situation" (1976, p. 3),

respectively. That is, by tense we know whether the time of an event or a situation is before, simultaneous with, or after a reference time; by aspect we view an event or a situation from different angles.

These ideas were strongly challenged by Dietrich et al. (1995), who argued that the definition of tense above cannot account for the tense of (1.45) and (1.46) and that Comrie's definition of aspect is metaphorical and hard to apply in actual research.

(1.45) The lion **was** dead.

(1.46) John **will have turned** in his assignment by next Monday.

According to the conventional definition, the past tense indicates that the time at which the event/situation occurred/existed is before the time of utterance, therefore, in (1.45), the time of the lion's being dead should be before the time at which this utterance was made. However, the reality is that the time of the lion's being dead has lasted into the time of utterance and will last forever. Similarly, the future tense of (1.46) indicates that the time of John's turning in his assignment is after the time of utterance. However, it is also possible that John's turning in of his assignment has already taken place by the time of utterance. Observing many other examples that defy the traditional definitions of tense and aspect, these authors proposed that three types of temporal intervals be identified: 1) the time of utterance (TU), indicating the time *at* which a claim is made, 2) the topic time (TT), denoting the time *for* which a claim is made, and 3) the time of situation (TSit), referring to the time at which a situation obtains. They further argued that tense concerns the relationship between TT and TU while aspect concerns that between TT and TSit (pp. 23-24). The common tenses and aspects defined in this framework are listed in Table 1.4.

Table 1.4 Tenses and aspects defined deictically (Dietrich et al.*, 1995, p. 24)*

Tense	PAST	TT BEFORE TU
	PRESENT	TU IN TT
	FUTURE	TT AFTER TU
Aspect	PERFECT	TT AFTER TSIT
	IMPERFECTIVE	TT IN TSIT
	PERFECTIVE	TT includes end of TSit and beginning of time AFTER TSit
	PROSPECTIVE	TT BEFORE TSit

It should be clear that tense and aspect in this framework are not linguistic markers but rather temporal relationships that exist in all languages and that can be encoded by at least three means: pragmatic means, lexical means and morphosyntactic means. With this in mind, we understand that a tenseless language only means that it has no overt tense markers but it does not mean that it has no tense. For example, Chinese does have various tenses, which are encoded by pragmatic means, lexical means and very marginally by aspect markers. Similarly, that German is an aspectless language only means that it has no morphosyntactic means to express aspect; however various grammatical aspects do exist in that language.

English possesses complete morphosyntactic means to encode various tenses and aspects. Morphosyntactic means play a much more important role than the other two in encoding the passive voice as well. Using a transitive verb “make” for third person singular subject as an example, Table 1.5 lists the sixteen possible tense/aspect forms and their corresponding passive forms.

Table 1.5 The possible tense/aspect/passive voice forms of "make"

	Tense/aspect form	**Example**	**Passive voice**
1	Simple present tense	makes	is made
2	Present progressive aspect	is making	is being made
3	Present perfect aspect	has made	has been made
4	Present perfect progressive aspect	has been making	has been being made
5	Simple past tense	made	was made
6	Past progressive aspect	was making	was being made
7	Past perfect aspect	had made	had been made
8	Past perfect progressive aspect	had been making	had been being made
9	Simple future tense	will make	will be made
10	Future perfect aspect	will have made	will have been made
11	Future progressive aspect	will be making	will be being made
12	Future perfect progressive aspect	will have been making	will have been being made
13	Past future tense	would make	would be made
14	Past future progressive aspect	would be making	would be being made
15	Past future perfect aspect	would have made	would have been made
16	Past future perfect progressive aspect	would have been making	would have been being made

The structures of will/shall (would/should) + base verb can be given different grammatical names according to their functions. For example, (1.47) and (1.50) below have more to do with a future plan; therefore, they should be labeled as the present future tense and the past future tense, respectively. However, (1.48), (1.49) and (1.51) are used

to express the volition and intention of the speaker, therefore, it would be more proper to call them modal structures. [1] As this dissertation is not about modality, I will only pick those occurrences when these words were used to express future tenses.

(1.47) I will watch a video after I finish my job.

(1.48) No matter what your schedule is, I will watch a video.

(1.49) That trouble-maker shall get out of here.

(1.50) I told you that my schedule is that I would watch a video after I finished my job.

(1.51) I would like to watch a video after I finish my job.

These three means play different roles in encoding temporality and the passive voice for different languages on the one hand, and for language learners at different proficiency levels on the other. Lexical means serve as reminders of tense /aspect marking on verbs in tense languages such as English while they substitute for tense markings on verbs in tenseless languages such as Chinese. For example, in English "at 2 o'clock yesterday" reminds the interlocutors that the past tense should be marked morphologically, e.g., "Sam arrive**-d** in China at 2 o'clock yesterday." In the equivalent Chinese translation of this sentence, "at 2 o'clock yesterday" is the only indicator of the past tense. For elementary language learners, lexical and/or pragmatic means enable them to focus on meaning by setting them free from marking temporality morphosyntactically, while for proficient learners the tense-aspect markers empower them to be more versatile and expressive and to achieve stylistic uniformity.

[1] Actually, words like "will", "would", "shall", and "should" have more roles than the two I just listed. Take "will" for example, according to Merriam-Webster online dictionary, it can be used to express futurity, determination, probability, and capability, among many others. I thank Dr. McCreary for bringing this to my attentions.

1.2 FRAMEWORK AND RESEARCH QUESTIONS

Two common research approaches in language acquisition are form-to-function approach, which reveals the functions of certain linguistic forms that appear in the production of language learners, and function-to-form approach, which explores the means employed by language learners to encode certain concepts, such as tense, aspect, mood, passiveness, and causativeness, etc. This project will use both approaches to investigate the subject's acquisition of tense, aspect, and the passive voice, focusing on morphosyntactic means only.

Using form-to-function approach, it will answer the following questions: 1) Are there significant associations between the inflections attached to verbs and the lexical aspects residing in those verbs that are claimed by the Aspect Hypothesis? The Aspect Hypothesis, which will be given a detailed definition with illustrating examples in Chapter two, claims that beginning language learners use verb inflections to mark verbs' temporal semantics, rather than the requirements of tense and/or grammatical aspect. 2) To what extent did the subject use verbal inflections to encode tense-aspect *per se*? 3) What are the functions of the various passive structures that appeared in the subject's production?

Using function-to-form approach, this project will answer another three questions: 1) When was a given tense/aspect/passive voice first correctly encoded? 2) At a given period, how many of the obligatory contexts of a given tense/aspect/passive voice were provided with the required form? 3) At a given period, what non-target forms were used to encode an obligatory tense/aspect/passive voice?

1.3 GENERAL METHODOLOGY

1.3.1 Means of obtaining occurrences of forms and contexts

The data to be analyzed in this project amounts to around 50,000 words produced within a time span of 25 months. I relied on the Find/Replace function of Microsoft Word to count the occurrences of specific forms and contexts. This computer-aided analysis depends on accurate data coding. As detailed explanations of individual methodologies are given at the beginning of Chapter Four, Chapter Five, Chapter Six, Chapter Seven, and Chapter Eight, in this section I just give a general description of the methodology that I will use.

In form-to-function paradigm, each verb form is assigned the following codes: 1) a code referring to the verb's aspectual category: "sta" for state verbs, "act" for activity verbs, "acc" for accomplishment verbs, and "ach" for achievement verbs[1], 2) a code marking the verb's inflection: "-zero" for base verbs, "-s" for the third person singular form, "-ing" for a verb ending with "ing", and "-past" for a verb in the past tense, 3) a code indicating the tense, aspect and voice of the verb: e.g., "present" for the simple present tense, "pres_fut" for the present future tense, "pres_perf" for the present perfect, "infn_psv" for "passive voice of an infinitive, etc., 4) the word "correct", if a verb form was used to mark the target function, or the word "incorrect" followed by the code denoting the non-target function if a form was used to mark something other than the required function.

For function-to-form approach, the first code stands for the context of the required verb form, followed by the code "oblg", meaning that the preceding context is obligatory,

[1] The definitions of these verb types will be given in section 2.2 with illustrating examples.

followed by the code “correct”, if the target form was provided, or “incorrect” followed by the code standing for the non-target verb form, if a non-target form was provided. These codes were pre-recorded using the macro function of the Word application to ensure accurate searches.

1.3.2 Statistics significance consideration [1]

This project does not consider statistics significance. The main reason is that this is a longitudinal study of a single subject, tracking many aspects of the subject’s acquisition of English temporality and the passive voice. Some aspects do not have much data to run significance tests, such as his acquisition of the perfect aspect, the future tense, the non-finite passive voice, etc. Possibly because of similar reasons, it is not normal practice in SLA research to consider statistical significance in studies of this type. Actually all of the studies on SLA that I know do not consider statistics significance except Robison (1990, 1995), which run chi square tests.

1.4 OUTLINE OF THE SUBSEQUENT CHAPTERS

Chapter Two will review some relevant studies. The main focus will be on the acquisition of temporality, as the acquisition of grammatical voice has been touched upon very little. Considering that this study is a longitudinal case study with only one subject, a subsection will also be devoted to a brief review of some of the book-length case studies with one informant, the purpose of which is to justify the research methodology of this dissertation rather than setting up the stage for this study. The description of the subject and the data of this project will be offered in Chapter Three. Chapter Four and Chapter Five will take form-to-function approach to look into the functions of the verb inflections

[1] I thank Dr. Langston for bringing the issue of statistics significance to my attention.

that the subject used. Chapter Four will replicate the Aspect Hypothesis by using the written production of the subject of this study to see whether its claims apply to the written production of a single subject. Considering that it is also possible that the subject used the verb inflections to encode grammatical tenses and aspects, Chapter Five investigates the degree to which these inflections were used to encode these temporal functions *per se*. Chapter Six and Chapter Seven are done in function-to-form approach. Chapter Six will investigate how the subject expresses the major English tenses, namely, the simple present tense, the simple past tense, the present future tense, and the past future tense. Chapter Seven will look into his encoding of the major English grammatical aspects. Specifically, his encoding of the following grammatical aspects will be explored: the present progressive, the past progressive, the present perfect, and the past perfect. Chapter Eight will be devoted to his acquisition of English passive voice, employing both form-to-function approach and function-to-form approach. Chapter nine concludes the dissertation, summarizing the findings of this study.

CHAPTER TWO

REVIEW OF LITERATURE

In his seminal work on the acquisition of functional morphemes by children learning English as their native language, Brown (1973) found that his subjects never overgeneralized the inflection “-ing” to state verbs, and that they assigned the English past tense marker almost exclusively to punctual and resultative verbs, such as “fell”, “dropped”, “slipped”, “crashed”, “broke”. These findings made him believe that there existed some associations between the temporal semantics of the verbs and the tense-aspect markers they receive. Since then, in both first language acquisition and second language acquisition, many scholars have started to explore what these associations are and what motivates them(Andersen, 1991, 1993; Andersen & Shirai, 1994; Antinucci & Miller, 1976; Bardovi-Harlig, 1992, 1994, 1998, 1999; Bardovi-Harlig & Bergstrom, 1996; Bardovi-Harlig & Reynolds, 1995; Bloom, Lifter, & Hafitz, 1980; Cziko & Koda, 1987; Li & Shirai, 2000; Rispoli, 1981; Robison, 1990, 1995; Rocca, 2002; Rohde, 1996, 2002; Salaberry, 2000; Shirai & Andersen, 1995; Shirai & Kurono, 1998; Yang & Huang, 2004). In the late 1980s and 1990s, there was a shift of focus in the field of second language acquisition from exploring the functions of the verbal inflections to the forms employed by learners to encode tense and aspect(Dietrich et al., 1995; Klein, 1993, 1994; Meisel, 1987; Schumann, 1987; Yang & Huang, 2004). This chapter gives a relatively comprehensive review of the research in this field and a brief review of the

studies on the acquisition of the English passive voice. As this dissertation is a case study with only one subject, to justify this research methodology, a brief review of some of the book-length case studies with a single informant is also presented.

2.1 FIRST LANGAUGE ACQUISITION OF TEMPORALITY

In the field of first language acquisition of temporality, the research focuses on the following three questions. 1) What is expressed by the inflections attached to the predicate verbs: tense, aspect or something else? 2) What drives the verbal morphology assignment patterns, if any? 3) Can very young children express such temporal concepts as past and future? Before I review the literature, an introduction of the semantic classification of verbs is in order.

A verb has its inherent temporal semantic features, such as stativity vs. dynamicity, atelicity vs. telicity, durativity vs. punctuality, etc. Verbs like “believe”, “live”, and “be” have the stativity semantic feature while verbs like “go”, “swim”, and “draw” have the dynamicity feature. Verbs like “draw”, “run”, and “paint” have the atelicity feature while “draw a picture”, “run a 100-meter race”, and “paint a door” have telicity. Finally, all of the preceding verbs have the feature of durativity but “arrive”, “die” and “finish” have the feature of punctuality. A situation described by the verb has some of these semantic features as well. A situation is telic if it has an intrinsic endpoint, otherwise it is atelic; it is dynamic if it needs energy for its maintenance, otherwise it is stative; and it is punctual if the starting point and the ending point collapse into one; otherwise it is durative. Based on their semantic and syntactic properties, Vendler (1967) classified verbs into state verbs, activity verbs, accomplishment verbs, and achievement verbs.

Two points concerning lexical aspects need to be pointed out: First, although sometimes it is hard to clearly separate the lexical aspects of a verb from those of the situation described by that verb, it is more proper to say that it is the situation that possesses lexical aspects, as manifested by (2.1) – (2.3):

(2.1) I **pushed** the cart in a flash.

(2.2) I **am pushing** the cart.

(2.3) I **am pushing** the cart toward Wal-Mart.

(2.1) is punctual which entails telicity and dynamicity, (2.2) is dynamic and atelic, and (2.3) is telic and durative. These examples show that the same verb when used to describe different situations has different lexical aspects. Second, an activity verb may change into an accomplishment verb by taking a proper object, such as “read” vs. “read a report”.

Equipped with these ideas, let us return to first language acquisition of tense-aspect markers. Bronckart and Sinclair (1973) found some very interesting associations between tense-aspect markers and lexical aspects. Their twenty French subjects predominantly assigned passé composé (the perfective past) on verbs with a clear end result and présent (the present tense) markers on predicates with no clear end result. Among the verbs with a clear end result, those having a longer duration had greater attraction to the present tense than those with shorter or no duration, such as momentary verbs. Similarly, the seven Italian subjects of the longitudinal study Antinucci and Miller (1976) assigned the past tense inflection almost exclusively to verbs with a clear end result but almost never with verbs with no end results. The subjects used imperfetto (similar to English past progressive) to redundantly mark the semantic features of dynamicity, continuousness,

and progressiveness residing in the verbs, rather than the progressive aspect. After investigating the longitudinal emergence of verbal inflections in the spontaneous speech of four American children, Bloom, Lifter, and Hafitz, (1980) found that the subjects assigned “-ing”, “-s”, and irregular past selectively: 1) activity verbs were assigned “-ing”, 2) achievement verbs were assigned irregular past, 3) accomplishment verbs were assigned “-s”, 4) internal states (equivalent to Vendler’s state verbs) either remained uninflected or inflected infrequently with “-s”, 5) perfective states (Vendler’s activity verbs) inflected more often and with more different inflectional forms.

These scholars concluded that in first language acquisition: 1) only telic verbs receive past-tense inflections, 2) tense distinctions are redundant and only accompany aspectual distinctions, and 3) only references to immediate past situations are made. In other words, tense-aspect markers are used by first language learners to express the temporal semantic features residing in the verbs rather than tense-aspect proper and that unless the situation is the immediate past, children cannot express tenses, although they have such tools. They further claimed that children cannot express tense-aspect because they lack an abstract concept of time (Antinucci & Miller, 1976, p. 183). Such alignments of semantic features with verbal morphology were replicated by subsequent scholars with various results.

Andersen (1993) is a purely theoretical paper that put forward one conceptual prime and four principles to account for the findings of the above and other studies. The conceptual prime is the figure-ground conceptual prime, by which humans are predisposed to distinguish figure from ground and “the learner perceives the punctual or telic events as key, important, foreground, and learns to mark them as such and to not

mark the background events or situation" (p. 328). The first principle is the Relevance Principle proposed in Bybee (1985), which states that the more relevant a morpheme is to express the meaning of the verb, the earlier it is acquired. For example, the third person singular "-s" is the least relevant morpheme, therefore it is the latest to appear in the learners' production and gets acquired. The second principle is the Congruence Principle, claiming that it is the inflection whose meaning is most congruent with the meaning of the verb that is attached to that verb. For instance, "-ing" expresses duration and something in progress, therefore it is congruent with the semantic features of activity and accomplishment verbs. Similarly, "-ed" that denotes completion is naturally attached to achievement verbs that imply punctuality. In fact, this Principle is almost the same as the "naturalness of combination" stated in Comrie (1976). The third principle is the One-to-One Principle, which "guides the learner to assume that each grammatical morpheme he discovers has one and only one meaning, function, and distribution." (p. 329). These three principles and the conceptual prime apply to both mature adult speakers and children alike, guiding their assignment of tense-aspect markers. Therefore, the special distribution of tense-aspect markers discovered by the above studies in fact, he claimed, exist in the mature proficient speakers' speech as well that set the model for children to follow. The fourth principle is the Subset Principle, by which he meant that children are more conservative than mature native speakers in making form-meaning mapping. This principle applies to children only, which was termed "the Prototypical Account" in Andersen and Shirai (1994) and Andersen and Shirai (1996).

Andersen (1993) is the first paper that systematically provides a theoretical account for the special distribution patterns of verbal morphology in first language acquisition.

Unlike other scholars who accounted for the phenomenon by either claiming the subjects' cognitive deficit (Antinucci & Miller, 1976; Bronckart & Sinclair, 1973) or resorting to the prelinguistic semantic distinction of process from result (Slobin, 1985) or claiming a biologically pre-programmed facility to distinguish state from process and punctual from nonpunctual (Bickerton, 1981), he attributed children's special distribution patterns of tense-aspect morphology assignment to the input, which are featured by these asymmetric semantic-morphological associations as it is, and to the four cognitive Principles and the Conceptual Prime which reinforce the biased association patterns. Quite a few of Andersen's and Shirai's subsequent papers are based on this paper.

Li and Shirai (2000) examines the acquisition of aspect from both developmental and crosslinguistic perspectives, with an attempt to reveal the computational mechanisms that govern the learning process and to understand the learner's remarkable ability to extract input patterns and form linguistic associations. Three experiments were conducted to investigate the acquisition of Chinese aspect: 1) a comprehension experiment, 2) a production experiment, and 3) an imitation experiment. The results of experiment one showed that the subjects had a better understanding of the progressive marker "zai-" with activity and semelfactive verbs[1] than with accomplishment verbs, and a better understanding of perfective marker "–le" with accomplishment verbs than with activity and semelfactive verbs. In Experiment two, the subjects produced imperfective aspect markers "zai–" and "–zhe" mostly with activity verbs and semelfactive verbs and rarely with accomplishments or achievement verbs. On the other hand, "–le" was produced far more frequently with accomplishment verbs and achievement verbs than with activity

[1] A semelfactive verb is an achievement when referring to a single event and it is an activity in essence as it is often used iteratively. This idea was proposed by Smith (1991). For example, "tap" is a semelfactive verb while "arrive" is an achievement verb.

verbs and semelfactive verbs. In experiment three, the subjects imitated the combination of "–le" with accomplishment verbs and achievement verbs better than with activity verbs and semelfactive verbs, the combination of imperfective "–zhe" and "zai-" with activity verbs and semelfactive verbs than accomplishments and achievement verbs. The results of these three experiments boiled down to one conclusion: there was a consistent association of imperfective markers, "zai-" and "–zhe" with activity verbs and semelfactives and an association of the perfective markers "–le", and "-guo" with accomplishments and achievement verbs. In fact, the associations are more absolute than the findings of the studies of first language acquisition of English. Thus the findings of children's acquisition of Chinese aspect gave strong support to the association patterns between lexical aspect and tense-aspect markers.

Unlike the chapter devoted to the acquisition of Chinese aspect, the chapter describing the acquisition of Japanese aspect is more focused on providing a literature review than on a specific study. The findings of the reviewed studies contradicted each other. For example, Cziko and Koda (1987) reported that there was no reliable correlation between the past inflection "–ta" and punctuality, which contradicted Rispoli (1981) whose findings supported the association of past marker "–ta" with punctuality/telicity. Furthermore, unlike other studies, the data of Rispoli (1981) did not suggest any special effects of lexical aspect with respect to the development of imperfective marker "–te i-".

In sum, Li and Shirai (2000) give support to the idea that the past tense markers are attracted by achievement verbs and accomplishment verbs while the progressive marker is mainly assigned to activity verbs. However, what is special about this book is the explanation proposed for these assignment patterns. Instead of referring to innate or

prelinguistically determined factors to account for the acquisition of tense and aspect, they appealed to connectionism, which emphasizes the learners' remarkable ability of extracting patterns from the linguistic input and of forming patterns of association between the lexical semantics and the tense-aspect morphology.

The studies reviewed so far have one thing in common: the tense-aspect markers were not used by their subjects to express tense or aspect proper but to express lexical aspects. Bronchart and Sinclair (1973) and Antinucci and Miller (1976) proposed an explanation for this phenomenon. They claimed that the subjects were not capable of expressing tense at all, i.e. the emerging tense morphology is defective in its function since it does not code deictic temporal relations. This proposal is labeled as the Defective Hypothesis by Weist et al (1984), who challenged its validity. With children of 1;7 to 2;2 years old learning Polish as L1 as their subjects, these authors conducted a longitudinal study followed by a cross-sectional one and found that 1) both atelic and telic verb phrases were marked in the past tense; 2) deictic future reference and remote past reference appeared moderately in the subjects' speech, i.e. tense is not defective; and 3) no special morpho-semantic association patterns were found. In sum, the findings blatantly contradict the Defective Tense Hypothesis.

2.2 SECOND LANGUAGE ACQUISITION OF TEMPORALITY

Research in second language acquisition of temporality can be divided into two large groups, according to the approaches they adopted: form-to-function studies, which investigated the functions and the distribution patterns of verbal morphology and the underlying motivations and function-to-form studies, which focused on the devices used by second language learners to express temporality. The former can be further divided

into two subgroups according to their findings: 1) the Aspect Hypothesis group, focusing on testing the Defective Hypothesis using second language acquisition data, either with confirmative findings (Andersen, 1991; Bardovi-Harlig, 1998; Bardovi-Harlig & Reynolds, 1995; Shirai & Kurono, 1998), or with contradicting or mixed ones (Bardovi-Harlig, 1992; Duff & Li, 2002; Rocca, 2002; Rohde, 1996, 2002; Salaberry, 2000) and 2) the Discourse Hypothesis group, exploring the binding effect of discourse organization, such as foreground clauses and background clauses, on the distribution of tense-aspect markers (Bardovi-Harlig, 1995a, 1998; Bardovi-Harlig & Bergstrom, 1996; Flashner, 1989; Kumpf, 1984).

2.2.1 Form-to-function studies of temporality acquisition

Andersen (1991) is the first paper to apply the research approach adopted by Bronckart and Sinclair (1973), Antinucci and Miller (1976) and Bloom et al (1980) to second language acquisition of tense-aspect markers. After analyzing the assignment patterns of tense-aspect markers of two English speakers learning Spanish at eight developmental stages, he concluded that L2 Spanish learners marked particular lexical aspect in a nonnative-like manner with corresponding verbal inflections (imperfect marker added to stative verbs and preterit markers to punctual event verbs). With the increase of their proficiency of Spanish, the inflections began to gradually spread to their adjacent categories and finally were distributed evenly among all types of verbs in a native-like manner, as illustrated by Table 2.1, which is a copy of Table 3 in Andersen (1991, p. 314).

Andersen and Shirai (1994, 1996) are basically literature reviews, so they add almost nothing new except that two new terms “the Aspect Hypothesis” and “the Primacy

of Aspect" are used in the 1994 paper and the 1996 paper respectively. In these two papers, they summarized the findings of both first and second language acquisition of tense-aspect markers and accounted for such distribution patterns by using the theories proposed in Anderson (1993). They used two new terms "the Prototypical Account" and "Discourse Motivation for the One-to-One Principle" in the 1994 paper.

Table 2.1 Developmental sequence for encoding tense and aspect with "past" inflections, a copy of Table 3 in Andersen (1991, p. 314)

	STATES "had"	ACTIVITIES "played"	TELIC EVENTS "taught x to y"	PUNCTUAL EVENTS "broke (in two)
1	Tiene	juega	enseña	se parte
2	Tiene	juega	enseña	se partió
3	[tenía]	juega	enseña	se partió
4	[tenía]	[juegaba]	enseñó	se partió
5	[tenía]	[juegaba]	enseñó	se partió
			[enseñaba]	
6	[tenía]	[juegaba]	enseñó	se partió
		jugó	[enseñaba]	
7	[tenía]	[juegaba]	enseñó	se partió
		jugó	[enseñaba]	[se partía]
8	[tenía]	[juegaba]	enseñó	se partió
	Tuvo	jugó	[enseñaba]	[se partía]

Shirai and Andersen (1995) elaborated the Prototypical Account Theory to explain the distribution patterns of tense-aspect morphology produced by second language

learners. Its basic idea is that an inflectional morpheme is first used to perform the most prototypical function and later gradually to represent the less prototypical ones. They claimed that past/perfective marker is first used by language learners to show deictic past, within which it is first attached to achievement verbs, then to accomplishment verbs, then to activity verbs and finally to state verbs. After performing its deictic functions, it is used to express counterfactuality and finally it is used as a pragmatic softener. One of the drawbacks of most papers following this framework is that they basically do not provide actual utterances produced by the subjects as examples and this paper is no exception: throughout the entire article, not a single example is given.[1] To help the readers understand the prototypical account of the use of "-past", I provide the following examples myself.

Stage one

(2.4) Max arriv**ed**. (*Deictic, attached to an achievement verb*)

(2.5) Max paint**ed** the barn. (*Deictic, attached to an accomplishment verb*)

(2.6) Max danc**ed**. (*Deictic, attached to an activity*)

(2.7) Max lov**ed** Terry. (*Deictic, attached to a state verb*)

Stage two

(2.8) If you **came** here earlier, you **could** have seen her off. (*Counterfactuality*)

Stage three

(2.9) I **was** wondering if you **could** lend me some money. (*A pragmatic softener*)

[1] The exceptions are Robison (1990, 1995) and Salaberry (2000).

Just like the gradually changing functions of the past/perfective marker, the progressive marker is prototypically used to express action-in-progress, within which it is combined first with activity verbs, then with accomplishment verbs. After that stage, it is used iteratively, followed by its habitual or future use and finally it is attached to state verbs, as illustrated by (2.10) – (2.14):

Stage one

(2.10) Max is **dancing**. (*Attached to an activity*)

(2.11) Max is **painting the barn**. (*Attached to an accomplishment verb*)

Stage two

(2.12) Max is **coughing**. (*Iterative use*)

Stage three

(2.13) Max is **leaving** for London this evening. (*Future tense*)

Stage four

(2.14) Max is **forgetting** things nowadays. (*Attached to a state verb*)

One special point about this paper is that it changed the strong version of the Aspect Hypothesis, which claims that

> In beginning stages of language acquisition only inherent aspectual distinctions are encoded by verbal morphology, not tense or grammatical aspect. (Andersen, 1991, p. 307)

to its weak version, which states that

> Depending on how one looks at the phenomena, two claims become possible: (1) early past morphology encodes underextended past tense; that is, it is attached only to prototypical past; and (2) early morphology encodes aspectual features such as completive, perfective, punctual, telic, and so forth. (Shirai & Andersen, 1995)

As shown from the weak version, tense-aspect markers are able to express tense, aspect and lexical aspect, i.e., none of them has priority. What is emphasized is the concept of prototypicality: the first encoded could be the prototypical past, the prototypical grammatical aspect, or the prototypical lexical aspect.

Another productive scholar in second language acquisition of tense-aspect is Kathleen Bardovi-Harlig, who tested both the Aspect Hypothesis and the Discourse Hypothesis, in addition to exploring the relationship between tense-aspect acquisition and formal instruction. In the following subsection, I will review her research aiming to replicate the Aspect Hypothesis.

After analyzing the answers to 32 cloze tests given by 182 learners in the Intensive English Program of Indiana University, the cross-sectional study of Bardovi-Harlig and Reynolds (1995) found that 1) the highest percentage of use of “-ing” was with activity verbs; 2) with stative verbs, non-past had the second highest rate; and 3) learners found telic verbs to be the best case examples of past-tense carriers. Therefore, that study gave strong support to the Aspect Hypothesis, as did Bardovi-Harlig (1998), a cross-sectional analysis of the narrative structures and the lexical aspects in a single corpus comprising 74 narratives (37 written and oral pairs) across levels.

In his analysis of the speech of a Spanish speaker learning English, Robison (1990) found a significant correlation between "-ing" and activity verbs and accomplishment verbs, as in (2.15), and between past and achievement verbs, as in (2.16):

(2.15) The one guy tell me, "I want to you **makin**' one pant…"
[One guy might tell me, 'I want you to make me a pair of pants.'] (p. 326)

(2.16) And here, do you want something you **buyed** it. [In the United States, if you want something, you buy it.] (p. 328)

However, he also found a significant amount of the progressive forms of stative verbs, which contradicted one of the claims of the Aspect Hypothesis that "-ing" is not overgeneralized to stative verbs.

With the question in mind whether the Aspect Hypothesis holds across proficiency levels, Robison (1995) conducted research on subjects at low, intermediate and advanced levels. His findings are that the low-to-intermediate level subjects aligned "-ing" with activity verbs, past with achievement verbs, and "-s" with state verbs and that with the increase of the subjects' proficiency level, these prototypical associations became weaker and weaker, and the subjects tended to assign verbal inflections to reflect tense more than to reflect the lexical aspect. One of the supporting examples is the use of "-s", as the author stated: "…we see a steady shift in the primary locus of "-s" from states at the lowest level to present reference at the highest." (p.362) Another example is the fairly steady increase of past marking from its redundant marking of the punctual aspect by the learners at low levels to its marking anteriority by the learners at higher levels (p. 363). This weakening of the prototypical associations lent support to the spreading of

tense-aspect markers from the most prototypical member of the most prototypical verb class to the peripheral candidates of the same verb class and then to the less prototypical verb class as proposed by Andersen (1991).

The languages investigated by the preceding scholars were all Indo-European languages. To test the applicability of the Aspect Hypothesis to non-Indo-European languages, Shirai and Kurono (1998) investigated the acquisition of Japanese tense-aspect markers. The oral production of the three English speakers learning Japanese as a second language showed stronger association between achievement verbs with the past marker "–ta" and between activity verbs with the progressive/durative marker "–te i-" than native Japanese. In the acceptability judgment test of tense-aspect forms, the subjects had more difficulties correctly judging the acceptability of "–te i-" with achievement verbs and of "–ta" with activity verbs. These allowed Shirai and Kurono to extend the applicability of the Aspect Hypothesis to the learning of Japanese, a non-Indo-European language.

However, not all of the studies conducted in this framework lent support to the Aspect Hypothesis. Duff and Li (2002) had findings that blatantly contradicted the Aspect Hypothesis. In their study of the acquisition of the Mandarin perfective aspect marker "–le" by English speakers learning Chinese, they found that the subjects, particularly those at low levels, tended to oversupply "–le" with stative and non-perfective activity verbs. But according the Aspect Hypothesis, it should be assigned to telic or punctual verbs.

Bardovi-Harlig (1992) and Rhode (1996, 2002) found mixed evidence for the Aspect Hypothesis. Although the subjects of Bardovi-Harlig (1992) showed strong

associations between “-past” and achievement verbs and between “-ing” and activity verbs and accomplishment verbs, the verbs were inflected by the subjects to express tense as well. In fact, the subjects in that study had little trouble with tense and more difficulties with lexical aspect.

Similarly, using audio recordings of the naturalistic and spontaneous speech of two German girls and two German boys aged between six and nine learning English as a second language in a family in California for six months, Rhode (1996, 2002) found that achievement verbs were, among other things, inflected with “-ing” for future reference or remained uninflected and that nearly all stative verbs received “-past” in obligatory contexts. Their findings indicate that the subjects’ assignments of verbal morphology were guided not only by inherent semantic features of the verbs, but by tense, grammatical aspect requirements and were influenced by first language transfer.

Salaberry (2000) presented his own experimental study which tested the four associations of the Aspect Hypothesis by analyzing the instructed English speakers learning Spanish as a second language. He used various tasks, describing the particular distribution of the past morphology at each stage of development and the effect of instruction on the advancement from stage to stage. He obtained two findings. First, in the early stages, there were no significant associations of past tense morphology with telic predicates. Second, in the later stages, the effect of lexical aspect on past tense marking became much stronger. With these findings, he reached the following conclusion:

> In sum, both set of data (movie narratives and written task) show that the effect of tense is stronger than lexical aspect during the

early stages of acquisition of L2 Spanish among English-adult classroom learners. (p. 168)

2.2.2 Function-to-form studies of temporality acquisition

Schumann (1987) studied the expression of temporality in basilang speech [1]. The five subjects (one Chinese, one Japanese, and three Spanish) arrived in the United States as adults and had been in this country for at least ten years; all of them seemed to have fossilized at the very rudimentary stage of second language acquisition. After analyzing the tense-aspect markers displayed in their production, Schumann found that none of these subjects used any morphological inflections to mark tense and aspect. Even though they used the forms, they did not use them for the proper aspectual distinctions. For example, "*-ing*" was used in almost every situation: for both completion and non-completion, and both habitual and continuous actions. Schumann concluded that instead of using morphological endings to mark tense and aspect, these subjects used such pragmatic devices as serialization and implicit reference and such temporal devices as adverbs and calendric words to express temporality.

If we say that Schumann's finding is the by-product of his investigation of the functions of their tense-aspect markers, Meisel (1987) is one of the first persons to explicitly explore the specific devices used by language learners to express past events. He advocated:

> What needs to be done is that the usual perspective has to be reversed; instead of searching for possible "interpretations" of a feature, we must define the concepts and functions which have to be

[1] By basilang speech, Schumann means the speech produced by language learners of very rudimentary level.

> encoded, and then analyze the devices used by different learners or types of learners to express these concepts and functions at different points on the development continuum" (p. 206)

Thus, unlike form-to-function studies, which count the appearances of the verbal morphology and then try to point out their functions, Meisel (1987), using immigrant workers as subjects, conducted a longitudinal study (n = 12) followed by a cross-sectional study (n = 45) to assess the subjects' language proficiency, linguistic awareness and ability to detect errors in their own speech in earlier recording. It explored the devices used by immigrant workers learning German as a second language to express past events and actions. In spite of the considerable variation of the forms and uncertainty of their functions, he obtained the following findings. First, three means were employed by the workers to encode temporality in the order of pragmatic means, lexical means, and morphosyntactic means. Second, the developmental sequences of new devices followed the hierarchies of increasing performance complexity and decreasing pragmatic frequency, i.e., the more complex the learners' performance became, the less frequent pragmatic means became in expressing past events or actions. Third, his subjects did not systematically use any aspectual system. These findings led him to claim that

> It may well be that this [the association between lexical aspect and tense-aspect markers] is a very marginal phenomenon, occurring only occasionally, which has received too much attention by researchers who based their expectations on findings in L1 studies or on creole studies. It might be the case that it is a learner-specific characteristic. (p. 220)

Other research that takes the same research approach as that of Meisel (1987) is the European Science Foundation Project, in which longitudinal studies were conducted to investigate the immigrant workers' acquisition of temporality of the target languages of the countries to which they emigrated. This project resulted in a paper (Klein, 1993) and a book (Dietrich et al., 1995). As the former is only an excerpt of the latter, I will review the latter only.

Dietrich et al (1995) attempted to answer the following three questions: 1) How do learners express temporality at a given stage of their language development? 2) How do learners proceed from one stage to the next? 3) What causal factors determine the form and function of the learner system at a given time, on the one hand, and its gradual transformation towards the target language on the other?

Unlike Comrie, these scholars treated tense and aspect not as linguistic markers but as temporal relations existing in every language. Tense is the temporal relation between TT and TU and aspect is that between TSit and TT. They defined TU as the time *at* which a claim is made, TT as the time *for* which a claim is made, and TSit as the time at which a situation obtains. Take (2.17) as an example,

(2.17) By 5:00 pm next Monday, Max **will have left** London.

TU is the time at which this specific utterance was made, TT is 5:00 pm next Monday, and TSit is the actual time at which Max left London, which can be anytime before 5:00 pm next Monday. From morphosyntactic markings we know that (2.17) is in the future tense and in the perfect aspect. As TSit can be anytime before 5:00 pm next Monday, its temporal relationship with TU is not fixed. Therefore, the future tense of (2.17) is not dictated by the precedence of TU over TSit, as claimed to be by the

traditional definition of the future tense. Instead, the future tense is indicated by the anteriority of TU to TT, which is 5:00 pm next Monday. From this example, we see that tense is not used to locate the event time but to locate TT with regard to TU. Similarly, the perfect aspect is indicated by the anteriority of TSit to TT, i.e. the time of Max's leaving London is always somewhere before 5:00 pm next Monday, if this proposition is true.

In addition to defining tense and aspect from a new perspective (see Table 1.4 for detail), this longitudinal project revealed the overall process of second language acquisition of temporality. They found that the acquisition process can be divided into three stages, which are listed in Table 2.2 along with their features.

The latest study undertaken in this paradigm, as far as I know, is Yang and Huang (2004), which is an cross-sectional investigation of the acquisition of English tense systems by native Chinese speakers. These learners are high school and college students. They found that 1) classroom instruction may force an early start for tense use, 2) the Chinese way of expressing temporality may reinforce the learners' initial tendencies of relying on pragmatic and lexical devices to indicate temporal locations, 3) the preceding two factors resulted in an extended period, during which the learners' expression of temporality exhibited a very slow shift from depending on pragmatic and lexical devices to depending on the grammatical devices, and 4) the function of temporal adverbs may change from a tense substitute to a tense reminder as a result of their special classroom training process. In sum, this study lent support to Meisel (1987) and Dietrich et al (1995) in that with the increase of their English proficiency, the learners relied more on morphosyntactic means than pragmatic means and/or lexical means, as illustrated by

(2.18), produced by one of the learners of the lowest level and (2.19) by one of the learners of the highest level:

Table 2.2 The overall stages of second language acquisition of temporality

Stage	Features
Stage one The pre-basic variety stage	1. No functional inflection 2. Putting together words into complex constructions by following the principle of narrative order 3. Context-dependence
Stage two The basic variety stage	1. Utterances typically consisting of uninflected verbs with their arguments and, optionally, adverbs 2. No case marking, no finite construction
Stage three The stage beyond the basic variety	1. Formal variation precedes functional use. 2. Further development is slow, gradual and continuous. 3. Tense marking precedes aspect marking. 4. Irregular morphology precedes regular morphology.

(2.18) The queen **opened** the door. A merchant **ask** her **bought** these dresses. The queen **saw** these dresses very like. “You must money I **sent** you”, the queen **said**. Finally, the merchant **saw** the queen **was** a greedy queen. (p. 59)

(2.19) My family **was** quite poor **when** I **was** young. Both of my father and mother **had to** go out to work. Even though they **had worked** very hard the income still **could not** support our living. Therefore **when** I **was** a F3 student I took a summer job in order to relieve the burden of my family. I

was very happy when I received the salaries from my boss…(p.60)

(2.18) relied heavily on pragmatic means (i.e. serialization) to express tenses randomly while (2.19) exploited the adverbial clauses extensively along with morphosyntactic means to mark tenses systematically.

All of the function-to-form studies have revealed more findings in the specific programmatic means than the other two that are used by second language learners to encode tense and aspect, with the specific pragmatic means least investigated.

2.3 SECOND LANGAUGE ACQUISITION OF THE PASSIVE VOICE

The latter part of the twentieth century witnessed a large number of studies on second language acquisition of temporality, and what I have reviewed are only a small part of them. However, this is not the case for the acquisition of the passive voice. To my knowledge, there are very few papers exploring this topic, not to mention book-length studies. In this section, I will review the study conducted by Hinkel and Fotos (2002), who conducted four experiments to compare the perceptions of lexical animacy of English nouns by native speakers (NSs) and nonnative speakers (NNSs) and to assess the influence of these perceptions on the learners' grammaticality judgments of active and passive constructions. The descriptions and major results of these experiments are presented in Table 2.3.

From the four experiments, Hinkel concluded that the perception of animacy of nouns did not have a significant influence on the subjects' grammaticality judgment of active or passive constructions. The author also concluded that the potentiality for agency implied by the sentience of some subject nouns and the transitivity of the verbs made

second language learners give high grammaticality rate of active voice constructions. Based on these findings, the article suggested that in teaching the English passive voice, the influence of such concepts as transitivity and sentience on learners' use and comprehension of passive constructions need to be emphasized in addition to the mechanical practice of changing active constructions into their passive counterparts.

Table 2.3 The four experiments of Hinkel (2002) on lexical animacy of English nouns and their influence on grammaticality judgments of active and passive constructions

Purposes	**Subjects**	**Results**
Getting the subjects to rank the animacy of nouns	n = 179 NSs=30	'NS and NNS perception of animacy were more similar than dissimilar, and there was no evidence of drastically different evaluations.' (p. 241)
Getting the subjects to rank the animacy of noun phrases	n = 149 NSs=30	'NNSs seemed to perceive the lexical animacy of abstract concepts and inanimate concrete noun phrases to be slightly higher than NSs did.' (p. 241)
Probing the effect of noun (phrase) animacy evaluation on grammaticality judgment; paired sentences	n = 179 NSs=30	The perception of animacy of nouns did not have a significant influence on grammaticality judgment of active or passive constructions, but the perception of sentience did.
Probing the effect of noun (phrase) animacy evaluation on grammaticality judgment; single sentences	n = 179 NSs=30	Verb transitivity and direct objects' presence had a significant influence on grammaticality judgment of active or passive constructions

It is obvious that the paradigm in which the above study about the passive voice was done is different from that in which my study on the acquisition of the passive voice will be conducted.

2.4 THE CASE STUDY APPROACH

As this project is a case study, I will discuss this approach and give a brief review of some book-length case studies with a single subject in the area of language acquisition in this section. The case study approach in a broad sense refers to the research approach used by any discipline that tracks a small number of subjects over a relatively long period of time to find out the developmental trends of the subject(s). Its narrow definition was given by Runyan (1982) as: “the presentation and interpretation of detailed information about a single subject, whether an event, a culture, or…an individual life” (quoted in Deuchar and Quay (2000, p. 2)). The three most prominent features of the case study approach are a longitudinal approach, natural settings and qualitative data. Case studies presuppose a relatively long time span to trace the subject(s) and no large number of subjects or specially designed data elicitation means are necessary. Case studies are very important for a valid hypothesis to be proposed and tested because “only when we have a number of such individual records, will the time have come for a really authoritative summary.” (Leopold, 1939, p. viii)

Due to the limited number of subjects, case studies may be criticized for their findings’ lack of generalizability and reliability, since “it is difficult to know with any degree of certainty whether the results obtained are applicable only to the one or two learners studied, or whether they are indeed characteristic of a wide range of subjects.’ (Gass & Selinker, 2001, p. 31). However, a disciplined and well-planned case study can maximally reduce these problems, such as those conducted by Brown (1973), Dromi (1987), Fantini (1985), De Houwer (1990), just to name a few.

Due to the advantage that case studies are "more likely to uncover unanticipated findings as the details are explored" (Platt 1988: 20, quoted in Deuchar & Quay (2000)), this approach has a long history in the study of child language acquisition. There is a substantial number of case studies in second language acquisition with a single subject (De Houwer, 1990; Deuchar & Quay, 2000; Fantini, 1985; Halliday, 1975; Leopold, 1939; Owens, 1992; Porsché, 1983; Ronjat, 1913; Saunders, 1988; Tomasello, 1992), just to name a few.

In the following, I will review some of the book-length case studies with a single subject in the chronological order. As these works have little relevance to my own project in terms of the questions addressed (except Owens (1992)), only a very brief review will be given. An even more concise summary of these studies is presented in Table 2.4.

Using diary as the data collection technique, Leopold (1970) is one of the earliest and most comprehensive case study of first language acquisition. He traced his own daughter's general development of German and English simultaneously from the child's birth to the age of 12. This seminal work contributed notable accounts of child's language development.

Taking the framework of generative phonology as set forth in Chomsky and Halle (1968) and relying on notes and occasional audio-recording as data collection measures, Smith (1973) reported his son's phonological development of English from 2;2 to 4, with particular emphasis placed on the consonant system.

Table 2.4 Book-length case studies with a single subject (Ronjat (1913); Porsché (1983); and Saunders (1988) are made reference to in De Houwer (1990)).

Study	**Languages being acquired**	**Age range**	**Data collection techniques**	**Main emphases**
Ronjat 1913	French/German (BL1A)	1;10-2;7	No information	Sound system and language choice
Leopold 1939-1949	German/English (BL1A)	Birth-12	Diary	General development
Smith 1973	English (L1A)	2;2 - 4	Notes, audio-recording	Phonology with consonants in particular
Porsché 1983	English/German (BL1A)	1;10-2;7	Notes, recording	Translation 'equivalents'+ semantic relations
Fantini 1985	English/Spanish (BL1A)	birth-10;9	Audio-recording	General development
Dromi 1987	Hebrew (L1A)	0;10 – 1;6	Diary, audio/video - recording	Early Lexical development
Saunders 1988	English/German (BL1A)	2;6-6	Recording	Sociolinguistic aspect; general proficiency
De Houwer 1990	English/Dutch (BA)	2;7-3;4	Audio-recording	Morphosyntax
Owens 1992	Irish (L2A)	3;2-5;9	Notes, audio-recording	Verbal system
Tomasello 1992	English (L1A)	1;0-2;0	Diary	Early verbs
(Deuchar & Quay, 2000)	English/Spanish	1;3-3;3	Audio/video taping	Phonology, lexicon, syntax, language choice

From a sociolinguistic perspective, Fantini (1985) examined the general language development in phonology, morphology and syntax of a bilingual child acquiring English and Spanish simultaneously from infancy through his tenth year. The research was based on the data from audio recording and a speech diary collected throughout that period. The primary emphasis, however, was on language interference and language transference with regard to the social context as a determinant affecting the degree, type and direction of borrowing.

As one of the well-planned and very disciplined case studies with a single subject, Dromi (1987) focused on the lexical development of a girl during her one-word stage. The data were collected via the researcher's hand-written diaries and audio/video recording from 0;10 to 1;6. Various theoretical and practical questions concerning the lexical development of children during their one-word stage were addressed.

Using a girl acquiring English and Dutch simultaneously as the subject of her case study, De Houwer (1990) reported the subject's morphosyntactic development from ages 2;7 to 3;4. Her findings made her conclude that the subject's morphosyntactic developments of Dutch and English proceeded along two separate lines and that "it seems that Kate [the subject] can, so to speak, be seen as two monolingual children in one (p. 339).'

By analyzing the verbs and sentences produced by his daughter during her second year of life, Tomasello (1992) aimed to illustrate the way by which the subject acquired her early verbs and the role played by verbs in structuring her early sentences and grammar. His findings made him believe that "two-year-olds do not operate with the innate apparatus of Universal (Generative) Grammar…" (p. 8).

Deuchare and Quay (2000) reported the phonological, lexical and syntactic development and language mixing and choice of the daughter of the first author acquiring English and Spanish as a simultaneous bilingual with the time-span of 1; 3 to 3; 3. In that book, various questions concerning language acquisition in general and bilingual first language acquisition in particular were raised and answered.

Although there are plenty of cases studies of first language acquisition, book-length case studies of second language acquisition are rare. Owens (1992), which is about the acquisition of Irish by his daughter (age: 3;2 – 5;9), is one of the few studies. This project traced the subject's development of her verbal system including the acquisition of formal tense markers and progressive markers, verb related elements including pronominal reference, verbal noun complements, and negatives and questions, and complex syntactical and textual skills, such as assembling clauses into complex sentences and narratives. Such issues as the roles played by the subject's attitude, her motivation, child-directed speech, language transfer, age, and other factors in second language acquisition were also addressed in that book.

The findings of Owens (1992) are in most cases not relevant to my case study, due to the following factors. First, the data of these two studies are different. He tape-recorded his daughter's speech and used it as his data. Although, he attempted to obtain spontaneous speech, he sometimes failed due to his daughter's refusal to cooperate. On the other hand, the data used in my study is written and produced with no elicitation means. Second, the ages of these two subjects are different: 3;2 – 5;9 vs. 11;11 – 13;11. This also leads to another difference, i.e. the environment. His subject's environment was mainly home while that of my study was school. However, in spite of these differences,

one of his findings is the same as mine: both subjects had preference for using uninflected verb forms for various tense and aspect functions. I will detail my findings later.

CHAPTER THREE

SUBJECT AND DATA

3.1 SUBJECT AND HIS ENVIRONMENT

The subject of this study, my son, referred to as J hereafter, is a Chinese-speaking boy, who came to the United States from China with his mother on July 28, 2003, at the age of 11. Before leaving China, J was a fourth grader in an elementary school that provided one 45-minute English class per week starting from the fourth grade. The focus of that class was on a very limited amount of basic words and drills with no communication skills emphasized. Unlike Chinese and mathematics, English was not included in the middle school entrance examination in most regions of China, including his, at that time. The time allotted to that subject, the teaching content and its insignificance in the promotion to middle school indicate that it was an unimportant subject in his elementary school. Due to this and other reasons, he did not do well in English in that class and in fact he lost interest in English. By the time he came to the United States, his English was limited to a very small number of words and formulaic greetings.

On August 6, 2003, eight days after coming to the United States, J was placed in the fifth grade of Barrow Elementary School. He had one class of English as a Second Language (ESL) each weekday until he graduated from that school, in addition to attending various mainstream classes along with his native classmates. During his time at

Barrow Elementary School, four factors helped him out: 1) one of his Chinese classmates who was assigned to be seated beside him acted as his interpreter, 2) the help obtained from the ESL classes, 3) his motivation to master English, and 4) the kind encouragement and tolerance displayed by his teachers.

Besides ESL classes, his mother, a middle school English teacher before coming to the United States, gave him a short session of intensive one-on-one instruction on English tense/aspect around November of 2003, covering the simple present/past/future tenses, the present/past progressive aspects, and the present/past perfects. However, it seemed that that tutoring gave him little help, probably because his English level at that time did not prepare him for understanding and using those concepts. During the summer vacation of 2004, we used a set of downloaded ESL video lectures to train him on English tenses and aspects. The textbooks used in the video were *New Concept English*, a four-volume set of ESL textbooks written by L. G. Alexander. [1] The instructors were some of the professors and lecturers from Peking Foreign Languages Institute and the language of instruction was Chinese. The length of the summer vacation only allowed him to study the first two books: book one focusing on everyday English (speaking and listening), and book two, dealing with the basic English tenses and aspects that his mother had coached him on before. His understanding and use of tenses and aspects were much improved at the end of that summer vacation.

By the end of the second semester, his language barrier had almost completely disappeared. From May, 2004 on, when his English vocabulary became large enough, we asked him to write at least two journal entries each week. After he entered Clarke Middle

[1] I cannot remember the exact year in which the books were published; however, I believe the first print was made around 1979. These books have had numerous reprints to meet the tremendous demand of EFL market in China.

School in August 2004, he was tested for his English proficiency, the result of which exempted him from receiving further ESL instruction.

Besides the above-mentioned factors, the following individual factors have also contributed to his success, the first of which is his predisposition toward learning language. As his father, I observed even from his early childhood that he showed much greater interest and competence in language than mathematics. At the age of five when he repeatedly failed to count from one to one hundred, he was able to read out almost all of the bus stops of Chongqing, his hometown, a very big city, which requires a person to be able to recognize at least several hundred of Chinese characters. The second factor is that he likes reading. During the second semester of his first year in the United States when his English vocabulary was a little larger, he resumed his habit of extensive reading of children's books, this time in English. Through reading, he learned many new words and absorbed some of the English grammar rules unconsciously, though he could not tell why they should be used in a particular way. Third, the positive transference of the competence of his native language also helped him a lot. His L1 competence was very high when he started to learn English. By the time when he was a third grader, he had read many fairy tales and stories in Chinese, which is a marvelous achievement for students in China where extensive reading is not encouraged for non-college/university students. His extensive reading laid a solid foundation for his writing. He was often praised by his Chinese language arts teachers for his excellent Chinese compositions. In 2003, he was awarded the third place in a nationwide elementary school student composition contest. His high L1 competence facilitated his English learning, though it also created some transfer errors such as induced errors. For example, his knowledge of

Chinese syntactic structure made him curious about the grammatical differences exhibited in English and this curiosity enhanced his metalingustic competence and let him compare these two languages consciously, which doubtlessly helped his learning English. The fourth factor is that he was still before puberty when he came to the United States. This is important if we believe that the critical period for second language learning is around puberty. The last factor is his environment. In school, he has no chance to use his native language and when he comes back home, the children in family housing all speak English when they play with each other, regardless of their individual nationalities.

By his second semester in Barrow Elementary when he was able to read extensively in English, in addition to writing summaries of the books he read, he started to write freely. When he entered Clarke Middle School, his command of the English language enabled him to read even more quickly and produce more genres of writings, such as journal, summary, reaction paper, Story, fairy tale, poem, argumentation, expository essay, travelogue, the future plans, and letters.

The native language of his father, the author of this dissertation, and of his mother, a house-wife, is a Sichuanese, a dialect of Chinese. This dialect has fewer consonants than Mandarin Chinese and it assigns different tones from Mandarin for most of the characters. However, all of the Chinese dialects have the same writing system and almost the same grammar system as those of Mandarin Chinese. He and his parents can speak and understand Mandarin as well. His father can use English for daily and academic purposes while his mother is poor at spoken English though she has a good command of English grammar. For J, code-switching and borrowings rarely occur. He uses Chinese to

communicate with me and his mother and English to interact with his friends and nonnative Chinese speakers.

This research is different from the above-mentioned studies in three aspects. First, J's native language, Chinese, is an analytic language while those of most of the previous studies are synthetic languages[1]. As an analytic language, Chinese has no morphosyntactic means to express the concept of tense, hence the term tenseless language. Though it has a complete grammatical aspectual system, the aspectual markers are not bound but free morphemes. For example, there are no such entries as "-ing" and "-ed" in English dictionaries but you can find the Chinese aspectual markers "-guo", "-le", "-zai", and "-zhe" in any Chinese dictionary. Furthermore, the use of aspectual markers in Chinese has great personal, stylistic, and contextual variations, while the use of aspectual markers is more obligatory and consistent in synthetic languages where part of the meaning of a sentence depends on those markers and therefore is less subject to personal and style differences. Second, unlike the subjects in the previous studies, who were usually either completely untutored, for instance, immigrant workers (Dietrich et al., 1995; Klein, 1993; Meisel, 1987; Robison, 1990) or pre-school children (Rohde, 1996, 2002), or in a pure foreign language environment, for instance, adult second language college students (Duff & Li, 2002; Yang & Huang, 2004), J was acquiring English through both instruction in a one-year ESL program and continues to learn English through immersion in mainstream classrooms where the subject language arts concentrates on language development *per se* and other subjects develop his English proficiency as a byproduct. Third, unlike the previous studies that used only one variety

[1] The exceptions, to my best knowledge, are Yang and Huang (2004) for second language acquisition and a study included in Li and Shirai (2000) for first language acquisition.

of data, i.e., narrative, this study will employ almost all of the varieties of his written data, including journal entries, summaries, descriptions (of persons, objects, processes, etc.), travelogues, argumentations, reaction papers, stories, fairy tales, jokes, poems, future plans, letters, translations from Chinese stories, notices, and sentences made by using given words.

3.2 DATA

Data used in the field of language acquisition are roughly of two basic types: comprehension and production. The typical comprehension data includes grammaticality judgments, whereas the production data can be further classified into written and oral forms. Both written and oral data can be produced either in a natural environment with no pressure or constraints imposed on the subject or by means of elicitation under some control, such as interviews and cloze tests.

3.2.1 Features of data used in this project

Data used in this project are composed of J's school assignments, extra homework that his father assigned, and the writings that were produced by his own will, the last few of which provide the bulk of the data. With a time span of 25 months (11/05/2003-12/05/2005), these data are writings of various varieties produced in a completely natural environment and are purely self-motivated. My decision to use pure natural written production is motivated by the following factors.

Originally, I planned to track his oral linguistics development by audio-recording all his ESL classes. That would have enabled me to discover the correlation between his progress and the ESL instruction given to him and to compare the influence of different native languages in the learners' English development since his ESL classmates had

different native languages. Unfortunately, that project was not approved by the principal who was worried that the students had suffered rather than benefited from too many similar projects which had been conducted previously. To compensate for this, I planned to record the conversations between he and me and I indeed undertook and recorded two interviews. However, it turned out that the interviews did not achieve the desired result. There are mostly two reasons for the failure. First, my own oral English, which is a second language for me as well, is not good enough to handle such an interview. Second, I dismissed my idea of asking a native speaker to do the interviews for me considering the huge amount of time and energy that would have been involved. I tried the third method of collecting oral data, that is, I asked him to retell the TV programs that he watched or orally summarize the books that he read. Unfortunately, he was not cooperative. So finally I resorted to his writings produced by his own will and this turned out to provide me with a great amount of data. Though it might be better to use oral data, written data has its own advantages as follows.

First, as a longitudinal case study investigating the acquisition of various temporal means and their passive forms, this project is more interested in the growth of his linguistic competence than his linguistic performance. It is known that there are occasions on which linguistic errors occur not because the speakers do not know the grammatical rules but simply because they are nervous, stressed or inattentive. They are performance errors which have a higher possibility to be corrected by the subjects themselves in writings than in speech. This is especially true for second language learners. For example, it is possible for a person who has learned English as a second language for many years to utter (3.1) in spontaneous speech.

(3.1) Hi, guys, I'm sorry to say that he **didn't**, you may have known that, I think, **told** me this earlier…

The long distance between the negative auxiliary "didn't" and the main verb "tell" created by the inserted "you may have known that, I think", makes the speaker forget the existence of "didn't", which requires that the negated verb be in its base form. However, we cannot conclude that by the time when that utterance was made, the speaker hadn't mastered the grammatical rule of English that the existence of "did/didn't" supplants the past tense form of the predicate verb of the same sentence. This is simply because the speaker would be able to correct this error, given the time for proofreading in writing. In other words, using oral production may have the risk of inaccurately revealing the path of a subject's linguistic competence.

Second, in oral production, the attachment of the inflectional morphemes may be affected by the features of the surrounding phonological environment. Supporting data come from Wolfram (1989) who studied the phonetic surface constraints on the assignment of English simple past morphology and proposed the Principle of Saliency, claiming that the phonetic shape of the past tense of the verb determines the likelihood of its exhibiting that tense. For example, for regular verbs, /ɪd/ is more likely to be attached to a verb than /t/, which in turn is more likely to be attached than /d/. We know that the specific allomorphs of a past tense morpheme are determined by the phonetic features of the ending phoneme of the verb: voiceless sounds except /t/ require the allomorph /-t/, voiced sounds except /d/ require the allomorph /-d/, and /t/ and /d/ require /-ed/. In that article, he also reported the finding that in addition to the phonological environment preceding the past tense morphology, the phonetic feature of the sound following the past

tense morpheme also affects the likelihood of exhibiting past tense morphology. For example, he showed that the past tense morpheme is more likely to be attached to a verb followed by a vowel-initial word than to a verb followed by a consonant-initial word, as shown from (3.2) and (3.3), respectively.

(3.2) I missed **E**ve.

(3.3) I missed **T**om.

Wolfram did not account for these patterns; however, I assume that they are connected to the ease of articulation. The subject may be less affected by the phonetic and phonological restrictions in writing where the articulation of the words is not necessary, compared to oral production.

Finally, some of the methods used to elicit data have the drawback that the subjects may copy or may be significantly influenced by the existing linguistic structures in the immediate context. For example, the faithfulness of the findings of a project that deals with the acquisition of tense-aspect and that uses interview as an elicitation method to obtain data may be reduced by the fact that it is likely that the interviewee may copy the interviewer's tense-aspect forms, especially when the learners are at a very elementary level. Natural written production can avoid these possibilities and maximally reflect the subject's real linguistic competence.

It is not a new idea to use written data alone to investigate the acquisition of temporality in SLA. Bardovi-Harlig (1989) chose to use the compositions written by 30 advanced learners as the materials to investigate their syntactic and morphological achievements and found that the interlanguage of her subjects exhibited relatively strong syntax but incomplete and variable acquisition of grammatical morphemes. Using pure

written responses provided by second language learners to cloze tests, Bardovi-Harlig (1992) found that the subjects had a higher accuracy rate in form than in meaning. In their cross-sectional analysis of the written productions of 182 learners, Bardovi-Harlig and Reynolds (1995) found that, like untutored learners, their tutored subjects' simple past development was influenced by lexical aspect and adverbs of frequency. After analyzing the written narratives given by 23 ESL and 23 FFL (French as a second language) learners, Bardovi-Harlig and Bergstrom(1996) investigated the influence of narrative structure in second language learners' acquisition of tense and aspect. Recently, by analyzing the written compositions of their Chinese subjects learning English as a foreign language, Yang and Huang (2004) concluded that the lack of morphosyntactic tense markers in Chinese delayed their subjects' transition from relying on the lexical and pragmatic means to morphosyntactic means to express tense and that the function of temporal adverbials changed from tense substitute to tense reminder as a result of the special classroom training process.

3.2.2 Data Collection

This project used two sets of data, one for form-to-function analysis and the other for function-to-form analysis. Form-to-function data set was collected to reveal the functions of the verbal morphology used in various writing varieties by J at five periods ranging from an extremely rudimentary level to a relatively advanced level. As shown from Table 3.1, the intervals between each period were set at around five months to ensure that qualitative progress between two collections was achieved, and each period lasted one month.

Table 3.1 Form-to-Function Data Set

Period	Age	Study length	Genres (n)
1	11;11	17 weeks	Journal entry (1); Reading summary (12); Sentence making (3)
2	12;02	38 weeks	Journal entry (1); Reading summary (3)
3	12;04	64 weeks	Journal entry (5); Argumentation (1); Description (1); Future plan (1); Translation from a Chinese detective story (1); Notice (1)
4	12;07	90 weeks	Journal entry (1); Argumentation (1); process-description (1), travelogue (1)
5	12;08	115 weeks	Journal entry (1), Story (1)

Considering that J was unproductive in the first two periods, almost all of his written productions in those two periods are included. Since January 2005, he has been so productive that on the average he produced a piece of writing almost every other day. To ensure enough varieties of writing to be included for period four and period five, only one piece of each major writing variety was chosen.

With the purpose of revealing all of the means used by J to encode various temporalities and passive structures, function-to-form data set is composed of all pieces of his writing, except those that I believe he copied from the books, or that his mother corrected. This data set consists of 23 collections representing 23 periods of his English development. As shown in Table 3.2, there is virtually no gap between these 23 periods, except between the first four periods. In this way, it is ensured that all of the means used by him to express English temporality and the passive voice and the order of their appearances and acquisitions are closely tracked.

Table 3.2 Function-to-form data set

Period	Age	Length	Genres (n)
1	11;11	7 weeks	Journal entry (1); Reading summary (12); Sentence making (3)
2	12;02	32 weeks	Journal entry (1); Retelling (1); Sentence making (2), Description (1), Imaginary writing (1)
3	12;04	41 weeks	Journal entry (1); Reading summary (4)
4	12;07	53 weeks	Reading summary (1); Reading summary (3)
5	12;08	56 weeks	Journal entry (1); Reading summary (7); Description (1); Letter (1);
6	12;08	57 weeks	Reading summary (8)
7	12;09	61 weeks	Journal entry (2); Reading summary (4); Travelogue (2);
8	12;10	63 weeks	Journal entry (1), Reading summary (5); Description (1); Argumentation (1); Future plan (1); Notice (1);
9	12;10	65 weeks	Journal entry (2), Reading summary (3), Translation of story (1)
10	13;01	79 weeks	Journal entry (3); TV program summary (1); Letter (3)
11	13;02	82 weeks	Journal entry (2); Reading summary (1); TV program summary (1); Argumentation (2);
12	13;03	85 weeks	Journal entry (1); Description (3); Fairy tale (1); Translation of Description (1)
13	13;03	88 weeks	Journal entry (1); Travelogue (1)
14	13;04	93 weeks	Argumentation (1); Journal entry (1); Fairy tale (1); Poem (2);
15	13;05	95 weeks	Journal entry (1); Description (2); Story (2); Poem (2)
16	13;05	97 weeks	Description (2); Journal (2); Story (1); Poem (2)
17	13;07	102 weeks	Joke (4); Travelogue (1); Reaction Paper (1); Poem (1);
18	13;07	105 weeks	Description (2); Joke (1); Journal (3); Reaction (1);
19	13;08	110 weeks	Journal entry (3); Reaction (1)
20	13;09	111 weeks	Argumentation (1); Reaction Paper (2); Story (1)
21	13;09	114 weeks	Story (part 1)
22	13;10	116 weeks	Argumentation (1); Description (3); Journal entry (2); Story (part 2)
23	13;11	119 weeks	Story (part 3)

3.2.3 Data Samples

J has produced 19 different writing genres. In the following, I will give a brief introduction to each of the major varieties with a short excerpt of each.

Journal Entries

Journal entries in this project are those short writings produced by J to narrate his mood or an event that took place.

The Skates

When I saw some kids weared on their skate, I felt I really want a skate. Just like the artists want draw a new picture. In China, most stores didn't has skates. Now I'm in U.S.A., most of the stores has many skate, so I want use my own money to buy one… (05/10/04)

Summaries

Some of these were assignments given by his reading teacher, for which he was required to summarize each book that he read. This kind of assignment was given throughout his whole 5th grade. Since 03/04/2004, J has started to write summaries about the books chosen at his own interest, Harry Potter being his favorite. In addition, he summarized two cartoon TV programs after his listening ability became good enough. Summaries are the bulk of the data before 2005.

Hurricanes

This book tell we: what is hurricane, what does a hurricane look like, parts of a hurricane. What do hurricanes do, famous hurricanes. Studying hurricanes and preparing for a hurricane. Although nature

give human food, but at one time, also give balefulness, like hurricanes, avalanche… (11/10/2003)

Descriptions

With the improvement of his English writing competence, J started to describe objects, scenery, processes, and people.

My Classmate John

One major feature is that he laughs a lot. He laughs 24/7.... One of his victim is Jacob, every move and word Jacob said would make Alexander crack up. And once he gets cracked up, we all get influenced an**d lau**gh with him, Mrs. Wilkins wants to kill Alexander because of that. (11/08/05)

Travelogues

They are similar to journal entries in that they narrate past events but differ from them in that they are much longer and the events are those that he actually experienced on his trips. J produced two travelogues, one of which, *The Band Trip*, is 2600 words long. The following is from the one recording his camping trip organized by a church.

The Camp

This summer I went to a fun camp. Church of the Nations organized it. We planned to go at July 17th. We had sack lunch at the church. And then loaded the luggage until two, and finally arrived by 2:40. The camp was located at Hard Labor Creek State Park… (07/24/05)

Argumentation

After J entered Clarke Middle, I sometimes asked him to write an argumentation article, using the topics from TOEFL (Test of English as a Foreign Language). This data also includes his similar school assignments.

The Most Important Subject

The most important subject I think i learned in school is math. Math taught me how to multiply, divide, subtract and add. Customary and International units. And how to calculate the area of figures. All of them are very valuable in my whole life… (03/02/05)

Stories

J wrote two extended stories, which are both around 3,000 words long. Similar writings include fairy tales and translations from Chinese stories. These are perfect data to reflect his encoding of temporalities and passive constructions. An example from one follows:

Underground

"Kelvin, grab everything that will burn and pile them under the Wall. Next, gather as much snow as you can with these cooking pots. I want them here in 10 minutes."…

Kelvin began gather all the supplies Jack demanded and soon a huge pile of dead branches that had been brought down by the avalanche, mosses that had grown on the slippery stones and even some paper they had. The cooking pots were soon filled with gallons of snow and everything was set…

(11/21/05)

Future Plans

The Aspect Hypothesis claims that verbal inflections only reflect the temporal semantics denoted by the verbs, regardless of the specific temporal requirement. If this is true, punctual verbs will still display their past tense forms even if they are used to describe a future plan. So this genre is an excellent one to test the validity of that Hypothesis.

What will I do if I have wings?

> I will fly to the other side of the ocean to see my family. I will go to North Pole to visit the Whale, study station over there and the polar bear. I also want to go to Egypt to watch the famous and mysterious pyramids, then I will glide to Australia to see whether there's really the kangaroo which as tall as the man, after that, I will create a kind of oxygen mask and go to explore the universals. And I will, will, will… (10/25/04)

Sentence-making productions

These are the assignments given by J's language arts teacher as homework, for which he used the given words to make sentences in his first semester in Barrow Elementary School. The words were of various parts of speech in both base and inflected forms. At first, his limited knowledge of English prevented him from making sentences freely. In most cases for the first semester, he simply looked up the assigned words in an English-Chinese dictionary to find out their meaning and then came up with a Chinese sentence containing that word and translated that sentence into English word by word

with the help of a Chinese-English dictionary. With the increase of his English proficiency, his production relied less on literal Chinese-to-English translation.

My mom ***absent*** at the home. (11/20/2003)

The sentence-making data are reliable only when the given words are in base form and their usefulness is reduced by the fact that most of the sentences made are very short and contextless. For this reason, they are used with caution.

CHAPTER FOUR

REPLICATING THE ASPECT HYPOTHESIS

The objective of this chapter is to test whether the claims of the Aspect Hypothesis apply to the subject of this study. That is, the goal is to find out whether the correlations of verb inflections and verb aspectual categories claimed by the Aspect Hypothesis exist in the written production of this particular subject.

4.1 METHODOLOGY

The time span for this data collection is 25 months, divided into five periods ranging from an extremely rudimentary level to a relatively advanced level. The length of each period, the intervals between two periods and the data information of each period are listed in Table 3.1. The Find/Replace function of Microsoft Word was used to count the occurrence of each of the inflections assigned to each of the four verb categories at each period. To ensure correct searching, two sets of codes are assigned to all of the verbs included in this chapter, one marking a verb's inflection and the other marking its aspectual category. Modal verbs, auxiliary verbs, copulas, and verbs of formulaic expressions are excluded from calculation.

4.1.1 Assigning Inflection Codes

In this study, base verbs are treated as verbs with the inflection of "-zero". For example, the inflection of "walk" is "-zero". Irregular verbs such as "has", "is", and "does" are treated as verbs with the inflection of "-s". The past forms and past participles

of both regular and irregular verbs are treated generically as verbs with the inflection of "-past" (e.g., "walked", "broke", "broken", "drove", "took", and "taken"). Therefore, there are four possible endings of any English verb, which, along with their corresponding codes, are listed in Table 4.1.

Table 4.1 Form-to-Function Data Set

Verb ending	Example	Code
none	I play basketball in the afternoon.	-ZERO
-s	He hit**s**/do**es**/deni**es** it.	-S
-ing	He is/was do**ing** his home work.	-ING
-past	He count**ed**/**broke** it; he has **broken** it.	-PAST

4.1.2 Assigning Lexical Aspect Codes: The Operational Tests

The Aspect Hypothesis studies the relationship between the assignments of verb inflections and the three pairs of temporal semantic features residing in the verbs: stativity vs. dynamicity, atelicity vs. telicity, and durativity vs. punctuality. As said before, it is more proper to say that it is the situation/event expressed by a verb rather than the verb *per se* that possesses these features, since different situations described by the same verb may have different lexical aspects. However, the lexical aspects studied by the Aspect Hypothesis are the lexical aspects possessed by individual verbs. This treatment is evidenced by various operational tests used to classify verbs into their aspectual categories (Bardovi-Harlig & Bergstrom, 1996; Robison, 1990, 1995; Weist et al., 1984). This problematic treatment of the lexical aspect is one of the causes leading to the contradictory results of studies conducted in this paradigm. However, to ensure

comparability of this study with the previous ones, the term “lexical aspect” in this project also refers to the lexical aspects of the verbs.

Based on the semantic and syntactic features possessed by the four verb aspectual categories, I simplified the operational tests used in Robison (1995). Following are the explanations of the operational tests that will be used in this research. The full set is listed as appendix A.

We can use the compatibility of a verb with the progressive aspect to distinguish a state/achievement verb from an activity/accomplishment verb. If a verb simply cannot be used with the progressive aspect in non-imperative sentences without giving rise to some special meaning, it is either a state verb or an achievement verb, as illustrated by examples (4.1) and (4.2) below:

(4.1) * Georgia **is belonging** to the US. (State verb)

(4.2) * I'**m hearing** you. (Achievement verb)

We can then tell a state from an achievement by testing whether it relies on an adverbial in the simple present tense: only a state verb can be in the present tense without any adverbial in normal situations. Therefore, if a verb that normally cannot be used with the progressive aspect can be in the present tense without any adverbial, it is a state verb; otherwise, it is an achievement verb. See (4.3) and (4.4) below:

(4.3) Georgia **belongs** to the US. (State verb)

(4.4) * I **arrive**. (Achievement verb)

There are two additional tests to conclude that a verb is an achievement verb, based on the special meanings conveyed when an achievement verb is used with the progressive aspect. If a verb in its progressive aspect refers to the process leading to the final result

rather than the final result *per se*, or if it refers to a repetitive activity, it is an achievement verb, as shown from examples (4.5) and (4.6) below:

(4.5) She **is reaching** the summit. (Achievement verb, referring to the process leading to the summit).

(4.6) She **was jumping** for several minutes. (Achievement verb, referring to repetition)

If all of the above tests do not apply, the verb is either an activity verb or an accomplishment verb. The classic way to distinguish them is by resorting to the semantic feature of telicity. Being telic, an event expressed by an accomplishment verb cannot be what it is claimed to be unless it has been finished, i.e., reaching its intrinsic end point. Possessing no intrinsic end point, an event encoded by an activity verb can be so called once it starts. Thus we can use the following test to tell them from each other: imagine that somebody is in the middle of "verb-ing" (an activity); raise the question: "Has that person "verb-ed" (that activity)?" If the answer is "yes", the verb is an activity verb (see (4.7)); otherwise, it is an accomplishment verb (see (4.8)).

(4.7) He **is walking**.

Question: Has he walked?

Answer: Yes

Verb type: Activity verb

(4.8) He **is writing** a novel.

Question: Has he written that novel?

Answer: No.

Verb type: Accomplishment verb

There are 353 verbs to be classified. To make my judgments more reliable, in addition to my own classifications of the verbs, I assigned 10 verbs to each of the 35 native speakers in one of the linguistics classes I was teaching to make judgments after I gave detailed explanations of the operational tests. There were a few discrepancies between the judgments given by the students and mine, which were solved by face-to-face discussion. Appendix B lists the verbs of each categories at each developmental period used in this chapter. Table 4.2 lists the codes used to represent the four aspectual categories of verbs: “sta” for stative verbs, “act” for activity verbs, “acc” for accomplishment verbs, and “ach” for achievement verbs.

As every verb can have four possible inflections, there are sixteen total category-inflection combinations. As each combination for the same verb may appear more than once, a dollar sign is inserted between the code for the word type and the code for the inflection for the first appearance of a combination. Taking this into account, there are 32 combinations, which are listed in Table 4.3.

Using the Find/Replace function, I can find the frequency of each of these 32 combinations in each developmental period. Take the (STA)(-S) and (STA)$(-S) in period

Table 4.2 Codes for the four aspectual categories of English verbs

Aspectual category	**Code for verbs of first appearance**	**Code for verbs of subsequent appearances**
State verbs	$(STA)	(STA)
Activity verbs	$(ACT)	(ACT)
Accomplishment verbs	$(ACC)	(ACC)
Achievement verbs	$(ACH)	(ACH)

Table 4.3 Combinations of codes for verb categories and verb endings

Code combination of first appearance				**Code combination of subsequent appearance**			
1	(STA)$(-S)	9	(ACC)$(-S)	17	(STA)(-S)	25	(ACC)(-S)
2	(STA)$(-PAST)	10	(ACC)$(-PAST)	18	(STA)(-PAST)	26	(ACC)(-PAST)
3	(STA)$(-ING)	11	(ACC)$(-ING)	19	(STA)(-ING)	27	(ACC)(-ING)
4	(STA)$(-ZERO)	12	(ACC)$(-ZERO)	20	(ACT)(-ZERO)	28	(ACC)(-ZERO)
5	$(ACT)(-S)	13	(ACH)$(-S)	21	(ACT)(-S)	29	(ACH)(-S)
6	(ACT)$(-PAST)	14	(ACH)$(-PAST)	22	(ACT)(-PAST)	30	(ACH)(-PAST)
7	(ACT)$(-ING)	15	(ACH)$(-ING)	23	(ACT)(-ING)	31	(ACH)(-ING)
8	(ACT)$(-ZERO)	16	(ACH)$(-ZERO)	24	(ACT)(-ZERO)	32	(ACH)(-ZERO)

one as an example. The operation is as follows: 1) find all instances of (STA)$(-S) and get the result N1, which is the frequency of "-S" attached to the state verb *types*; 2) find all instances of (STA)(-S) and get N2. The sum of N1 and N2 is the frequency of "-S" attached to the state verb *tokens*. The dollar sign ensures that each individual state verb can be counted maximally four times: when it is assigned "-zero", "-s", "-ing", and "-past". Suppose we have the following coded sample (4.9).

(4.9) belong (STA)$(-ZERO), belong (STA)(-ZERO), belong (STA)(-ZERO), belongs (STA)$(-S), belongs (STA)(-S), belongs (STA)(-S), belonging (STA)$(-ING), belonging (STA)(-ING), belonging (STA)(-ING), belonged (STA)$(-ED), belonged (STA)(-PAST), belonged (STA)(-PAST)

(STA)$(-ZERO) will be counted only once (N1 = 1), which is the type frequency, while (STA)(-ZERO) will be counted twice (N2 = 2). The token frequency of the state verb "belong" that is assigned "-zero" is N1 + N2 = 3. It is useful to distinguish verb types from verb tokens as some high frequency verbs may boost the statistical figures.

The figures thus obtained are the absolute numbers. To make the results reliable, the percentage value of each category-inflection combination needs to be worked out by dividing the frequency of an inflection assigned to a verb category with the total number of that verb category in a certain period. For example, if period three contains 40 state verbs, the token count that is assigned "-zero" is 30, and the type count is 20, then the token percentage and type percentage would be 75% (30 / 40 * 100%) and 50% (20 / 40 * 100%), respectively.

In addition to finding the statistical figures, locating specific examples for and against the Aspect Hypothesis is made easy by using the Find/Replace function. For example, I can find all of the associations between state verbs and "-past", which is supposed to be uncommon according to the Aspect Hypothesis, by searching all instances of (STA)(-PAST) and (STA)$(-PAST).

In the following, for each period I will tabulate the correlations of each of the four inflections with each of the four verb categories, generate charts for easier comparisons, and summarize and discuss the findings.

4.2 PERIOD ONE

45 different types of verbs were produced during this period (age: 11;10, study length: 17 weeks), which were composed of 11 state verbs, nine activity verbs, 18 accomplishment verbs and seven achievement verbs. The multiple occurrences of some

of them gave rise to a token number of 133. Table 4.4 lists these verbs with their type and token counts and percentages.

Table 4.4 Verbs that appeared during period one

Category	**Type (45)**		**Token (129)**	
	n	%	n	%
STA	11	24%	63	47%
ACT	9	20%	12	9%
ACC	18	40%	5	4%
ACH	7	16%	53	40%

Table 4.5 Token counts (n) and percentages (%) of the distributions of the four inflections among the four verb categories (period one)

Token (133)	**Total**		**STA**		**ACT**		**ACC**		**ACH**	
	n	%	n	%	n	%	n	%	n	%
-zero	63	47%	24	38%	10	16%	24	38%	5	8%
-s	12	9%	10	83%	1	8%	1	8%	0	0%
-ing	5	4%	0	0%	3	60%	2	40%	0	0%
-past	53	40%	11	21%	10	19%	19	36%	13	25%

The token number of verbs equals to the token number of inflections (133 for both), as every verb must be marked with one and only one inflection. However, the type number of verbs is less than the type number of inflections (45 vs. 59), as the same verb may take more than one inflection. For example, “begin” may appear as “begin”,

"begins", "began", "begun", and "beginning". Table 4.5 lists the token counts and percentages of the distributions of the four inflections among the four verb categories with their type counterparts listed in Table 4.6.

Table 4.6 Type counts (n) and percentages (%) of the distributions of the four inflections among the four verb categories (period one)

Type (59)	**Total**		**STA**		**ACT**		**ACC**		**ACH**	
	n	%	n	%	n	%	n	%	n	%
-zero	28	47%	9	32%	6	21%	10	36%	3	11%
-s	6	10%	4	67%	1	17%	1	17%	0	0%
-ing	4	7%	0	0%	3	75%	1	25%	0	0%
-past	21	36%	3	14%	2	10%	12	57%	4	19%

Findings

Column 3 of Table 4.6 shows the percentages of the total appearances of the four verb inflections out of the total type counts: "-zero" (47%), "-s" (10%), "-ing" (7%), and "-past" (36%). These figures indicate that "-s" and "-ing" occurred very rarely, nearly half of the verbs remained uninflected, and a considerable number of verbs were assigned past inflections. The distribution patterns of these inflections are displayed in Figure 4.1, which is made out of Table 4.6.

The most obvious feature of "-zero" is that it was assigned to all verb types by this individual. Among them, it had the highest distribution rate among accomplishment verbs (36%), trailed by state verbs (32%). It had low distribution rate among activity verbs (21%) and the lowest rate among achievement verbs (11%). "-s" was mainly assigned to state verbs (67%), with the same rate to activity verbs and accomplishment verbs (17%).

No “-s” was assigned to achievement verbs. “-ing” was exclusively assigned to activity verbs (75%) and accomplishment verbs (25%). 57% of “-past” inflections were assigned to accomplishment verbs, 19% were assigned to achievement verbs, 14% to state verbs and 10% to activity verbs. I will give the possible reasons in the discussion section.

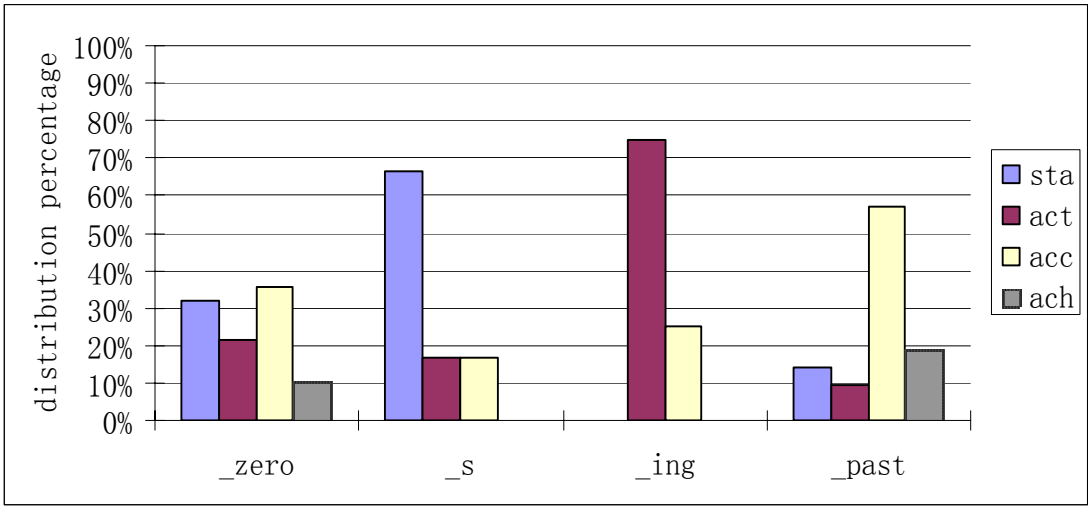

Figure 4.1Distribution percentages of the four inflections among the four verb categories at period one (type)

In sum, the results of period one obtained from J’s written production only partially supported the Aspect Hypothesis, i.e. the exclusive assignment of “-ing” to activity/accomplishment verbs and the high distribution rate of “-s” among state verbs. Contra the Aspect Hypothesis, the association between “-zero” and state verbs and that between “-past” and achievement verbs were rather weak (32% and 19%, respectively). We must note that the supports are compromised by the overall small amount of “-s” and “-ing” inflections that were produced. Table 4.7 summarizes the results at period one with reference to the Aspect Hypothesis:

Table 4.7 Period one results compared with the Aspect Hypothesis

Association claimed by the Aspect Hypothesis	**Total count of inflection**	**% displayed**	**Confirmed or not**		
-*zero* and STA	28	32%		no	
-s and STA	6	67%			?
-*ing* and ACT/ACC	4	75%/25%	Yes		
-*past* and ACH	21	19%		No	

4.3 PERIOD TWO

38 types and 57 tokens of verbs were included during this period (age: 12;3, study length: 38 weeks). The relevant figures are listed in Table 4.8, Table 4.9, and Table 4.10. Figure 4.2 is made out of Table 4.10 for easier comparison.

Findings

Table 4.10 shows that "-s", "-ing" and "-past" dropped from 10%, 7%, and 36% at period one to 7%, 2%, and 33% at period two. In accordance with these drops, "-zero" rose from 47% to 58%. These changes indicate that more verbs appeared in their base forms and that "-s" and "-ing" were too sparse to be statistically significant.

The distribution rates of "-zero" among the four verb categories are: 20% to state verbs, 32% to activity verbs, 36% to accomplishment verbs, and 12% to achievement verbs. The main conclusion that can be reached for this individual subject is that base form became more and more common, independent of the lexical aspects residing in the verbs. Therefore the skewed correlation between "-zero" and state verbs, as claimed by the Aspect Hypothesis, did not exist in J's production at this period.

Table 4.8 Verbs that appeared during period two

Category	Type (38)		Token (57)	
	n	%	n	%
STA	6	16%	18	32%
ACT	9	24%	9	16%
ACC	15	39%	21	37%
ACH	8	21%	9	16%

Table 4.9 Token counts (n) and percentages (%) of the distributions of the four inflections among the four verb categories (period two)

Token (57)	Total		STA		ACT		ACC		ACH	
	n	%	n	%	n	%	n	%	n	%
-zero	32	56%	9	28%	8	25%	12	38%	3	9%
-s	8	14%	8	100%	0	0%	0	0%	0	0%
-ing	2	4%	0	0%	0	0%	2	100%	0	0%
-past	15	26%	1	7%	1	7%	7	47%	6	40%

Table 4.10 Type counts (n) and percentages (%) of the distributions of the four inflections among the four verb categories (period two)

Type (43)	Total		STA		ACT		ACC		ACH	
	n	%	n	%	n	%	n	%	n	%
-zero	25	58%	5	20%	8	32%	9	36%	3	12%
-s	3	7%	3	100%	0	0%	0	0%	0	0%
-ing	1	2%	0	0%	0	0%	1	100%	0	0%
-past	14	33%	1	7%	1	7%	6	43%	6	43%

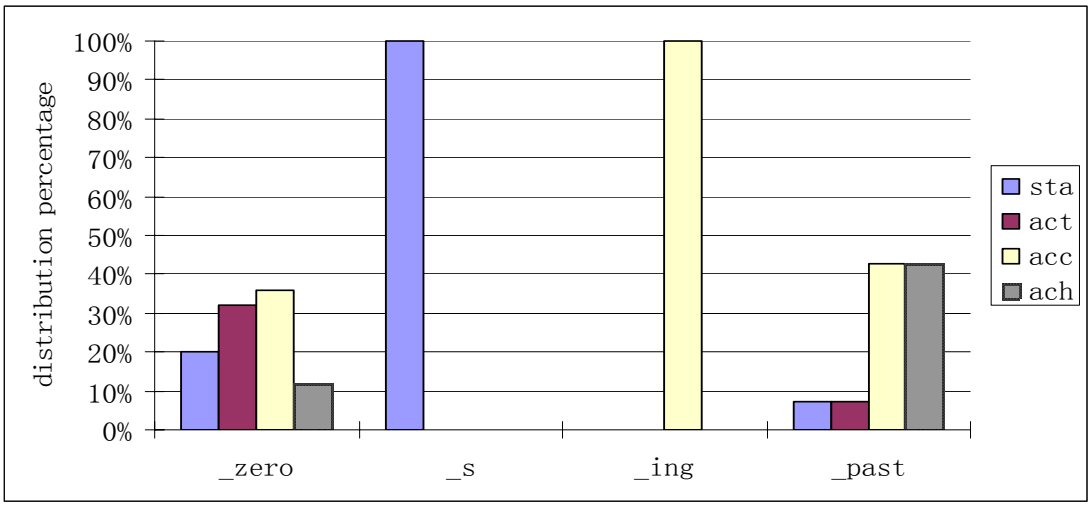

Figure 4.2 Distribution percentages of the four inflections among the four verb categories at period two (type)

On the surface, "-s" was exclusively assigned to state verbs. However, the fact that totally there were only eight tokens of this inflection (attached to only three verb types), makes this result only a partial support for the Aspect Hypothesis at best. There was only one instance of "-ing" ("shoving a dog into the bathroom"). Whatever the lexical aspect of "shove" is, the result is unrevealing. "-past" was assigned to all verb types, with the same high rate among achievement and accomplishment verbs (43% for both) and the same low rate among activity and state verbs (7% for both). Therefore the claim of the Aspect Hypothesis that "-past" was attracted by achievement verbs only marginally applies to this particular subject, since "-past" was also heavily assigned to accomplishment verbs.

In sum, J's written production at this period gave very little support for the claims made by the Aspect Hypothesis, as listed in Table 4.11.

Table 4.11 Period two results compared with the Aspect Hypothesis

Association claimed by the Aspect Hypothesis	**Total count of inflection**	**% displayed**	**Confirmed or not**		
-*zero* and STA	25	20%		No	
-s and STA	3	100%			?
-*ing* and ACT/ACC	1	0/100%			?
-*past* and ACH	14	43%			?

4.4 PERIOD THREE

159 types and 284 tokens of verb were produced during this period (age: 12;9, study length: 64 weeks). The relevant statistics figures are listed in Table 4.12, Table 4.13 and Table 4.14. Figure 4.3 is made out of Table 4.14 for easier comparison.

Table 4.12 Verbs that appeared at period three

Category	**Type (159)**		**Token (284)**	
	N	%	n	%
STA	21	13%	45	16%
ACT	44	28%	65	23%
ACC	54	34%	99	35%
ACH	40	25%	75	26%

Findings

Table 4.14 shows that a significant change of the overall appearances of inflections is the rise of "-past" from 33% at period two to 54% at period three and the drop of

"-zero" from 58% at period two to 33% at period three. "-s" and "-ing" were still as low as 7%, though they rose slightly. The patterns of the distributions of the inflections among the verb categories are reflected in Figure 4.3 and are summarized below.

Table 4.13 Token counts (n) and percentages (%) of the distributions of the four inflections among the four verb categories (period three)

Token (284)	**Total**		**STA**		**ACT**		**ACC**		**ACH**	
	n	%	n	%	n	%	n	%	n	%
-zero	96	34%	21	22%	27	28%	35	36%	13	14%
-s	15	5%	12	80%	1	7%	1	7%	1	7%
-ing	12	4%	0	0%	7	58%	5	42%	0	0%
-past	161	57%	12	7%	31	19%	58	36%	60	37%

Table 4.14 Type counts (n) and percentages (%) of the distributions of the four inflections among the four verb categories (period three)

Type (159)	**Total**		**STA**		**ACT**		**ACC**		**ACH**	
	n	%	n	%	n	%	n	%	n	%
-zero	60	33%	10	17%	18	30%	23	38%	9	15%
-s	12	7%	10	83%	1	8%	1	8%	1	8%
-ing	12	7%	0	0%	7	58%	5	42%	0	0%
-past	99	54%	10	10%	21	21%	36	36%	32	32%

There was no substantial difference of the distribution rates of "-zero" among the four verb types: accomplishment verbs (38%), activity verbs (30%). state verbs (17%), and achievement verbs (15%). This indicates that J still preferred using the base form of

all verb types in many situations. Contra the Aspect Hypothesis, the association between "-zero" and state verbs was the weakest, as far as J's written production is concerned.

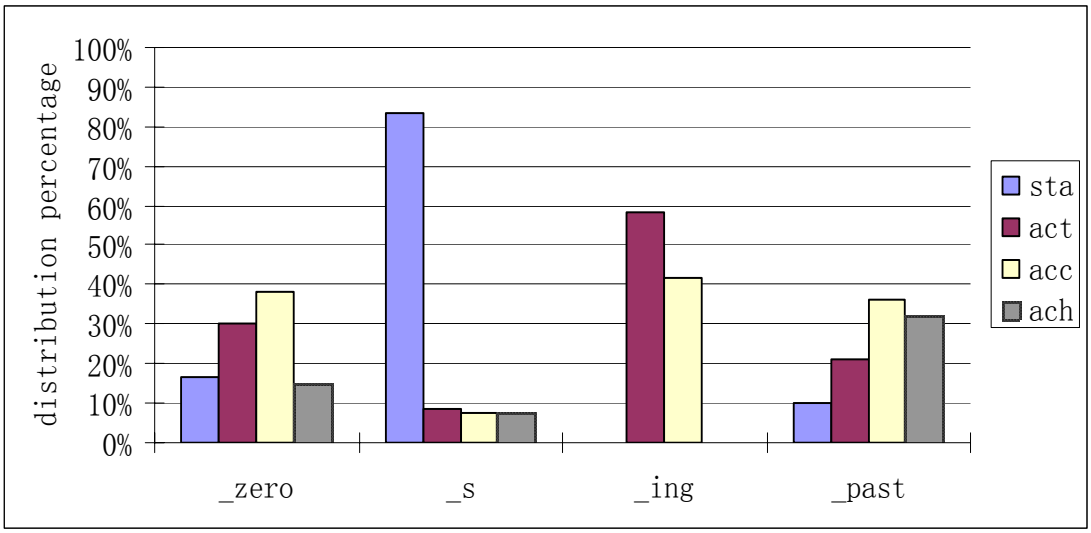

Figure 4.3 Distribution percentages of the four inflections among the four verb categories at period three (type)

There were 16 instances of "-s" at this period, which belonged to 12 verb types (nine state verbs, one activity verb, one accomplishment verb and one achievement verb). As shown from the preceding figures, "-s" was dominantly assigned to state verbs for this individual subject, which supports the Aspect Hypothesis.

J produced 12 instances of "-ing" , among which seven were assigned to activity verbs (58%) and five to accomplishment verbs (42%). None was assigned to state or achievement verbs. This is a firm support for the Aspect Hypothesis's claim of the association between activity/accomplishment verbs and "-ing".

"-past" was still assigned to all verb types. The distribution figures are: 36% among accomplishment verbs, 32% among achievement verbs, 21% among activity verbs, and 10% among state verbs. These figures imply that "-past" was attracted by verbs with the

semantic feature of telicity, which is possessed by both achievement verbs and accomplishment verbs. This finding only marginally supported the Aspect Hypothesis' claim of the association between "-past" and achievement verbs.

In sum, as shown from Table 4.15, as far as J's written production is concerned, the results of this period gave stronger support to the claims of the Aspect Hypothesis than the previous two periods. The possible reason is that before period three, his English was so poor that in most cases he just simply used uninflected forms for everything. However, when he became more proficient in this language, due to the salience of verbal inflections in his reading materials, he started to attempt to inflect verbs but he was not sure how to do that.

Table 4.15 Period three results compared with the Aspect Hypothesis

Association claimed by the Aspect Hypothesis	**Total count of inflection**	**% displayed**	**Confirmed or not**		
-*zero* and STA	60	17%		No	
-*s* and STA	12	83%	Yes		
-*ing* and ACT/ACC	12	58%/42%	Yes		
-*past* and ACH	99	32%			?

4.5 PERIOD FOUR

220 types and 470 tokens of verbs were produced during period four (age: 13;3, study length: 90 weeks). The relevant statistical figures are listed in Table 4.16, Table 4.17 and Table 4.18. Figure 4.4 is made out of Table 4.18 for easier comparison.

Findings

"-zero" had the highest distribution rate among accomplishment verbs (35%), trailed by activity and accomplishment verbs (24%), with the lowest rate among state verbs (17%). As at previous periods, it was still very common for verbs to appear in their base forms, regardless of their aspectual categories. Again, no support for the Aspect Hypothesis was found for the association between "-zero" and state verbs during this period from J's written production.

Table 4.16 Verbs that appeared at period four

Category	**Type (220)**		**Token (470)**	
	n	%	n	%
STA	29	13%	77	16%
ACT	54	25%	101	21%
ACC	80	36%	163	35%
ACH	57	26%	129	27%

Table 4.17 Token counts (n) and percentages (%) of the distributions of the four inflections among the four verb categories (period four)

Token (470)	**Total**		**STA**		**ACT**		**ACC**		**ACH**	
	n	%	n	%	n	%	n	%	n	%
-zero	143	30%	33	23%	31	22%	46	32%	33	23%
-s	31	7%	20	65%	5	16%	4	13%	2	6%
-ing	25	5%	2	8%	13	52%	6	24%	4	16%
-past	271	58%	21	8%	53	20%	107	39%	90	33%

Totally, there were 31 instances of “-s”, which were mainly assigned to state and activity verbs and less favored by accomplishment and achievement verbs. If we divide the four types of verbs into atelic verbs (composed of state verbs and activity verbs) and telic verbs (composed of accomplishment verbs and achievement verbs), it seems that “-s” was dominantly assigned to atelic verbs. So these results did not give support to the Aspect Hypothesis’ claim that “-s” was solely favored by state verbs.

Table 4.18 Type counts (n) and percentages (%) of the distributions of the four inflections among the four verb categories (period four)

Type (278)	**Total**		**STA**		**ACT**		**ACC**		**ACH**	
	n	%	n	%	n	%	n	%	n	%
-zero	103	37%	17	17%	25	24%	36	35%	25	24%
-s	16	6%	6	38%	5	31%	2	13%	2	13%
-ing	20	7%	1	5%	11	55%	4	20%	4	20%
-past	139	50%	8	6%	30	22%	57	41%	44	32%

There were 26 instances of “-ing”, attached to 20 verb types. 55% of the verbs were activity verbs, 20% were accomplishment verbs, 20% were achievement verbs, and only 5% were state verbs. This supported the Aspect Hypothesis’ claim of the association between activity /accomplishment verbs and “-ing”. The distribution rates of “-past” are: 41% among accomplishment verbs, 32% among achievement verbs, 22% among activity verbs (22%), and 6% among state verbs (6%). These figures indicate that more verbs started to be assigned “-past” to mark past tense and that “-past” inflection seemed to be favored by verbs with the semantic feature of telicity, which is possessed by achievement verbs and accomplishment verbs. Like in periods two and three, the Aspect Hypothesis’

claim that "-past" was attracted by achievement verbs only partially applies to J's written production.

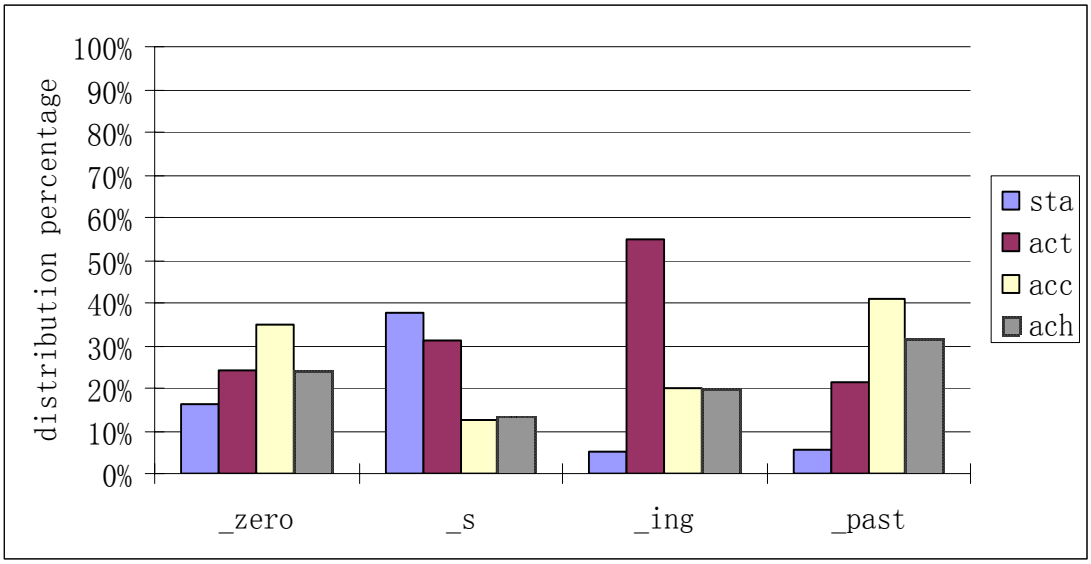

Figure 4.4 Distribution percentages of the four inflections among the four verb categories at period four (type)

The results of this period, with reference to the Aspect Hypothesis, are listed in Table 4.19.

Table 4.19 Period four results compared with the Aspect Hypothesis

Association claimed by the Aspect Hypothesis	**Total count of inflection**	**% displayed**	**Confirmed or not**		
-*zero* and STA	103	17%		No	
-s and STA	16	38%		No	
-*ing* and ACT/ACC	20	55%/20%	Yes		
-*past* and ACH	139	32%			?

4.6 PERIOD FIVE

235 types and 446 tokens of verbs were produced during this period (age: 13;9, study length: 115 weeks). The relevant statistical figures are listed in Table 4.20, Table 4.21, and Table 4.22. Figure 4.5 is made out of Table 4.22

Findings

An obvious change in the appearance of inflections that occurred during period five was that all of the inflections appeared among all verb categories, which means that inflections became more temporally oriented. Specific findings of this period are summarized below.

No substantial difference in the distribution rates of "-zero" among the four verb categories was found. Contrary to the prediction of the Aspect Hypothesis, it had the lowest rate among state verbs (13%).

Table 4.20 Verbs that appeared at period five

Category	**Type (235)**		**Token (446)**	
	n	%	n	%
STA	20	9%	59	13%
ACT	74	31%	115	26%
ACC	82	35%	145	33%
ACH	59	25%	127	28%

13 tokens of "-s" appeared during this period, belonging to nine types, 56% of which were given to state verbs, 22% to activity verbs, and 11% to accomplishment and

achievement verbs, respectively. This formed a partial support for the Aspect Hypothesis' claim that "-s" is associated with state verbs.

Table 4.21 Token counts (n) and percentages (%) of the distributions of the four inflections among the four verb categories (period five)

Token (446)	**Total**		**STA**		**ACT**		**ACC**		**ACH**	
	n	%	n	%	n	%	n	%	n	%
-zero	124	28%	25	20%	27	22%	34	27%	38	31%
-s	13	3%	7	54%	3	23%	2	15%	1	8%
-ing	61	14%	5	8%	29	48%	15	25%	12	20%
-past	248	56%	22	9%	56	23%	94	38%	76	31%

Totally, there were 55 type counts of "-ing". It had the highest rate among activity verbs (49%), followed by achievement verbs (24%), then by accomplishment verbs (20%), with the lowest rate among state verbs (7%). These findings supported the Aspect Hypothesis in that they lived up to the prediction that activity and accomplishment verbs have strong attraction correlation with "-ing" but they also contradicted it in that achievement verbs obtained higher rate than accomplishment verbs.

"-past" had the highest distribution rate among accomplishment verbs (38%), followed by achievement verbs (28%) and activity verbs (26%), then by state verbs (9%). These findings contradicted the Aspect Hypothesis's prediction of the association between achievement verb and "-past".

In sum, according to the written data of this particular subject, the results of period five gave nearly no support for the claims made by the Aspect Hypothesis, as listed in Table 4.23.

Table 4.22 Type counts (n) and percentages (%) of the distributions of the four inflections among the four verb categories (period five)

Token (291)	**Total**		**STA**		**ACT**		**ACC**		**ACH**	
	n	%	n	%	n	%	n	%	n	%
-zero	75	26%	10	13%	23	31%	25	33%	17	23%
-s	9	3%	5	56%	2	22%	1	11%	1	11%
-ing	55	19%	4	7%	27	49%	11	20%	13	24%
-past	152	52%	13	9%	39	26%	58	38%	42	28%

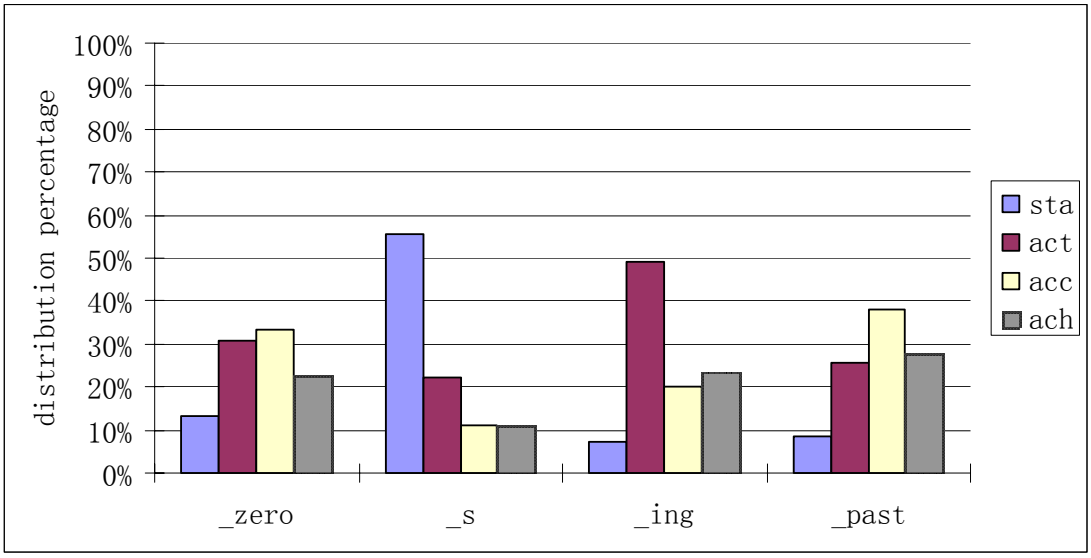

Figure 4.5 Distribution percentages of the four inflections among the four verb categories at period five (type)

4.7 SUMMARY OF FINDINGS

Combining the figures of Tables 4.7，4.11，4.15，4.19，and 4.23, a new Table, Table 4.24 is made to summarize the supports and contradictions given to the Aspect Hypothesis from J's written production of the five developmental periods. Read horizontally, this table reveals the support/contradictions displayed by the five periods for each of the four claims of the Aspect Hypothesis, which derives the following four

conclusions: 1) the association between "-zero" and state verbs has never been confirmed throughout the five periods; 2) the association between "-s" and state verbs has been supported largely at period three (83%), partially at period one (67%), period two (100%)[1], and period five (56%), and contradicted at period four (38%); 3) the association between "-ing" and activity/accomplishment verbs has been supported fully at periods one, three, and four, partially at period five, and no conclusion can be made for period two due to its small number; and 4) the association between "-past" and achievement verbs has been only marginally supported in periods two, three, and four but blatantly contradicted at periods one and five.

Table 4.23 Period five results compared with the Aspect Hypothesis

Association claimed by the Aspect Hypothesis	**Total count of inflection**	**% displayed**	**Confirmed or not**		
-*zero* and STA	103	17%		No	
-s and STA	16	38%			?
-*ing* and ACT/ACC	20	55%/20%			?
-*past* and ACH	139	32%		No	

4.8 DISCUSSION

According to the written data of this particular subject, the findings of this research contradicted more than supported the Aspect Hypothesis. In particular, during periods one, two, four, and five, lexical aspect had very little effect on J's assignment of verb

[1] The extreme low total number of "-s" produced at stage two made 100% of association between "-s" and state verbs only partial supportive. As there is only two instances of "-ing", the marking of support or contradiction is not applicable; therefore, I leave the cells for association between "-ing' and ACT/ACC blank.

inflections, while during period three, it had evident effect on his assignment of "-s" and "-ing". Like the subjects of Salaberry (2000), the subject of this study displayed the influence for the assignments of certain inflections during later periods rather than the beginning period. This result may be contributed to by the following factors.

Table 4.24 Summary of supports/contradictions given to the Aspect Hypothesis by the five periods.

Claim of the Aspect Hypothesis	**Confirmed or Not**				
	Period one	Period two	Period three	Period four	Period five
-*zero* with STA	No	No	No	No	No
-*s* with STA	?	?	Yes	No	?
-*ing* with ACT/ACC	Yes		Yes	Yes	?
-*past* with ACH	No	?	?	?	No

First, for this beginning language learner, priority of expressing meaning over manipulating forms, his limited linguistic resources, and the processing efforts involved in inflecting verbs forced him to use uninflected verbs in as many situations as possible. This preference for using uninflected verbs was also displayed by the subjects of Meisel (1987), Schumann (1987), Dietrich et al (1995), and Klein et al (1993). For example, none of the subjects of Schumann (1987) used any morphological inflections to mark tense and aspect and most subjects of Dietrich et al (1995) still used base forms in most cases even after one year's living in the target countries. During late periods when he became more proficient in this language, his assignment of very morphology seemed to

be influenced by factors other than lexical aspect, i.e. to reflect the requirements of tense, grammatical aspect and syntax.

The studies reporting support for the Aspect Hypothesis often failed to report what kind of inflections were given by language learners to the verbs of infinitives or the content verbs preceded by auxiliary/modal verbs. The target-like forms should be the base forms but the Aspect Hypothesis would predict that learners still assign "-ing" to them if they are activity/accomplishment verbs, "-ed" if they are achievement verbs, and so on. As far as the written production is concerned, J used their base forms (see examples (4.10) – (4.14)), except for only a few occasions on which J used the past forms if the situations were in the past, and the 3sg forms if the subjects were third person singular, regardless of the lexical aspects of the verbs in question. However, no such instances as "didn't swimming", "may making a toy", or "I like to swimming" occurred throughout the five periods, which would be perfectly possible, according to the Aspect Hypothesis, since these verbs are either activity verbs or accomplishment verbs.

(4.10) I **don't like** (state verb) Sue Ellen, because she **didn't like** (state verb) her friends. (*11/05/03, Period one, Reading Summary*)

(4.11) That night he **will fight** (activity verb) with Ming Siou long. (04/24/04, *Period two, Reading Summary*)

(4.12) Then he swore he **will kill** (achievement verb) the dragon to avenge. (10/18/04, *Period three, Reading Summary*)

(4.13) I personal suggest the tree branches at the top, you **can bend them into many shapes** (accomplishment verb) and

they **won't break** (achievement verb), then you need a string **to tie to the wood** (accomplishment verb). (04/07/05, *Period four, Description*)

(4.14) Masses of white snow came rushing down the steep slope with a force that no living things **can block** (accomplishment verb) its way. (10/16/05, *Period five, Description*)

The highlighted verbs of the above examples and many verbs in similar contexts received the "-zero" inflection. Although from the limited data of this single subject I am not sure whether his assigning "-zero" to these verbs was motivated by the peculiar English syntactic requirements or caused by his limited ability to inflect verbs, it is unlikely that he assigned "-zero" to these verbs due to the lexical aspect residing in the verbs, since they are of various aspectual categories.

It is controversial whether the features of the source languages of the learners have influences on their acquiring the temporality of the target languages. Bardovi-Harlig (1992) reported that her subjects showed no such influences while Dietrich et al. (1995) reported that their subjects did. As far as J is concerned, the features of his mother tongue, Chinese, may have played a role in his favoring uninflected forms. Chinese is an extreme case of analytic languages that requires no inflection at all. J had already internalized its features by the time when he started to learn English.

Second, "-s" is the least functional morpheme among the four inflections, since its function of expressing the present tense can be taken by "-zero", and its function of expressing number in most cases is redundant — after all, the subject of a sentence itself

tells its number. Therefore, this inflection is the result of language specific syntactic requirement. From a functional viewpoint, this morpheme is bound to appear late. This explains its overall low and late production by J as well: he did not produce a statistically adequate amount of "-s" until period three. After that, he started to become aware of this syntactic peculiarity of English. He realized its function of expressing number before realizing its function of expressing tense. This priority is reflected in the following examples in which he used "-s" when the subject was third person singular, even though the tense was not the present tense, as shown from the following examples.

(4.15) One day the Rosies go to the beach. But beach **has** (state verb) too many bottles and cans. They cleaned it up. Then begin picnic. (11/13/03*, Period one, Reading summary*)

(4.16) Arangon, Elf prince and a dwarf went to Rohan to help. Meanwhile, Frodo **carries** (activity verb) Ring to Mordon to destroy it. (11/07/04*, Period three, Retelling of a film: The Lord of the Rings*)

(4.17) I run into the water and let the wave hug me, the first big wave **pulls me down** (accomplishment verb)…(04/23/05*, Period four, Travelogue*

(4.18) He was hit so bad that the snow had been driven inside his snow goggles so that the flexible plastic bulged out like two round light bulbs, which **makes** (accomplishment verb) Jack **looks** (state verb) like a giant dragonfly in a parka…(10/16/05*, Period five, Story*)

Chinese does not use copulas; instead, it uses bare adjectives or prepositions as the predicates of sentences. For example, the Chinese translations of the English sentences "He is tall" and "He is like a brat" are "He tall" and "He like a brat (no inflection)", respectively. This feature of Chinese and his awareness that "-s" is required for the 3sg subject made him go to the extreme of adding this inflection to prepositions, as shown from the following examples.

(4.19) Raymond is a playful child, just **likes** (preposition) a Brat. (05/21/04, *Period two, Reading summary*)

(4.20) I have two china peacocks on the table. It **froms** (preposition) my dad's friend. (03/22/04, *Pre-period two, Description*)

In sum, his assignments of "-s" were largely influenced by the number of the subject of the sentence. There was no clear evidence that they were determined by the temporal requirement, since it appeared in both present and past tense situations, nor by lexical aspects, since it was attached to every kind of verbs, as shown from the above examples.

Third, just like "-s", "-ing" did not start to appear on a scale large enough for statistical analysis until period three. As a matter of fact, the token frequencies of "-ing" are five and two for periods one and two respectively. However, the token frequencies of activity/accomplishment verbs for these two periods are 27 (nine activity verbs and 18 accomplishment verbs) and 24 (nine activity verbs and 15 accomplishment verbs), respectively. The extremely low frequency of "-ing" during these two periods indicates that neither activity verbs nor accomplishment verbs had strong attraction of "-ing". As

the bulk of the data of those two periods are reading summaries and journal entries, which feature the past tense, J had to think of how to construct the past progressive aspect, which was beyond his English competence during those periods. Therefore, he might simply have given up and use uninflected verb forms instead in most cases.

Periods four and five saw a considerable amount of attachment of "-ing" to achievement verbs. The real exclusive association between "-ing" and activity/accomplishment verbs existed in period three. However, scrutiny of all of the instances of the last three periods indicate that J used this inflection correctly to form the progressive aspect, gerunds, participles, and independent nominal structure, as shown from the following examples.

(4.21) We woke up at 5 o'clock AM, **waiting for** (adverbial participle) the van to take us in the parking lot. (10/15/04, *Period three,, Journal entry*)

(4.22) When I sat on a big rock to rest, I saw miles of green, yellow and red mountains, the birds **were singing** (the progressive aspect) above, the sun rose and warmed the world. (10/15/04, *Period three,, Journal entry*)

(4.23) If you are interested **in making** (prepositional gerund) your own bow, the paragraphs will teach you how to make them. (04/07/05, *Period four, Explanation*)

(4.24) ***Lying*** (independent nominal structure) in a **crouching** (attribute participle) position while **groaning** (adverbial

participle), Kelvin slowly lifted up his head. (10/13/05, *Period five, Story*)

It is unclear whether J assigned "-ing" to the verbs of the above and of other similar sentences to encode the verbs' lexical aspects, since most of them are activity/accomplishment verbs, or to meet the English syntactic requirements, since they were also used in a native-like manner.

Finally, J started to produce "-past" in considerable amounts as early as during period one and in most cases he used these forms in a target-like manner, which were caused by the following two evident factors. The correct suppliance rate of this inflection during early periods had a lot to do with the writing genres, the bulk of which was reading summary. To write a reading summary, J had to read the book carefully, which may have brought the verb endings to his attention. During the last three periods, he became more and more proficient in this language and he started to use "-past" in a native manner. This accounts for the following phenomena. Although there were still many cases in which he used "-zero" where "-past" was required even in the last period, he used "-past" almost exclusively to express past temporality and construct the perfect aspect, the passive voice, attributive past participles and adverbial past participles, regardless of the verbs' lexical aspects, as shown from the following examples.

(4.25) In the heart of the street it **stood** (state verb) an Indian chief statue, the board beside it said that... (10/15/04, *Period three,, Journal entry*)

(4.26) He went up period, made a few funny cooing sound; then **disguised** himself as a dwarf but nobody **laughed**

(accomplishment verb) (11/19/04, *Period three,, Journal entry*)

To observe how their subjects inflected the verbs, studies that addressed the Aspect Hypothesis generally like using personal narrative as the data type, such as narrating a personal experience, retelling a pantomime film, writing a fairy tale, etc. Suitable supplementary data type would be non-past genres, such as future plan, object description, explanation, argumentation, etc. A non-past genre like this does not require the "-past" inflection, whatever the verb type is. However, if the association between achievement verbs and "-past" is as strong as claimed by the Aspect Hypothesis, the subjects would still add "-past" to the verbs as long as they are achievements. What strikes me most is that scholars seemed uninterested in using non-past genres. I deliberately included several pieces of non-past data across periods in an attempt to reveal the degree to which "-past" is affiliated to achievement verbs. The relevant figures are listed in Table 4.25.

Table 4.25 Degrees to which "-past" was attached to achievement verbs in non-past genres

Period	Genre	Ach	Past	Ach with past (n)
1	Description	0	1	0
3	Argumentation, Explanation	6	7	3
4	Argumentation, Explanation	16	34	9
5	Description	3	1	1

As shown from the above table, the description genre of period one is unrevealing due to the small numbers of both achievement verbs and "-past". The figures of the other periods indicate that no particular association existed between achievement verbs and

"-past", at least as far as J's written production is concerned. Furthermore, most of those achievement verbs attached with "-past" were used grammatically, such as encoding the simple past and to form the perfect aspect, as shown from the following examples.

(4.27) **Have** you ever **heard** an animal with strong legs and two over the shoulder, have a wing like a bat, with horns on its head, spikes on its back? (10/21/04, *Period three, Argumentation*)

(4.28) When [you] **pulled** the string, you **forced** the wood to bend farther, when [you] **released** it, the inertia **caused** the string to **pull** the arrow out. (04/07/05, *Period four,, Explanation*)

(4.28) is particularly revealing, in which the same achievement "pull" was attached to different inflections: "-past" to mark the grammatical perfective aspect and "-zero" to meet the infinitive syntactic requirement. It seems that his uses of "-past" were not restricted by the lexical aspects of the verbs to which it was attached.

In sum, learning second language verbal morphology is a complicated process, which involves many factors. As far as J's written production is concerned, the lexical aspect of verbs played a weak role. Instead, other factors were at play, which are: 1) the requirements of tense and grammatical aspect; 2) the language-specific syntactic requirements, such as infinitives, modal/auxiliary verbs, passive structures, independent nominal structures, 3) the writing genres, 4) his English proficiency level, and possibly 5) the features of his mother tongue.

CHAPTER FIVE

INFLECTION AND TENSE – ASPECT

Chapter Four revealed that J's written production gave more contradiction than support for the claims of the Aspect Hypothesis that verb inflections are used by beginning language learners merely to mark verbs' lexical aspects. This chapter will investigate the extent to which verb inflections were used by J to mark tense and/or grammatical aspect. I will first introduce the methodology used in this chapter, list the extents to which each inflection at each period was used to mark tense/aspect, compare the results of each period, and discuss the findings.

5.1 METHODOLOGY

This chapter will use the same data used in Chapter Four. As I did in Chapter Four, copulas, modal/auxiliary verbs, and the verbs forming formulaic expressions are excluded, so are the verbs with inflections that have unclear motivations. The code "exclude" is assigned to those verbs that are excluded. For the included inflections, the code "tga" is assigned to those that were used to mark tense and/or grammatical aspect and the code "nontga" is given to those that were not motivated by temporal requirements. The codes for the verbal inflections are the same as those of the preceding chapter: "-zero" for the inflection of base verbs, "-s" for that of the 3sg verbs, both regular and irregular (e.g. "works", "has", "does", etc.), and "-past" for that of past verbs and past participles, both

regular and irregular (e.g. “worked”, “took”, and “broke”, “broken”, etc.). These codes are illustrated by the following examples.

(5.1) The mirror **has (-S) (NONTGA)** some kind of strange power which **can make (-ZERO) (NONTGA)** Max and his friends **became (-PAST) (TGA)** invisible. (*10/31/04, Period eight, Reading summary*)

(5.2) When I saw her, she is **working (-ING) (TGA)** in her garden. (*05/04/05, Period 14, Reading Summary*)

(5.3) I’m really sorry to **bother (-ZERO) (EXCLUDED)** you in the morning…(*11/11/04, Period nine, Chinese-English Translation*)

In (5.1), “nontga” is assigned to the inflection of “has” (“-s”), since the temporal situation calls for “-past”. "Nontga" is also assigned to the inflection of “make” (“-zero”) because it is not used to mark the past tense but to meet the requirement that the verb preceded by a modal verb should be in its base form. "Tga" is assigned to the inflection “became” (“-past”) because it is used to mark an event that took place in the past, although the to-less infinitive should be used. In (5.2), "tga" is assigned to the inflection of “working” (“-ing”), since it is used to mark the progressive aspect, although the tense is not correct. In (5.3), the inflection of “bother” (“-zero”) may have been motivated by the present tense of the sentence, or by the syntactical requirement of infinitive; therefore, "excluded" is assigned to indicate its unclear motivation.

As a second language learner in his first two years, J used the verb inflections in many different ways, some of which are quite unexpected. In the following, I will

describe in detail how I code the four inflections of the verbs that he produced in various situations, namely, infinitives, gerunds, participles, verbs preceded by modal/auxiliary verbs, and other special forms.

5.1.1 Coding of infinitives

In terms of their syntactical structures, grammatical infinitives can be classified into simple infinitives and complex infinitives. A simple infinitive is composed of the particle “to” and a single verb in its base form, such as “to do”, while a complex infinitive consists of the particle “to”, the base form of the auxiliary verb “be” or “have” followed by other verb(s) in various forms, such as “to be doing”, “to be done”, “to have done”, “to have been doing”, “to have been done”. In both cases, such verbs as “let”, “have”, “make”, “see”, and “hear”, etc. arbitrarily require that the infinitives following them drop the particle. The inflection “-zero” of the verb contained in an infinitive is merely motivated by the arbitrary syntactic requirement. Table 5.1 lists the codes assigned to the inflection of simple infinitives (“-zero”) under various circumstances, followed by explanations with examples.

Table 5.1 Treatment of simple infinitives

Form of infinitive verbs	**Temporality of situation**	**Code**	**Example**
Base	Non-past	EXCLUDED	(5.4)
Base	Past tense	NONTGA	(5.5), (5.6)
Past tense	Past tense	TGA	(5.7)

The “-zero” inflection attached to the verb of a simple infinitive is marked as “excluded” if the actual temporal situation is also non-past because it is uncertain

whether the base form of the infinitive verb is motivated by the infinitive syntactic requirement or by the non-past situational temporality (see (5.4)) . It is marked "nontga" if the situation requires the past tense because it is clear that it is not used to mark the past temporality (see (5.5)). "tga" is assigned to the verb of a simple infinitive that is inflected with “-past” if the actual situation is past, although the verb of a simple infinitive thus inflected is ungrammatical (see (5.6)).

(5.4) You can use a stick to **make (-ZERO) (EXCLUDED)** a bow…(*Reading summary, Period 12*, 04/07/05)

(5.5) First Ben **went** up to the period, his mission **is to make (-ZERO) (NONTGA)** the 3 of us laugh (*11/09/04, Period nine, Journal*)

(5.6) After making the bow, you still need an arrow **to shot (-PAST) (TGA)**. (*04/07/05*, Period 12, *Expository Writing*)

By the time of the last data collection, J had produced only two types of complex infinitives: the passive infinitives and the progressive aspect infinitives. They will be treated in the same way as the finite passive voice and finite the progressive aspect constructions will be treated, which will be illustrated below.

5.1.2 Coding of participles

There are present participles and past participles in English. Participles have five major roles: 1) serving as attributes, e.g. “a moving sale”, “an abandoned ship”; 2) serving as adverbials, e.g. “While crossing the street, I…”, “Woken up by the alarm, I…”; 3) forming the progressive aspect, e.g. “She was reading”; 4) forming the perfect aspect,

e.g. “She has read the book”), and 5) forming the passive voice, e.g. “She was killed”. J used them to play all of these roles.

A present participle constructing the progressive aspect and a past participle constructing the perfect aspect receive “tga”, regardless of the form of the preceding auxiliary verb, the tense-carrier. The ways I encode past participles constructing the passive voice are listed in Table 5.2, followed by explanations and examples.

Table 5.2 Treatment of past participles of the passive voice

Temporality of situation	**Code**	**Example**
Non-past tense	NONTGA	(5.7)
Past tense	EXCLUDED	(5.8)

"Nontga" is assigned to a past participle forming passive constructions if the situation calls for non-past tense, since the “-past” attached to the verb is not needed, in terms of marking the past temporality (see example (5.7)). "Excluded" is assigned to such a past participle if the sentence is in past tense, since it is unclear whether the “-past” inflection was motivated by the past situational temporality or the by the passive voice syntactic requirement (see example (5.8)).

(5.7) Natural resources **can be used up (-PAST) (NONTGA)**.
(*05/09/05, Period 14, Journal*)

(5.8) …but all his fun **was built (-PAST) (EXCLUDED)** on Jack’s pain and embarrassment. (11/10/05, *Period 22, Story*)

The attributive participles are treated as marking tense/aspect, in the definitions given by Klein (1994) and are given “TGA”, as shown in (5.9) and (5.10). “called” in (5.9)

implies that before TU, the activity of “calling” must have occurred at least once. Similarly, “burning” and “scorching” in (5.10) imply the continuity of those two activities.

(5.9) But he also released (-PAST) (TGA) a nameless, bodyless beast **called (-PAST) (TGA)** shadow. (*10/27/04, Period eight, Reading Summary*)

(5.10) The **burning (-ING) (TGA)** clothes had a **scorching (-ING) (TGA)** odor. (*11/21/05, Period 23, Story*)

The adverbial participles were treated in the same manner for the same reason. In (5.11), “TGA” was assigned to “laughing”, “talking”, and “doing” because they were used to mark the progressive and continuous aspect, coexisting with the state of “being seated in our soft cushioned seats”.

(5.11) We sat (-PAST) (TGA) in our soft cushioned seats, **laughing (-ING) (TGA), talking (-ING) (TGA)** and **doing (-ING) (TGA)** other entertainment activities. (*04/23/05, Period 13, Travelogue*)

5.1.3 Coding of gerunds

Gerunds are nominalized verbs inflected with “-ing”. They can take all of the roles of noun phrases, such as serving as the object of a verbal phrase or a prepositional phrase, e.g. “stop working”, “by working” or acting as the subject of a sentence, e.g. “Finishing this in two hours is hard”. When “-ing” is used to form gerunds, it is assigned "nontga" because instead of being an aspect marker, it is a nominalizer, indicating that verbs thus inflected carry the functions of noun phrases, as shown in:

(5.12) After **making (-ING) (NONTGA)** the bow, you still need an arrow to shot (-PAST) (TGA). (*04/07/05*, Period 12, *Expository Writing*)

5.1.4 Coding of the content verbs preceded by modal and auxiliary verbs

Both modal/auxiliary verbs and their various forms require the base forms of the verbs following them. Just like the requirement of the base form of the first verb of an infinitive, this requirement is motivated syntactically rather than temporally. In the English structure of “modal/auxiliary + verb”, the tense information is marked on the modal/auxiliary verb. J attached all of the four inflections to the verbs preceded by model/auxiliary verbs. Table 5.3 lists the codes assigned to the verbs preceded by modal/auxiliary verbs under various circumstances, followed by explanations and examples.

Table 5.3 Treatment of verbs preceded by modal/auxiliary verbs (shortened as m/a)

Forms of content verbs	Temporality of situation	Code	Example
Base	Non-past tense	EXCLUDED	(5.13)
Base	Past tense	NONTGA	(5.14)
Past tense	Past tense	TGA	(5.15/16/17/18)

The “-zero” inflection of the content verb is marked "excluded" if the situation requires non-past tense because the base form might be motivated by the non-past tense of the sentence or by the syntactical requirement of the preceding modal/auxiliary verb (see (5.13)). The “-zero” inflection of the content verb is marked "nontga" if the situation

requires the past tense (see as in (5.14)). Finally, the “-past” inflection of the content verb is marked "tga" if the sentence requires the past tense (see (5.15) - (5.18)).

(5.13) If the stick is too heavy it **won't go (-ZERO) (EXCLUDED)** very far…(*04/07/05, Period 12, Description*)

(5.14) In a blink of eye the sun **raised** its face from the mountains and we **will leave (-ZERO) (NONTGA)** (*04/26/05, Period 13, Travelogue*)

(5.15) But Lizzie **don’t wanted (-PAST) (TGA)**. (*12/10/03, Period one, Reading Summary***)**

(5.16) But do they really **existed (-PAST) (TGA)**? (*10/21/04, Period eight, Journal*)

(5.17) He **can ate (ACT) (-PAST)** hot dogs, **lived (-PAST) (TGA)** in a tent, (*12/03/03, Period one, Reading Summary*)

(5.18) However we also **didn’t forgot (-PAST) (TGA)** to do our homework (*11/02/04, Period eight, Journal*)

It is clear that the use of the “-past” inflection of the content verbs of (5.15) - (5.18) was motivated by J’s awareness that those situations were in the past. To him, the content verb takes more roles in expressing the past tense than the modal/auxiliary verb. There are evidence to show that the route of his acquiring the past form of the structure of “modal/auxiliary verb + verb” follow the following path: 1) uninflected modal/auxiliary verb + uninflected content verb (e.g. “can go”), 2) uninflected modal/auxiliary verb + inflected content verb (e.g. “can went”), 3) inflected modal/auxiliary verb + inflected

content verb (e.g. “could went”), 4) inflected modal/auxiliary verb + uninflected content verb, (e.g. “could go”).

J had the habit of using various forms of “be” before a past tense verb where no passive voice was required. The inflected content verbs are marked "tga" because obviously J intended to use them to mark tense and/or aspect, as illustrated by the following examples:

(5.19) Next day the snow **was came (-PAST) (TGA)**. (*11/23/03, Period one, Reading Summary*)

(5.20) He **was walked (-PAST) (TGA)** and **walked (-PAST) (TGA).** (*11/26/03, Period one, Reading summary*)

(5.21) Anna **was moved (ACT) (-PAST)** to a new town. (*12/06/03, Period one, Reading summary*)

(5.22) Next day the snow **was came (-PAST) (TGA)**. (*11/23/03, Period one, Reading summary*)

5.1.5 Coding of “-s”

The inflection “-s” has two roles: indicating that the sentence is in the present tense, and denoting that the subject of that sentence is third person singular. In terms of expressing tense, “-s” is the same as “-zero”, as both of them express the present tense. Due to this equivalence, both “-zero” and “-s” are marked "tga", regardless of the correctness of number, as long as they are used to reflect the present temporality, as shown from (5.23) and (5.24)

(5.23) Although nature **give (-ZERO) (TGA)** human food, but at one time in the meantime it also **give (-zero) (TGA)** us balefulness,

like hurricanes, avalanche (*11/11/03, Period one, Reading summary*)

(5.24) Now I'm in U.S.A., most of the stores **has (-S) (-GTA)** a lot of skate (*05/10/04, Period three, Reading summary*)

5.1.6 Coding of special forms

As the method used in Chapter Four, *"-en"*, and past forms of irregular verbs, both correct and ill-formed, are treated as the "-past" inflection. If they were used to mark the past tense, "tga" is assigned to them, as illustrated by (5.25) and (5.26)

(5.25) He found the shadow and prisoned it again *by* **given (-PAST) (TGA)** his life away. (*10/27/04, Period eight, Reading summary*)

(5.26) …is **like eaten (-PAST) (TGA)** Artie's mine, **breaked (-PAST) (TGA)** the glass, **drawed (-PAST) (TGA)** picture on wall. (*11/28/03, Period one, Reading summary*)

The ill-formed past forms or past participles of (5.25) and (5.26) ("given", "breaked", and "drawed") should have appeared in their gerund forms ("giving", "breaking", and "drawing", respectively), to serve as the objects of their preceding prepositions ("by" and "like"). However, influenced by the actual situational past temporality, J seemed to overuse the "-past" inflection to indicate that the activities of "giving", "breaking", and "drawing" took place in the past. Considering the motivation for the appearances of these forms, I marked them with "tga".

5.2 RESULTS

The percentage of an inflection marked "TGA" is calculated by using the formula *TGA / (total - EXCLUDED) * 100%* and the percentage of an inflection marked "nontga" is calculated by using the formula of *NONTGA / (total - EXCLUDED) * 100%*. For example, suppose during a period, there are 100 occurrences of "-ing". Among them, 20 are marked "excluded", 50 are marked "tga", and 30 are marked "nontga". The percentage of "tga" and "nontga" are 50 / (100 - 20) * 100% = 52.5% and 30 / (100 - 20) * 100% = 37.5%, respectively. In the following, the percentage for each inflection that was marked "tga" and "nontga" at each period is calculated and the results are summarized.

*5.2.1 **Period one** (age: 11;10, study length: 17 weeks)*

The relevant figures of this period are listed in Table 5.4. The very obvious feature of his use of "-zero" is that he used it freely: uninflected verbs can be found on every occasion. Of the 58 included "-zero" inflections, only 28% were used to mark tense/aspect. H produced 12 instances of "-s", 10 of which were included in calculation. Only 60% of them were used to mark tense-aspect. What's more, the 12 verb tokens with "-s" are of two verb types: "wants" and "has". Therefore, his overall awareness and ability of using "-s" to mark tense/aspect was extremely low during this period.

J produced five instances of "-ing", two of which were used to mark the progressive aspect and the remaining three were not. Given the low absolute total counts, the statistical results of this period were insignificant. All of the 53 instances of "-past" were included. All of them except one were used to mark tense/aspect. The extremely high "tga" rate of "-past" indicates that J used it to mark tense/aspect from the very beginning. On the other hand, we should also be aware that his overall awareness of

adding “-past” to verbs to mark past temporality was very low because he used uninflected verbs in many places where he should have used “-past”.

Table 5.4 Inflections used to mark tense/aspect at period one

Inflection	**Total**	**EXCLUDED**		**TGA**		**NONTGA**	
	n	n	%	n	%	n	%
-zero	63	5	8%	16	28%	42	72%
-s	12	2	17%	4	40%	6	60%
-ing	5	0	0%	2	40%	3	60%
-past	53	0	0%	52	98%	1	2%

*5.2.2 **Period two** (age: 12;3, study length: 38 weeks)*

As shown from Table 5.5, in comparison with period one, the portion of “-zero” of period two used to mark tense/aspect is even smaller: 14%, which implies that J’s awareness of using inflections were dropping: he was overstretching the function of “-zero” to a greater degree. Of the eight verbs inflected with “-s”, only three were used to mark tense/aspect, and furthermore, they were just one word type: “has”, which indicates his extremely low ability to use “-s” to mark tense/aspect. The remaining five verbs attached with “-s” were used correctly, in terms marking subject-predicate agreement, but incorrectly, in terms of marking tense, as illustrated by (5.27), in which “thinks” was incorrectly used for “thought”, since this is a reading summary.

(5.27) Fancine **thinks** (-S)(INCCORECT) she is a princess. (*05/25/04, Period three, Reading summary*)

Table 5.5 Inflections used to mark tense/aspect at period two

Inflection	Total	EXCLUDED		TGA		NONTGA	
	n	n	%	n	%		n
-zero	32	4	13%	4	14%	24	86%
-s	8	0	0%	3	38%	5	63%
-ing	2	2	100%	0	0%	0	0%
-past	15	0	0%	14	93%	1	7%

J produced only two "-ing" forms, one of which is (5.28) and the other appeared in a fragment "She paint at the cat of neighbor, draw at the library's book, let her family read the same book over and over and over again. **Shoving** a dog into the bathroom.". Their functions are not clear, which made me exclude them. The extremely low number of the total occurrences of "-ing" has two implications: on the one hand, it makes any statistical result insignificant; on the other hand, it indicates that J at this period had almost no ability or awareness of using "-ing".

(5.28) Ming Siou Looby go to his house and invite him **going** (-ING)(EXCLUDED) to a party. (*04/24/04, Period three, Reading summary*)

All of the 15 instances of "-past" that are included were used to mark tense/aspect except one. This implies that although he did not use "-past" in many a place where he should have, once he used it, he used it to mark tense/aspect.

*5.2.3 **Period three** (age: 12;9, study length: 64 weeks)*

As shown from Table 5.6, at this period, the motivation for J's use of "-zero" was still not marking temporality. Of the 68 instances of "-zero", only 13 (19%) were used to

mark tense/aspect. This indicates that up to this point he still preferred using uninflected form to mark tense-aspect in many cases.

Table 5.6 Inflections used to mark tense/aspect at period three

Inflection	Total	EXCLUDED		TGA		NONTGA	
	n	n	%	n	%		n
-zero	95	27	28%	13	19%	55	81%
-s	15	0	0%	3	20%	12	80%
-ing	12	1	8%	11	100%	0	0%
-past	162	10	6%	147	97%	5	3%

All of the instances of "-s" produced during this period were included. Of them, only three were used to mark tense/aspect. Despite the small number, it is a substantial progress, given that none of the three verbs was "has", and that he even attached "-s" to a verb preceded by a modal verb (see (5.29)). On the surface, this is a sign of regression rather than a progress, as "exists" is a non-target form: both the preceding modal verb and the plural subject "they" are incompatible with "-s". The significance revealed from this example, however, is that his awareness of the inflection "-s" as something attachable and detachable was strengthened in a sense.

(5.29) And once again I think they do exists (-S)(TGA). (*10/21/04, Period eight, Reading summary*)

Another considerable progress was that J produced 12 instances of "-ing", much more than at periods one two. Of the 11 included, all of them were used to mark grammatical aspect. As in the previous two periods, he used almost all of the "-past"

inflections to mark tense/aspect, though he did not inflect other verbs in the same situation in the same manner.

*5.2.4 **Period four** (age: 13;3, study length: 90 weeks)*

Table 5.7 Inflections used to mark tense/aspect at period four

Inflection	Total	EXCLUDED		TGA		NONTGA	
	n	n	%	N	%	n	%
-zero	143	28	20%	26	23%	89	77%
-s	32	0	0%	6	19%	26	81%
-ing	25	0	0%	17	68%	8	32%
-past	270	20	7%	228	91%	22	9%

As shown from Table 5.7, during this period only 23% of the included instances of "-zero" were used to mark tense/aspect, which indicates that in most cases J still did not inflect the verbs properly to express temporality. Put in other way, for most verbs, he still simply used their base forms, regardless of the temporal situations for which those verbs were used to express.

For the double roles of "-s", J had strong awareness of its marking agreement and weak awareness of its marking temporality. Of the 32 included "-s" inflections, only 19% were used to mark the present tense correctly. The vast majority of those instances of "-s" that were used non-temporally were used correctly in marking 3sg. For example, in (5.30) "makes" is grammatical in marking number agreement but failed to mark the past temporality indicated by the main verb "thought".

(5.30) Afterwards I thought what **makes (-S) (NONTGA)** Papa be so kind to a foreigner such as me. (*04/09/05, Period 13, Journal*)

Of the 25 included "-ing" inflections, 68% were used to mark grammatical aspect, which is a 32% drop from period two. J used almost all of the remaining 32% to form gerunds correctly. Just like the previous periods, almost all of the included instances of "-past" (91%) were used to mark tense/aspect.

*5.2.5 **Period five** (age: 13;9, study length: 115 weeks)*

Table 5.8 Inflections used to mark tense/aspect at period five

Inflection	**Total**	**EXCLUDED**		**TGA**		**NONTGA**	
	n	n	%	N	%	n	%
-zero	123	46	37%	28	36%	49	64%
-s	13	1	8%	6	50%	6	50%
-ing	62	0	0%	48	77%	14	23%
-past	248	22	9%	223	99%	3	1%

As shown from Table 5.8, of the 77 instances of "-zero", 64% were still not used to mark tense/aspect. This implies that even though after nearly two years' learning English, J still had the preference for using uninflected verbs on many occasions. He made a significant progress in using "-s" to mark the present tense. Of the 12 instances of "-s", six were used to mark tense/aspect, reaching 50%. Furthermore, these six instances of "-s" were attached to five different verbs, namely, "has", "laugh", "make", "sound", and "talk". This indicates that "-s", as an inflection with special function, began to be

internalized for him. J produced 62 instances of “-ing” during this period (all of which were included), and 77% of them were used to mark grammatical aspect. This indicates a considerable increase of his awareness of using it to mark grammatical aspect. He used most of the remaining 23% to form gerunds. Just like the previous periods, almost all of the included “-past” inflections (99%) were used to mark tense/aspect. Considering the large total counts of “-past” produced, i.e. 248, the result is quite reliable.

In this section, I summarized the features concerning the extent to which J used verb inflections to mark tense/aspect at individual developmental period. In the next section, I will generalize the developmental trends, making cross-period comparison of the temporal functions of verb inflections used by him.

5.3 SUMMARY OF RESULTS

Table 5.9 was made based on Tables 5.4, 5.5, 5.6, 5.7 and 5.8 to compare the degree to which each of the inflections was used to mark tense/aspect at each period. Figure 5.1 was generated out of Table 5.9 for visual comparison.

Table 5.9 Cross-period comparison of inflections used to mark tense-aspect

Inflection	**Period one**	**Period two**	**Period three**	**Period four**	**Period five**
-zero	28%	14%	19%	23%	36%
-s	40%	38%	20%	19%	50%
-ing	40%	0%	100%	68%	77%
-past	98%	93%	97%	91%	99%

Two conclusions can be made on J's use of the inflection of "-zero". First, the overall degree to which it was used to mark tense/aspect throughout the five periods was very low. Second, he revealed a slight U-shape process of using it to mark tense/aspect as shown by the percentage figures.

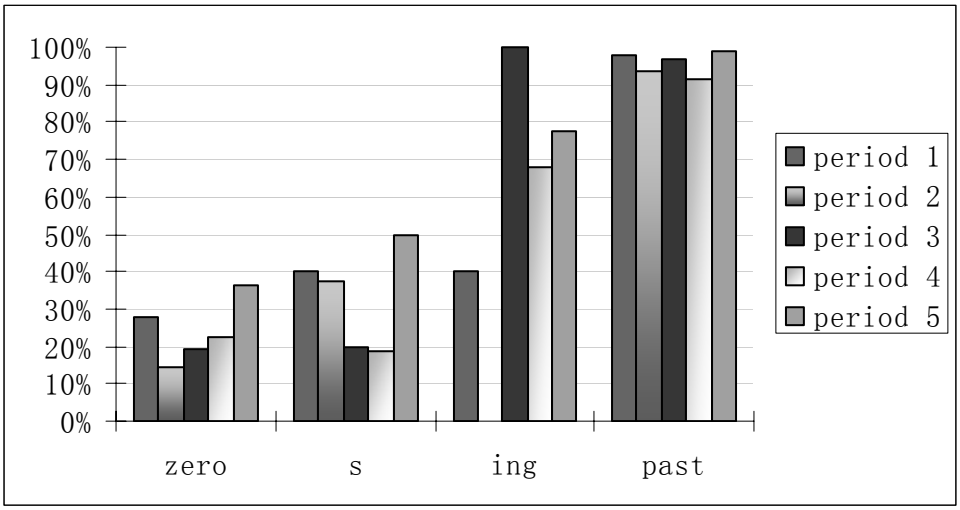

Figure 5.1 Percentages of inflections used to mark tense/aspect

On the surface, the rate of his use of the inflection of "-s" to mark tense/aspect was much higher than that of "-zero" during the first two periods (28% vs. 40%, and 14% vs. 38% for periods one and two, respectively). However, this conclusion is compromised by the fact that "has", which made up a considerable portion of the verbs inflected with "-s", was treated as the "-s" form of "have". If "has" was regarded as a base form in its own right, the percentages would drop to somewhere around that of "-zero". He exhibited an U-shape of using "-s" to mark tense/aspect: dropping from 40% at period one to 38% at period two, 19% at period three, 21% at period four, and climbing up to 50% at period five.

An outstanding feature of "-ing" in his production is its sparseness before period three. He produced totally five instances of this inflection during period one, of which

only two were regarded as marking grammatical aspect. During period two, there were only two instances of this inflection. The extreme low counts of “-ing” during the first two periods made any statistical results insignificant. Therefore, the analysis focuses on the last three periods, especially period four and period five, during which many instances of “-ing” were produced.

The overall rates of “-ing” used to mark grammatical aspect were high throughout the last three periods, which means that J had a better understanding of the aspectual function of “-ing”. There were some places where J did not use “-ing” when he should have done so. However, 100% of the “-ing” forms produced at period three, 68% at period four and 77% at period five were used to mark grammatical aspect. Another feature is that instead of revealing a more typical U-shape of acquisition process, his use of “-ing” to mark grammatical aspect exhibited some regression: dropping from 100% to 68% and rising to 77%. The point that J did not use all instances of “-ing” to mark aspect during period four and period five indicates his awareness of its multiple function. In fact, all of the instances of “-ing” that J did not use to mark aspect were correctly employed to form gerunds.

There are several clear features of his use of the inflection of “-past”. First, the exclusion rates were extremely low: 0% for periods one and two, 6% for period three, 7% for period four and 9% for period five, which indicates that his motivation of using this inflection is much clearer than that of using the other inflections. Second, from the very beginning, the degree to which J used “-past” to mark tense/aspect was extremely high and this high rate was kept throughout the whole period of data collection. In other words, although J did not use “-past” in many places where he should, once he used it, he used it

almost solely for marking tense/aspect, either by constructing the past tense and the perfect aspect or by serving as attributes and adverbials.

5.4 DISCUSSION

All of the data is in written form and consists primarily of narratives, such as journal entries, travelogues, stories. Given that the past tense threads the narrative genre, the high rates of his using “-zero” non-temporally indicates his low awareness or just ignorance of English verb inflections. It is quite possible that during the first two periods, his correct use of “-zero” was not a reflection of his knowledge of English grammar but a coincidence: he may have simply put the base forms of those verbs there, without knowing of the proper forms required by the situations. The decrease of the rate of using “-zero” non-temporally starting from period two is an indication of his awareness that English verbs need to be appropriately inflected for various situations. He gradually restricted “-zero” to proper situations, such as the content verbs of infinitives and verbs preceded by modal verbs, etc. Therefore, it can be concluded that during periods one and two, “-zero”, instead of being used to mark tense/aspect and the lexical aspects residing in the verbs, it is simply an “effort-saver”. He used it because it requires no processing effort on the learner’s side, which may explain the dominance of base forms of verbs for beginning language learners. This is especially true for J, whose mother tongue is an isolating language that has no inflections of any kind and who had already fully internalized it by the time he started to learn English, a brand-new language, in terms of inflection.

Like learners of English in general, his overall acquisition of “-s” is slow. The rate of his using it to mark tense/aspect was very low throughout the five periods (40%, 38%,

20%, 19%, and 50% for period one through period five). In terms of the double functions of “-s”, i.e. marking number agreement and marking the present tense, he had a better understanding of the former. Not infrequently, he attached “-s” to the verb of a sentence with the subject in its third person singular despite the situational past temporality.

Like “-s”, “-ing” started to appear very late. J did not start to produce it on a statistically significant scale until period three, which was about 14 months after he started to learn this language. The rate of his using it to mark grammatical aspect was 100% at period three and dropped to 68% at period four and dropped to 77% at period five. This is a sign of progress, as he used instances of “-ing” that were marked "nontga" to correctly form gerunds. It is worth noting, however, that this progress concerns his proper use of “-ing” *per se*. Even at the end of period five, he still produced sentences with the progressive aspect with modal/auxiliary verbs left out. Nonetheless, that is different from his understanding of the functions of “-ing”. It is related to his acquisition of the means to mark tenses and grammatical aspects, which I will investigate in the subsequent two chapters.

His rate of using “-past” to mark tense/aspect was higher than 93% throughout the five periods. From early on, he was aware of the function of “-past” of expressing the past temporality and he sometimes even overused this inflection. For example, when the situations were in the past, he occasionally ungrammatically attached “-past” to the first verb of infinitives (see (5.31)), verbs preceded by modal/auxiliary verbs (see (5.32)), and verbs following prepositions (see (5.33)).

(5.31) When I saw some kids **weared** on their skate,.. *(05/10/04, Period two, Journal entry*)

(5.32) However we also **didn't forgot** to do our homework.

(11/16/04, Period two, Journal entry)

(5.33) He found the shadow and prisoned it again **by given** his life away. *(10/27/04, Period two, Reading summary*)

One of the goals of studying second language acquisition is to make contributions to language education/learning by revealing aspects of learning a second language. The findings of this chapter may have a number of pedagogical implications.

First, we need to start early on to explicitly emphasize the concept of English verb inflections, telling language learners the functions of each of the inflections and drill them intensively. This is especially true for "-s". It is the instructor's task to tell the learners and provide them with exercises on its double role. Also, we need to try to use realistic materials, CD's, videos to inject reality into class. J's rapid progress and low fossilization was helped by the reality of his writing, which is meaningful situation for him.

Second, after the learners have mastered the basic functions of each of the inflections, explicit instructions on special syntactic requirements are necessary, such as "-zero" is needed for the first verb of an infinitive, the verb preceded by a modal/auxiliary verb, and the verb in some subjunctive mood, etc. regardless of the temporality of the situation. In so doing, ungrammatical structures such as "saw some kids weared on their skate", "didn't forgot to do our homework", "to shot", etc. can be maximally avoidable.

CHAPTER SIX

ACQUISITION OF MORPHOYNTACTIC MEANS TO EXPRESS TENSE

This and the next chapter use function-to-form approach to investigate morphosyntactic means that J used to encode the major tenses and aspects, with this one focusing on tenses and the next one on aspects. The same time span used for the previous two chapters is used in this and the subsequent two chapters. However, instead of being divided into five periods, the time span is segmented into 23 periods. Table 3.2 in Chapter Three lists the length of each period, the intervals between two periods and the data information of each period.

In the entire 23 periods' written data, 4632 contexts were created for various tenses, aspects, voices, modalities, etc.[1] In English, all of these forms can apply to both finite and non-finite verbs. Non-finite verb forms are realized as infinitives, gerunds, and participles, all of which can be classified into complex and simple forms. Excluding those simple non-finite verb forms, the total number of included verb contexts is 3827, which are realized as four tense forms, 11 aspect forms, and nine passive forms. These are the obligatory contexts but he did not provide all of them with the required forms. Therefore, for each type of verb context, three research questions to be answered are:

1) How many obligatory contexts were created during each period?

2) How many of them were provided with the required forms?

[1] Although the term "voice" can be both the active voice and the passive voice, it refers to the passive voice structure only, unless otherwise specified.

3) If a function was not realized by the required form, what alternative forms were supplied to encode that function?

In the following, I will first introduce the methodology that will be used in this and the subsequent two chapters, then list the syntactic means J used to encode the four major tenses, and summarize the findings in the last section.

6.1 METHODOLOGY

6.1.1 Coding

I distinguish four types of tenses, based on their syntactic features. They are the simple present, the simple past, the present future and the past future. Again, when it comes to the structure of "will/would/shall/should + base verb", my focus is on the future use of these verbs, rather than the modality. If a required verb tense is provided for an obligatory context, three codes are assigned to that verb form. The first code is one of the five options: 1) "non-3sg" for a simple present tense sentence whose subject is not the third person singular, 2) "3sg" for a present tense sentence whose subject is the third person singular, 3) "past" for the simple past tense, 4) "pres fut" for present future, and 5) "past fut" for the past future tense. The second code is invariably "oblg", indicating that the verb form indicated by the preceding code is the required form. The third code is "correct", denoting that the required form was provided. If a required verb form is not provided, four codes are assigned to that verb form. The first and the second codes are the same as those assigned when the verb tense was correctly provided. The third code is "incorrect", since the supplied form was not correct. The fourth one is the code standing for the specific non-target form J provided instead. These codes are illustrated in the following example.

(6.1) The girl's parents divorced (past/oblg) (correct). One day the girl go (past/oblg) (incorrect) (0+base) to her dad [**who]** lived (past/oblg) (correct) in a speck of land in the Atlantic Ocean. *(11/10/03, Period one, Reading Summary*)

The temporal setting of (6.1) is past, which requires the past marking of the verbs in general situations. The codes in "The girl's parents divorced (past/oblg) (correct)" mean that the required past form is correctly provided. The codes in "One day the girl go (past/oblg) (incorrect) (0+base) to her dad" indicate that an obligatory past tense context was incorrectly provided with the base form of the verb.

Verbs in the formulaic expressions, such as "got" in "I got you" and "have" in "Have a nice day!" are excluded, so are the irregular verbs whose past tense and present tense have the same form, such as "put", "cut", "read", "let", etc. The reason for their exclusions is that it is hard to tell whether they are the base forms or the past forms. However, the regularized past form of an irregular verb is included, as illustrated in

(6.2) Mr. Peters **got** some good book. Mr. Harper **puted** (past/oblg) (correct) seeds in his brick house. *(11/23/03, Period one, Reading Summary*)

6.1.2 Statistical Figures

With data coded in this way and with Microsoft Word's Find/Replace function, I can find out the following statistical figures: 1) the counts and percentages of the total obligatory tense contexts created against the total verb forms included in each period, 2) the counts and percentages of the obligatory contexts that were provided with the

required forms, 3) the counts and percentages of the non-target forms that were provided to encode a given function.

Table 6.1 The counts and percentages of the four obligatory tense contexts created at each period

Period	Total	Simple Present				Simple Past		Present Future		Past Future	
		Non-3sg		3sg							
1	155	17	11%	25	16%	111	72%		0%		0%
2	116	15	13%	23	20%	70	60%		0%	2	2%
3	90	6	7%	14	16%	63	70%	1	1%	2	2%
4	37		0%		0%	35	95%		0%		0%
5	131	22	17%	4	3%	83	63%	10	8%		0%
6	85	4	5%	1	1%	71	84%	1	1%		0%
7	140	2	1%		0%	128	91%		0%	4	3%
8	122	26	21%	8	7%	62	51%	8	7%	1	1%
9	120	6	5%	7	6%	92	77%	2	2%	3	3%
10	148	16	11%	1	1%	102	69%	2	1%	10	7%
11	138	31	22%	3	2%	84	61%	5	4%	3	2%
12	212	36	17%	21	10%	121	57%	8	4%	2	1%
13	368	8	2%	6	2%	317	86%		0%	9	2%
14	125	23	18%	18	14%	58	46%	3	2%	1	1%
15	208	42	20%	60	29%	76	37%	1	0%	3	1%
16	242	35	14%	30	12%	136	56%	4	2%	13	5%
17	148	9	6%	11	7%	115	78%	1	1%	2	1%
18	181	20	11%	18	10%	113	62%	4	2%	7	4%
19	90	26	29%	7	8%	43	48%	1	1%	5	6%
20	439	35	8%	10	2%	277	63%	10	2%	12	3%
21	167	16	10%	1	1%	125	75%	2	1%	1	1%
22	241	52	22%	39	16%	103	43%	7	3%	9	4%
23	124	17	14%	2	2%	81	65%	6	5%	2	2%
Total	3827	464		309		2466		76		91	

Table 6.1 lists the relevant information of the four tense forms to be investigated in this chapter. The listed verb forms do not include those with explicit aspect or voice marking. For example, a sentence like “I will be teaching a new course next semester” is only listed as “Present Future” even though it contains explicit progressive aspect marking. Therefore, the sum of the percentages of each row is not necessarily 100% and

the number listed under “Total” of each row does not necessarily equal to the sum of the remaining integers of that row either.

6.2 ACQUIRING THE SIMPLE PRESENT TENSE

Table 6.2 Counts and percentages of the target forms and non-target forms provided for the simple present tense (total (%) stands for the proportion of the simple present tense of the entire verb contexts).

Period	**Non-3sg simple present tense**					**3sg simple present tense**				
	Total	Target Forms		Non-target Forms		Total	Target Forms		Non-target Forms	
	%	n	%	n	%	%	n	%	n	%
1	11%	13	76%	4	24%	16%	18	72%	7	28%
2	13%	15	100%			20%	21	91%	2	9%
3	7%	5	83%	1	17%	16%	10	71%	4	29%
4										
5	17%	21	95%	1	5%	3%	3	75%	1	25%
6	5%	4	100%			1%	1	100%		
7	1%	2	100%							
8	21%	23	88%	3	12%	7%	8	100%		
9	5%	5	83%	1	17%	6%	7	100%		
10	11%	14	88%	2	13%	1%	1	100%		
11	22%	25	81%	6	19%	2%	2	67%	1	33%
12	17%	32	89%	4	11%	10%	20	95%	1	5%
13	2%	7	88%	1	13%	2%	4	67%	2	33%
14	18%	19	83%	4	17%	14%	16	89%	2	11%
15	20%	40	95%	2	5%	29%	52	87%	8	13%
16	14%	31	89%	4	11%	12%	25	83%	5	17%
17	6%	9	100%			7%	10	91%	1	9%
18	11%	18	90%	2	10%	10%	16	89%	2	11%
19	29%	18	69%	8	31%	8%	5	71%	2	29%
20	8%	34	97%	1	3%	2%	10	100%		
21	10%	16	100%			1%	1	100%		
22	22%	51	98%	1	2%	16%	32	82%	7	18%
23	14%	16	94%	1	6%	2%	1	50%	1	50%

English employs two morphosyntactic means to encode the simple present tense: base verbs and verbs with the inflection of “-s” when the subject is third person singular.

The exception to the first means is the specific form of the “be” verb. Unless the sentence is of imperative type, no base form of “be” is used in the simple present tense. Instead, “am”, or “are” is used, depending on the person of the subject of a sentence.

6.2.1 General features

As shown in Table 6.2, the frequency of obligatory simple present contexts is very low, which corresponds to the low proportion of the data featuring the simple present tense. The overall percentage of the suppliance of the required base forms is very high and that of the required 3sg form is high as well, though a little lower than that of the required base form. This seeming contradiction to the general late appearance and acquisition of the inflection “-s” is related to my counting as the 3sg forms the suppletive forms “is”, “has”, and “does” that make up a considerable proportion of the total 3sg counts.

When his English was poor, this high rate of suppliance of the required non-3sg and 3sg should not be interpreted as a coincidence since the simple present tense requires the verbs in their base forms (except for 3sg subjects) and he was not quite ready for inflecting verbs. When he became more proficient in English, this high rate may reflect his good command of the simple present tense; that is, he supplied a base verb or 3sg form because he knew that such form was supposed to be there.

6.2.2 Candidates for the simple present tense

One of the main goals of function-to-form approach is to find out what forms, both target and non-target, are used by language learners to encode a given function. In this section, I will find out what non-target forms he chose to encode the simple present tense.

Table 6.3 Non-target forms J provided for the simple present tense ("pres_m/a+past" stands for a modal/auxiliary verb in its present tense form followed by a verb in its past tense form, e.g. "can went", "do went")

Period	**Non-target forms for non-3sg simple present tense**						
	Total	Forms					
		Pres_m/a + past		Present future		0 + Past	
	n	n	%	n	%	n	%
1	4			4	100%		
2	0						
3	1					1	100%
4	0						
5	1					3	100%
6	0						
7	0						
8	3	1	33%			2	67%
9	1					1	100%
10	2			1	50%	1	50%
11	6	1	17%			4	67%
12	4					3	75%
13	1					1	100%
14	4	1	25%			3	75%
15	2					2	100%
16	4					4	100%
17	0						
18	2					2	100%
19	8					8	100%
20	1					1	100%
21	0						
22	1					1	100%
23	1					1	100%
Total	46	3		5		38	

Table 6.3 lists the non-target forms that he used for the simple present tense. For the non-3sg simple present, he used past verbs preceded by base modal/auxiliary verbs (e.g. "can went" for "go"), the present future tense (e.g. "will go" for "go"), and the simple past tense (e.g. "went" for "go"). For the 3sg simple present tense, he used the base form (e.g. "go" for "goes"), the simple past tense ("went" for "goes"), and

preposition inflected with “-s” (e.g. “froms”). I used the cover term modal/auxiliary verb for both modal verbs (e.g. “can”, “may”, “must”, “should”, etc.) and auxiliary verbs (e.g. “do”, “did”, “does”, etc.) due to the fact that both of them arbitrarily require that the verbs following them be in their base forms.

Table 6.3 Continued

Period	**Non-target forms for 3sg simple present tense**						
	Total	Forms					
		0 + Base		0 + Past		Preposition + s	
	n	n	%	n	%	n	%
1	7	6	86%	1	14%		
2	2	1	50%			1	50%
3	4	1	25%			3	75%
4							
5	1	1	100%				
6							
7							
8							
9							
10							
11	1	1	100%				
12	1	1	100%				
13	2	2	100%				
14	2			2	100%		
15	8			8	100%		
16	5	1	20%	4	80%		
17	1			1	100%		
18	2			2	100%		
19	2			2	100%		
20							
21							
22	7	2	29%	5	71%		
23	1	1	100%				
Total	46	17		25		4	

The dominant candidate for non-3sg simple present tense is the simple past tense, which is labeled as “0 +past” in the table to distinguish it from past verb preceded by other forms. This non-target form appeared almost in every period and it was the sole alternative form in periods 11 and 23. (6.3) is such an example.

(6.3) Yang Yang is strong; he can already run steady. Every time he **came** to our house, it's always accompanied by laughter and cheerful air. (*06/12/2005, Period 15, Description*)

The second candidate is the present future tense, which he used four times during period one and once during period 10. During period one, his English proficiency was so low that it seemed that he often made a sentence in Chinese and then translated it into English word-by-word, which may explain the errors that he made for examples (6.4) and (6.4).

(6.4) I **will thankful** for my family. (*11/15/03, Period one, Journal*)

(6.5) If a two good friends, they **will won’t mind** whether he is boy or she is girl. (*12/10/03, Period one, Reading summary*)

In addition to the simple past and the present future, he used the present form of modal/auxiliary verbs followed by past verbs for non-3sg simple present tense, which occurred during periods three, eight, 11, and 14, as illustrated by:

(6.6) But **do** they really **existed**? (*10/21/04, Period eight, Argumentation*)

(6.7) Back at your house, **do** you often **saw** lines like---- 2 liter of water, 3.5cups of flour,1 pound of chocolate chip in the cooking book? (*02/27/05, Period 11, Argumentation*)

(6.8) One day Old Oak thought: hmm, since I served other people so long, I **should grew** myself larger to serve them better. (*05/27/05, Period 14, Fairy Tale*)

For the 3sg simple present tense, in term of the instance counts, the number one non-target form is the simple past tense as well, which makes up 25 of the total 46 non-target forms; in terms of cross-period prevalence, the number one candidate is the base form, as it occurred in every period where he failed to provide the required forms. The paradoxical phenomenon of his using "-s" is that, on the one hand, just like second language learners of English in general, he did not add "-s" in many places where he should, on the other hand, on three occasions, he went to the other extreme by adding this marker even to prepositions if the subject was third person singular and if the situation called for the simple present tense, as though they were content verbs. The following are two examples:

(6.9) I have a china peacock on the table. It **froms** my dad's friend. (*03/22/04, Period two, Journal*)

(6.10) Raymond is a playful child, just **likes** a Brat. (*05/21/04, Period three, Reading summary*)

6.3 ACQUIRING THE SIMPLE PAST TENSE

Table 6.4 lists, for each period, the total count of the simple past tense contexts, their proportion of the entire verb contexts, and the counts and percentages of those provided with the target and non-target forms.

Table 6.4 Counts and percentages of the target forms and non-target forms provided for the simple past tense (total (%) stands for the proportion of the simple past of the entire verb contexts)

Period	Total		Target forms		Non-target forms	
	n	%	n	%	n	%
1	111	72%	57	51%	54	49%
2	70	60%	42	60%	28	40%
3	63	70%	26	41%	37	59%
4	35	95%	18	51%	17	49%
5	83	62%	59	71%	24	29%
6	71	84%	41	58%	30	42%
7	128	91%	89	70%	39	30%
8	62	51%	48	77%	14	23%
9	92	77%	60	65%	32	35%
10	102	69%	65	64%	37	36%
11	84	61%	68	81%	16	19%
12	121	57%	98	81%	23	19%
13	317	86%	193	61%	124	39%
14	58	46%	39	67%	19	33%
15	76	37%	60	79%	16	21%
16	136	56%	89	65%	47	35%
17	115	78%	74	64%	41	36%
18	113	62%	73	65%	40	35%
19	43	48%	33	77%	10	23%
20	277	63%	221	80%	56	20%
21	125	75%	94	75%	31	25%
22	103	43%	85	83%	18	17%
23	81	65%	72	89%	9	11%

6.3.1 General developmental trend

Figure 6.1, generated out of Table 6.4, displays the developmental trend of his supplying the required past tense forms. It displays a general increasing trend with six U-shapes: 1) period two – period five, 2) period five – period eight, 3) period eight – period 11, 4) period 11 – period 15, 5) period 15 – period 20, and 6) period 20 – period 23.

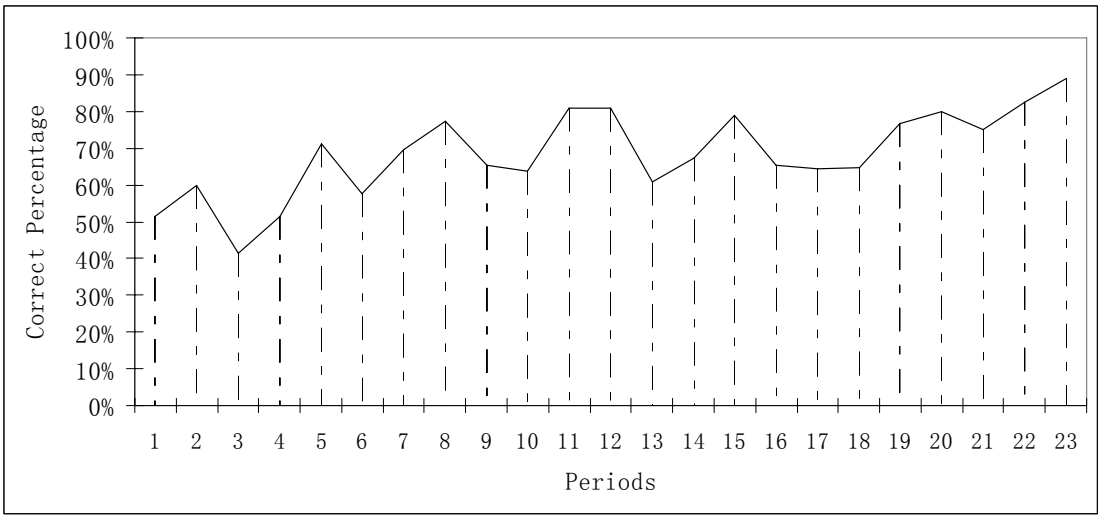

Figure 6.1 Correct percentage of the simple past tense at every period

During period one, 51% of the 111 past tense contexts were provided with the target forms. This is a marvelous achievement, considering that he had been learning this language for only four months. The data of this period is composed of three homework assignments of sentence-making, 12 reading summaries, and one journal entry. He may have copied the already inflected verb forms from the books for which he was writing summaries, without knowing their functions or morphological compositions, which might have boosted the percentage figures. However, this possibility is not very high, considering that he produced a considerable amount of overgeneralizations found in the reading summaries of this period, as illustrated by examples of (6.11) – (6.13) below:

(6.11) Mr. Harper **puted** seeds in his brick house. (*11/23/2003, Reading summary*)

(6.12) Artie's mine, **breaked** the glass, **drawed** picture on wall…(*11/28/2003, Reading summary*)

(6.13) Harold **teached** she how to do a cat's cradle. (*12/10/2003, Reading summary*)

The correct rate rose to 60% at period two, then it dropped to 41% at period three, followed by two increases: to 51% at period four and 71% at period five, which produced the first U-shape of learning process. What struck me most is the very low percentage of period three. A close look at the data revealed that it had a lot to do with his treatment of the verb “be”. There were 15 contexts in which the past form of “be” must be used, for which he provided six instances of “is”, seven instances of “was”, one “were” and “am”. He was not sure of their tense functions. So he used them almost interchangeably. Another contributor is that he started to use 3sg if the subject is the 3sg, regardless of the temporal situation requirement. The awareness of this function of 3sg lowered his correct rate of the simple past tense.

The figure dropped to 58% at period six, climbed up to 70% at period seven and 77% at period eight, which created the second U-shape. Period six consists of seven reading summaries, while the other two periods have more diversified writing genres. Generally speaking, it is more likely for a language learner to produce a higher percentage of past tense forms when writing reading summaries, since he/she may consult the verb forms from the original reading materials. Therefore, it is predictable that period six should have a higher percentage number than the other two, especially than period eight that also contains writing genres for which the past tense is not the main form. These facts may naturally generate a decreasing trend of percentage numbers from period six, period seven and period eight, in order. But his actual performances of these three periods are the opposite: period seven and period eight are 12 and 19 points higher than period six, respectively. This contradictory result made me conclude that after one

year's study of this language, he started to use verb inflections consciously, although in many places he still used the base form non-natively.

The third U-shape occurred during periods nine, ten, 11, and 12. He regressed in encoding this temporality as illustrated by the decrease of 12 and 13 percentage points during period nine and ten, respectively. Then his performance rapidly and greatly picked up, reaching 81% for both periods 11 and 12. Therefore this U-shape is characterized by more progress than regression. Another feature is the writing genres are even more diversified than before and reading summaries became rarer and rarer. In fact, period 12 has no reading summary at all, which made the results more reliable.

The fourth U-shape is composed of periods 13, 14 and 15. The correct rate of period 13 dropped to 61% from 81% from period 12. One of the major reasons for this drop is the data type of period 13, which consists of a journal, describing his helping his mom building a garden fence, and a long travelogue, recording his band trip to the Bahamas. This is one of the most authentic occasions that tested his command of English past tense, as almost all of the verbs of this period need to be put in the past tense. Although the number of 61% is not high, it indicates that acquisition had occurred, considering that he had to choose the right forms of all the verbs himself. The correct rate rose up to 67% at period 14 and 79% at period 15. This is a substantial progress, considering the more diversified writing genres.

The fifth U-shape is displayed from 06/15/05 to 09/13/05, composed of five periods: (period 16 – period 20). The number dropped from 76% to a point fluctuating around 65% during periods 16, 17, and 18. It climbed up to 77% at period 19 and 80% at period 20, respectively. The contributing factors for the substantial decrease after around

two years of learning English are as follows. To begin with, instead of using simple sentence structures, he preferred using compound and complex sentence structures to make his writings more coherent and sophisticated. The side-effect of this preference is that the more complex sentence structures, especially those containing relative clauses, made him forget the overall tense requirement. Second, the suppletive forms of “be” (“am”, “is”, “are”, “was”, and “were”), “have” (“has”), modal verbs (“can”, “could”, “may” and “might”), and auxiliary verbs (“do”, “does” and “did”) caused great difficulty for him. Even after such a long time of learning English, he was still not sure of the differences between these forms, as illustrated by his free alternative use of these forms in his writing. Third, he became more aware of the agreement function of “-s” than its function of marking tense/aspect, which resulted in his using this inflection instead of “-past” when the subject is in third person singular form even though the situation required past. The data structure of period 20 has no substantial difference from the previous four periods, which implies that the increase of the correct percentage during this period indicates his better command of English past tense encoding.

After period 20, his progress was steadier: although the percentage dropped to 75% at period 21, it rose steadily for the subsequent two periods: 83% during period 22 and 89% during period 23. So this last U-shape displayed more progress than regression. Considering the diversified writing genres of these last periods, the very high percentage figures reflect his improving command of encoding this tense.

6.3.2 Non-target forms used to express the past tense

The conspicuous feature of the non-target forms used by J for encoding the past tense is its tremendous diversity. These are listed below, each accompanied with an example. If a special label was used in coding, that label is also listed in the parenthesis.

1) Non-3sg simple present tense (coded as *base*)

(6.14) One day the girl **go** [went] to her dad [who] lived in a speck of land in the Atlantic ocean (*11/10/2003, Period one, Reading summary*)

2) 3sg simple present tense (coded as *3sg*)

(6.15) It was so high that when … it **looks** [looked] like… (*05/27/2004, Period 13, Journal*)

3) The base form of the content verb preceded by a modal/auxiliary verb in its simple present tense (coded as *pres_m/a+base*)

(6.16) …because it wanted plays its new sled. But there **don't have** [wasn't] snow (*11/23/2003, Period one, Reading summary*)

4) The past form of the content verb preceded by a modal/auxiliary verb in its present tense (coded as *pres_m/a+past*)

(6.17) Now Geraldine **can played** [could play] his new sled. (*11/23/2003, Period one, Reading summary*)

5) The past form of the content verb preceded by a modal/auxiliary verb in its past tense (coded as *past_m/a+past*)

(6.18) So I said a spell for the fireworks. But it **didn't made** [didn't make] the fireworks. (*03/02/2004, Period two, Journal*)

6) The simple present passive voice (coded as *pres_psv*)

(6.19) Today is Saturday, my dad, mom and me **are drived** [drove] to Stone Mountain, it's lay at 16 miles from Atlanta. (*03/18/2004, Period two, Journal*)

7) The simple past passive voice (coded as past_psv)

(6.20) There was a young man.... He **was walked and walked** [walked]. (*11/23/2003, Period one, Reading summary*)

8) The simple present progressive (coded as pres_prog)

(6.21) Joe **is missing** [missed] one tooth in the front….(*06/22/2005, Period 16, Journal*)

9) The bare present participle (codes as *PrP*)

(6.22) But one day there **coming** [came] one big shark. (*11/20/2003, Period one, Reading summary*)

10) The bare past participle (coded as *PP*)

(6.23) Billy **gone** [went] completely depressed. (*03/08/2005, Period 11, Reading summary*)

The count and percentage of each of these non-target forms at each period are listed in Table 6.5. In the following, I will analyze these forms period by period.

Period one (age: 11;11, study length: 7 weeks)

As shown from Table 6.5, the major candidate for the past tense form is the base form (25/54 = 46%). Another major candidate is 3sg. Totally, he produced 14 tokens of 3sg

where the past tense was required, which consists of three instances of “has”, eight instances of “is”, two instances of “knows” and one instance of “likes”. The reasonable treatment of them base as forms would have boosted the percentage of the base form to 67% ((25 + 11)/54) and reduced that of 3sg to only 6% (3/54). Another major candidate is the base form of the content verb preceded by a modal /auxiliary verbs in the present form.

The reason for him to choose this form probably is that he treated the structure of modal/auxiliary followed by the base form of the content verb as a chunk. Since he had encountered both the past forms and the present forms of auxiliary verbs followed by base verbs in real situations, such as hearing his teachers or classmates say them or read them from books, he may simply use both of them indiscriminately. However, this explanation cannot go far because during the same period, he combined the present forms of modal/auxiliary verbs with past verbs in three places. Considering this, a more reasonable explanation is that he believed that “-past” was something which expresses an event that took place in the past and he had no clear idea that the role of expressing tense should be carried out by the modal/auxiliary verbs rather than the content verbs.

In addition to the above non-target forms, he used the present progressive, the past passive voice, bare present participles, and bare past participles where the past tense was required. However, the frequencies of these forms are extremely low.

Periods two (age: 12;02, study length: 32 week) **–**

Period three (age: 12;04, study length: 41 week)

The major candidates were still the simple present tense, e.g. the base form of the content verb only, the base form of the content verb preceded by a modal /auxiliary verb,

and 3sg. The forms used to mark the past tense during this period were less diversified: no bare present/past participles, present progressive or past verbs preceded by present modal/auxiliary verbs were used. The two forms used during this period that were not used during period one are the present passive voice and the past form of the content verb preceded by a modal/auxiliary verb in its past form, as illustrated from the following examples.

(6.24) Today is Saturday, my dad, mom and me **are drived** [drove]
to Stone Mountain, it's lay at 16 miles from Atlanta.
(*03/18/04, Period two, Journal*)

(6.25) but she says [he] **didn't did** [didn't do] that footsteps..
(*04/15/2004, Period three, Journal*)

The pattern in (6.24) is common for Chinese people learning English as a second language. According to my memory, some of my former middle school students had this habit as well. J, in fact, liked inserting various forms of "be" before content verbs (in both base forms and past forms). Considering that this occurred when he had been learning English for such a short time, it is impossible that he misused the passive voice for the past tense. The last example, on the other hand, indicates his awareness of the function of the past tense form became stronger than during period one: even though the preceding "didn't" did not supplant the past form of the content verb "make". This phenomenon occurred several times more in the subsequent periods, which I call the "double past phenomenon".

Period four (age: 12;07, study length: 53 week) **–**
period eight (age: 12;10, study length: 63 week)

Table 6.5 Non-target forms used to mark the past tense

Period	Total	Base		3sg		Pres_m/a + Base		Pres_m/a + Past		Past_m/a + Past		Pres_psv		Past_psv		Pres_prog		PrP		PP	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1	54	25	46%	14	26%	7	13%	3	6%					1	2%	1	2%	3	6%		
2	28	11	39%	10	36%	3	11%			1	4%	1	4%	2	7%						
3	37	21	57%	10	27%	3	8%			1	3%			1	3%			1	3%		
4	17	8	47%	9	53%																
5	24	13	54%	10	42%	1	4%														
6	30	11	37%	13	43%	4	13%													2	7%
7	39	10	26%	26	67%	1	3%									1	3%	1	3%		
8	14	5	36%	8	57%	1	7%														
9	32	11	34%	17	53%					1	3%			2	6%			1	3%		
10	37	14	38%	18	49%	3	8%			1	3%							1	3%		
11	16	5	31%	8	5					1	6%							1	6%	1	6%
12	23	8	35%	11	48%	2	9%					1						1	4%		
13	124	36	29%	79	64%	3	2%			1	1%							1	1%	4	3%
14	19	14	74%	5	26%																
15	16	6	38%	9	56%	1	6%														
16	47	17	36%	26	55%	2	4%									1	2%	1	2%		
17	41	17	41%	23	56%	1	2%														
18	40	14	35%	23	58%	3	8%														
19	10	4	4	4	4	1	1			1	1										
20	56	20	36%	32	57%	2	4%	1	2%	1	2%										
21	31	9	29%	18	58%	2	6%			1	3%							1	3%		
22	18	7	39%	8	44%	1	6%							1	6%					1	6%
23	9	1	11%	8	89%																
Total	762	287		389		41		4		9		2		7		3		12		8	

The non-target forms were limited to the base form of the content verb only and 3sg during period four. For period five, one more form appeared, which is the base form of the content verb preceded by a modal/auxiliary verb (the token count is only one though). For period six, two instances of bare present participles were used to mark the past tense. The progressive aspect and present participle were used again during period seven. Period eight used no other forms except the three variations of the simple present.

Period nine (age: 12;10, study length: 65 week) **–**

period13 (age: 13;03, study length: 88 week)

Except during period 12, double past (i.e. past verbs preceded by modal/auxiliary verbs in the past tense) was used to mark the past tense. Another feature shared by all of these five periods is his use of bare present participle to mark the past tense, which is another common error made by Chinese people learning English as a second/foreign language. During these periods, J used them interchangeably with the past tense form of verbs.

Period 14 (age: 13;04, study length: 93 week) **–**

Period 18 (age: 13;07, study length: 105 week)

Except during period 16, during which he used one instance of the present progressive and one instance of bare present participle, no other forms except the three realizations of the simple present tense were used to mark the past tense.

Period 19 (age: 13;08, study length: 110 week) **–**

Period 23 (age: 13;11, study length: 119 week)

During periods 19 – 21, in addition to the simple present tense that were used to mark the simple past tense, the other feature is that even after almost two years' learning, he still used double past to mark the simple past. Periods 22 and 23 did not

see this phenomenon again and all of the non-target forms were limited to the bare base form and 3sg, except for period 22, during which he used one instance of the base form of the content verb preceded by a modal/auxiliary verb in its present tense.

6.4 ACQUIRING THE PRESENT FUTURE TENSE

Table 6.6 Counts and percentages of the target forms and non-target forms provided for the present future tense (total (%) stands for the proportion of the present future tense of the entire verb contexts).

Period	Total		Target forms		Non-target forms	
	n	%	n	%	n	%
1						
2						
3	1	1%	1	100%		
4						
5	10	8%	10	100%		
6	1	1%	1	100%		
7						
8	8	7%	8	100%		
9	2	2%	2	100%		
10	2	1%	2	100%		
11	5	4%	5	100%		
12	8	4%	8	100%		
13						
14	3	2%	3	100%		
15	1				1	100%
16	4	2%	3	75%	1	25%
17	1	1%	1	100%		
18	4	2%	3	75%	1	25%
19	1	1%	1	100%		
20	10	2%	10	100%		
21	2	1%	1	50%	1	50%
22	7	3%	6	86%	1	14%
23	6	5%	6	100%		
Total	76		71		5	

The present future tense is a kind of temporality, the TU of which is after the TT of which (Dietrich et al., 1995; Klein, 1993). For example, the TT of “I will go there tomorrow” is anytime before the end of tomorrow while the TU is now if this sentence is uttered by me. English uses the present forms of auxiliary verbs “will” and

"shall" plus the base forms of the content verbs to encode this temporality. The structure "am/is/are going to base verb" is also regarded as the present future tense in some grammar books, though it is classified as prospective aspect by the above authors.

The present future is a minor tense form of the writing genres of the data of this study, which resulted in only 76 obligatory present future contexts over the 23 periods. Table 6.6 lists, for each period, the total count of present future tense contexts J created, its contribution to the total verb contexts, and the counts and percentages of those provided with the target forms and those provided with non-target forms.

6.4.1 General developmental trend

Figure 6.2, which was generated out of Table 6.6, displays the developmental features of his encoding English present future tense

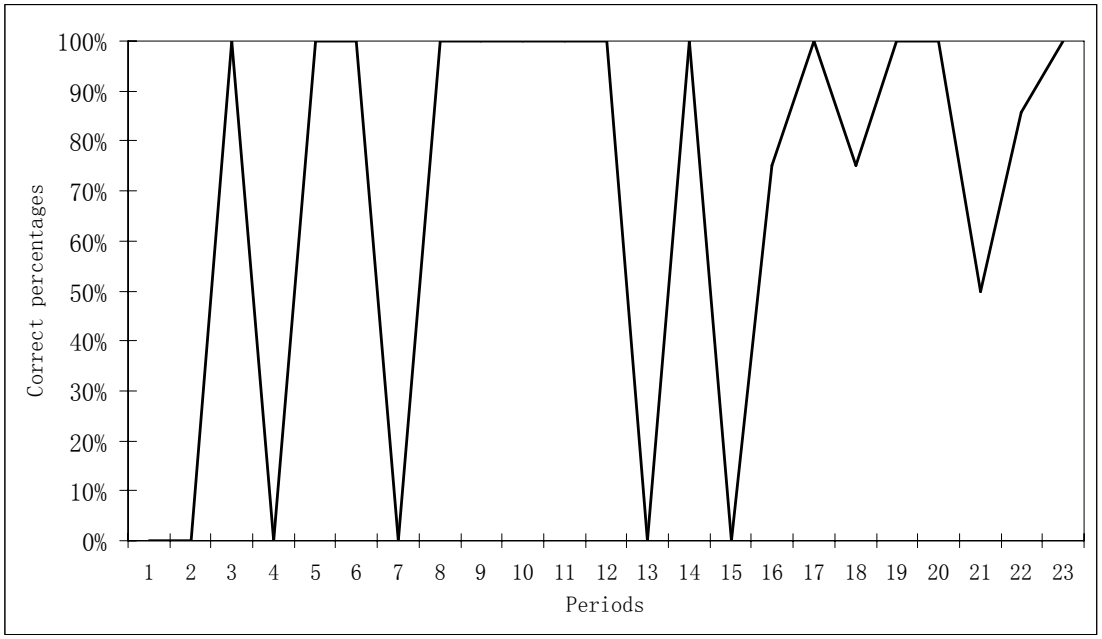

Figure 6.2 Percentages of the present future tense correctly used at every period

First, although he produced four instances of the present future tense during period one, it was used in an incorrect way, i.e. in place of non-3sg simple present tense. Period three, which was half a year after he came to the United States, saw the

first correct instance of this form, which was also the only present future tense that appeared during that period. Period four saw no such form. Seven days later, during period five, he produced ten such contexts. This was a really marvelous achievement for the following four reasons (see examples (6.26) – (6.28) for illustration). To begin with, all of these instances appeared in a single letter to the editor of an imaginary newspaper on August 30, 2004, illustrating the points for the Olympic Games to be held in Athens, Georgia, and all of the sentences were his own writing. Second, all of the ten obligatory contexts were provided with the required forms, not a single error was made. Third, he had a good command of the English syntactic peculiarity that temporal adverbial clauses do not use the present future tense to describe an event that will take place in the future. Finally, he used both "be going to plus base content verb" and "will /shall plus base content verb" to encode this temporality.

(6.26) First, when the Olympic begin, there **will be** thousands of tourists come to watch.

(6.27) After I **made** a lot of money, I **will pay** the taxes to the government, and our country will be richer

(6.28) Anyway, I am so happy that the Olympic **is going to be held** in our hand once again.

He made the second considerable progress during periods 11 and 12 when he provided the correct forms for all of the five and eight present future contexts during these periods, respectively. The dominant writing genres of these periods are argumentation and description. The third period that saw a large amount of correctly produced present future tense structures was during period 20. During that period he made no error in providing the required forms for the ten present future contexts. The fourth one occurred during the last period, where he provided the required forms for

the six obligatory contexts. Unlike the previous periods, these two periods are mainly composed of two of the stories he wrote: *Cannon and Sword*, describing a sea battle between Caribbean pirates and the British Royal Navy, and *Underground*, narrating how two boys managed to escape from an underground cave in the Alps. That he was able to produce the present future tense in these past settings indicates his good command of encoding English future tense.

6.4.2 Non-target forms used to encode the present future tense

As revealed from the previous section, J did very well in supplying present future contexts with the correct forms. Among the 76 obligatory contexts, only five were provided with non-target forms over 23 periods. In this section, I will look into those sporadic non-target forms. The relevant information is listed in Table 6.7. Only those periods with non-target forms are listed.

Table 6.7 Non-target forms used to mark the present future (starting from period 15)

Period	**15**	**16**	**18**	**21**	**22**
Forms (n)	Be + base (1)	0 + PrP (1)	Pres_m/a + PrP (1)	0 + base (1)	Pres_m/a + PrP (1)

As shown from Table 6.7, he used present participles preceded by auxiliary verbs in their base forms, bare present participles, bare base forms, and base forms preceded by “be” to encode the present future, as illustrated by the following example:

(6.29) But I am confident that I will learn a lot during this school year, and **won’t getting** [won’t get] in any trouble. (*08/15/05, Period 18, Journal*)

(6.30) But when the fall comes, they would forget [will forget] everything else and **storing** [will store] nuts and all kinds of other food like crazy... (*06/15/05, Period 16, Journal*)

(6.31) You better catch up, Jack! Or you might get lost and we **have** to [will have to] looking for you over the whole mountain like last year!" (*10/10/05, Period 21, Story*)

6.5 ACQUIRING THE PAST FUTURE TENSE

Like the present future, the past future marks that TU is before TT. The difference between these two temporalities is that the TU of the former is the current moment and TT is unexceptionally in the future but the TU of the past future tense is unexceptionally in the past while its TT is not fixed, i.e. it may be before or after the current moment. Take "He said he would repair your computer next day" for example. TU is the moment at which the "saying" took place while TT "next day" could be tomorrow if the current time is still within today or it could be sometime in the past if more than one day has passed since this utterance was made. But it is certain that TU is in the past and is before TT. Most utterances with the past future tense appeared in indirect speech. In English, two morphosyntactic means are used to encode this tense: 1) the past form of "will" and "shall" followed by a base content verb and 2) "was/were going to" followed by a base content verb. In colloquialism, the past future tense is avoidable by breaking down a complex sentence into several simple sentences. For example, instead of saying "He told me that in 2003 he would go to London", a language learner may say "He told me something. He planned to go to London in 2003". This is one of the reasons that why this form is not common in colloquialisms. For this reason, it is supposed to appear and gets acquired late.

This section analyzes J's use of this tense form. Table 6.8 lists the total amount of the obligatory contexts of this tense, its proportion of the entire verb contexts, and the counts and percentages of those that were correctly provided and those that were not.

6.5.1 General developmental trend

Table 6.8 Counts and percentages of the target forms and non-target forms provided for the past future tense (total (%) stands for the proportion of the past future tense of the entire verb contexts)

Period	Total		Target forms		Non-target forms	
	n	%	n	%	n	%
1						
2	2	2%			2	100%
3	2	2%			2	100%
4						
5						
6						
7	4	3%	1	25%	3	75%
8	1	1%	1	100%		
9	3	3%	1	33%	2	67%
10	10	7%	7	70%	3	30%
11	3	2%	2	67%	1	33%
12	2	1%	1	50%	1	50%
13	9	2%	5	56%	4	44%
14	1	1%			1	100%
15	3	1%	3	100%		0%
16	13	5%	12	92%	1	8%
17	2	1%	1	50%	1	50%
18	7	4%	6	86%	1	14%
19	5	6%	2	40%	3	60%
20	12	3%	5	42%	7	58%
21	1	1%	0		1	100%
22	9	4%	6	67%	3	33%
23	2	2%			2	100%
Total	91		53		38	

As shown from Table 6.8, before period seven, totally there were only four past future contexts, two for period two and two for period three, and he failed to provide the required forms. Periods one, four, five, and six saw no such contexts. During

period seven, he succeeded in providing the correct form for only one out of the four contexts. The percentage of correct suppliance for period eight is 100% but we should keep in mind no definite conclusion can be drawn considering that there was totally one instance of such context. Two of the three obligatory context of period nine were provided with non-target forms. The first progress occurred during period 10, during which he produced ten such contexts, and gave the correct forms for seven of them. The time of period 10 is 01/16/05 – 02/19/05, which was 16 months after he started to learn this language in mainstream classrooms.

The correct percentage started to drop in the subsequent four periods (period 11 - period13) in a mild manner (70% > 67% > 50% > 56%), which was the first U-Shape. Period 14 is statistically insignificant as it has only one obligatory context. Period 15 produced three such contexts, all of which were provided with the required forms. The percentages dropped in period 17 (50%), and rose back in period 18 (86%), which formed the second U-shape. Every period after period 19 had such obligatory context; however, the correct percentages dropped drastically: 40%, 42%, 0%, 67%, and 0% for periods 19 to 23, respectively. This is the third U-shape with no big rising back

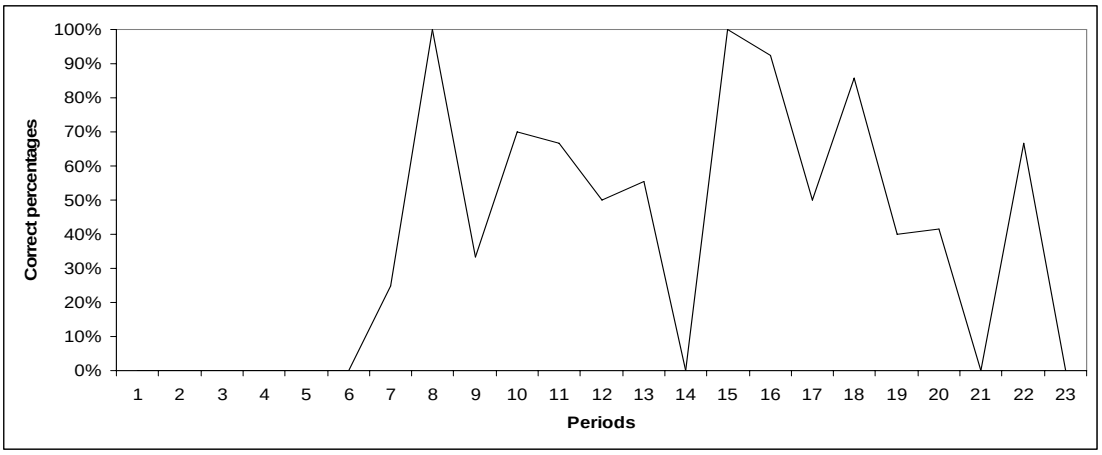

Figure 6.3 Correct percentage of the past future correctly used at every period

In sum, his acquisition of this form is slow and not stable, as illustrated by Figure 6.3, which was made by citing the correct (%) data of Table 6.8.

6.5.2 Non-target forms used to encode the past future

Totally he produced 91 past future contexts, and 38 of them were provided with non-target forms. Table 6.9 lists those non-target forms. Again, only those periods with non-target forms are listed. As shown from the table, the non-target forms he used to mark the past future tense are much diversified than those for the present future tense. (0 – (6.34)) are some illustrating examples.

Table 6.9 Non-target forms used to mark the past future

Period	**Total**	**Base**		**Pres_ future**		**Pres_fut_prog**		**Pres_m/a +past**	
	n	n	%	n	%	n	%	n	%
2	2			1	50%			1	50%
3	2			2	100%				
7	3			3	100%				
9	2	1	50%	1	50%				
10	3			3	100%				
11	1			1	100%				
12	1			1	100%				
13	4			3	75%	1	25%		
14	1							1	100%
16	1			1	100%				
17	1			1	100%				
18	1			1	100%				
19	3			3	100%				
20	6			6	86%				
21	1			1	100%				
22	3			3	100%				
23	2			2	100%				
Total	37	1		33		2		2	

(6.32) Don Sousa steal [stole] his sister’s gymnast play station

to went to the Dojo Center for the gymnast fight. **That**

night he **will fight [would fight]** with Ming Siou Long. (*04/24/04, Period three, Reading summary*)

(6.33) In Hogwarts, Harry can't believe [couldn't believe] he **will met** [would meet] a boy named Marouf, who worse than Dudley… (*03/10/04, Period two TV Program retelling*)

(6.34) At 7:00pm, we left Universal Studio and headed back to our hotel, we **will be leaving [would be leaving]** shortly after breakfast tomorrow. (*04/23/05 – 04/26/05, Period 13, Travelogue*)

The dominant candidate is the present future tense (33 out of 38). The main reason for this wrong use is that J couldn't correctly locate TT and TU for these two related but different tenses, as illustrated by 0, which is the first sentence of the first paragraph of a reading summary. The adverbial "that night" prescribed that the TT for the whole writing should be in the past since the time at which he was writing this summary was certainly after that night. TU in this case is not the time at which the summary was being written. We can put all of the sentences of the summary in the subordinate clause position, like "The narrator **said** that Don Sousa stole ..." Therefore, TU is when that imaginary "saying" occurred. Therefore, he failed to locate the two time spans from the very beginning. The sentence "That night he will fight with Ming Siou Long" substituted TU with the time at which this summary was being written and put TT beyond the scope of "that night", which was incorrect. This is also the reason why he used the present tenses for the other verb, "steal", in a non-native manner. An exception is his use of "to went to the Dojo Center" for "to go

to the Dojo Center", which indicates that he did not totally forget the binding effect of the adverbial "that night".

6.6 SUMMARY

Due to the limited data, the specific reasons for these non-target forms [for the present future tense] are hard to figure out. It may be that he was playing with various English verb forms, as was done by the subjects of Dietrich et al (1995) and Klein (1993), or he was in the process of creating, testing, discarding/modifying some hypotheses, or he was making a formula that stabilizes to be an interlanguage level, or 4) he was simply producing these forms idiosyncratically, as was done by the subjects of Meisel (1987).

The correct percentage figures of his supplying the simple present tense contexts are relatively high. However, we should be cautious in jumping to the conclusion that he had a better command of encoding this temporality than of the others. We need to look at whether he used this form in other obligatory contexts extensively. The fact is that he did: it is the most dominant non-target form where the simple past tense was needed. Therefore, the high correct rate of non-3sg simple present may be a kind of coincidence: he provided it both where it was needed and where it wasn't.

Though his development of the simple past tense was full of ups and downs, the general trend was increasing. The overgeneralization of irregular verbs and double past are good signs of his awareness of the past tense temporality. After period 20, his progress was considerably stable. At the end of data collection, the correct percentage was very high, which indicates his improving command of encoding this tense, considering the diversified writing genres of these last periods. The major candidates

for the past tense are bare base, 3sg, and various forms of content verbs preceded by various forms of modal /auxiliary verbs. The other forms have low frequencies.

He had a very good command of the present future tense, which appeared early and was acquired well. Of the 76 such contexts, only five were provided with non-target forms. In comparison, he did a poorer job in acquiring the past future tense, which appeared late and with higher percentage rate of non-target forms. The non-target forms he used to mark the past future tense are more diversified than those for the present future tense.

CHAPTER SEVEN

ACQUISITION OF MORPHOSYNTACTIC MEANS TO ENCODE ASPECT

Chapter Six discussed J's acquisition of morphosyntactic means to express four common tenses: the simple present, the simple past, the present future, and the past future. For each of them, the general developmental trend was described and the non-target forms were investigated. This chapter will follow the same methodology to look into morphosyntactic means that he used to encode English grammatical aspects.

In spontaneous utterances, aspect always appears with tense. English distinguishes two large categories of aspects: the perfect aspect and the progressive aspect. These two aspects can become very complicated by interacting with each other, with tenses, and with the finiteness of verbs. For example, "He said that by 2002 **he would have been teaching** English for 30 years." is a past future perfect progressive and "I am sorry to **have kept** you waiting for such a long time." contains an infinitive perfect aspect.

Totally, J created 11 types of aspect contexts, which are listed in Table 7.1. It can be seen from the table that only four of them have relatively high frequencies, which are: the present progressive, the past progressive, the present perfect, and the past perfect. The frequencies of the remaining are too low to be discussed in the dissertation. Therefore, the codes assigned to each verb form are the same as those used in the previous chapter except that the first code is used to mark the required aspect form: "pres prog" for the present progressive, "past prog" for the past progressive, "pres perf" for the present perfect, and "past perf" for the past perfect.

Table 7.1 Obligatory aspect contexts created by J

Aspect	n	Aspect	n	Aspect	n
Present progressive	20	Past progressive	85	Present perfect	29
Past perfect	51	Present perfect progressive	1	Past perfect progressive	1
Past future progressive	1	Past future perfect	1	Infinitive progressive	2
Infinitive perfect	1	Gerund perfect	5		

7.1 ACQUIRING PROGRESSIVE ASPECT

In conventional English grammar books, the progressive aspect is stated as a verb form to describe an event that is taking place at a certain point in time. Depending on whether that point in time is before, the same as, or after the time of speaking, three progressive aspects are differentiated: the past progressive, the present progressive and the present future progressive. In conventional books describing language aspects in general, another aspect is often mentioned, which is continuous aspect. It differs itself from the progressive aspect in that it refers to a continuous state but not necessarily an event that is going on (Li & Shirai, 2000). In other words, the progressive aspect entails continuous aspect but not the other way around. For example, “She has been studying hard recently.” is a continuous aspect while “She is studying hard” is a progressive aspect because the former does not guarantee that she is studying hard at the time of utterance while the latter does. Following the definition given by Dietrich et al (1995) and Klein (1993), this differentiation can be merged, since both aspects mark the same kind of deictic temporal relationship between TT and TSit such that the former is within the latter. In other words, for both of them, the

scope of TT is smaller than that of TSit. Considering this, the cover term “the progressive aspect” will be used.

The difference between the present progressive and the past progressive lies in the relationship between TT and TU. For the present progressive, TU is *in* TT while for the past progressive, TU is *after* TT. The syntactic structure of English present progressive is “am/is/are + present participle” and that of the past progressive is “was /were + present participle”. In this section, I will look into his acquisition of both the present progressive aspect and the past progressive aspect.

Table 7.2 Counts and percentages of target and non-target forms of the present progressive aspect and the past progressive aspect

Period	**Present progressive**						**Past progressive**					
	Total		Target forms		Non-target forms		Total		Target forms		Non-target forms	
	n	%	n	%	n	%	n	%	n	%	n	%
1	1	1%	1									
2							2	2%	1	50%	1	50%
3							1	1%	1	100%		
4							1	3%			1	100%
5							2	2%	1	50%	1	50%
6							1	1%			1	100%
7							1	1%	1	100%		
8							3	2%	3	100%		
9	1	1%			1	100%	1	1%	1	100%		
10	1	1%			1	100%	10	7%	7	70%	3	30%
11	1	1%	1	100%			6	4%	5	83%	1	17%
12	1		1	100%			7	3%	4	57%	3	43%
13							5	1%	2	40%	3	60%
14	2	2%	2	100%			2	2%	1	50%	1	50%
15	4	1%	2	50%	2	50%	4	2%	2	50%	2	50%
16	3	1%	3	100%			5	2%	2	40%	3	60%
17							1	1%	1	100%		
18	1	1%			1	100%	3	2%	2	67%	1	33%
19							1	1%			1	100%
20	2		2	100%			19	4%	16	84%	3	16%
21							4	2%	2	50%	2	50%
22	2	1%	2	100%			4	2%	4	100%		
23	1	1%	1	100%								
Total	20		15		5		83		56		27	

Table 7.2 lists the total counts of contexts of the present progressive and the past progressive that he produced, their proportions to the whole verb set included, and the counts and percentages of the target and non-target forms that were provided.

7.1.1 Acquiring the present progressive aspect

7.1.1.1 Period by period analysis of his encoding of the present progressive aspect

For the 23 periods, he created only 20 obligatory contexts for the present progressive, making up less than 1% of the entire verb contexts, which means that he was unproductive in this aspect. During period one, he produced two such forms. One was provided where the simple past was the obligatory context and the other was provided in the right context (see (7.1) and (7.2) below).

(7.1) I **am shimming** the museum. (*11/12/03, Period one, Sentence-Making*) [1]

(7.2) She **is admitting** [admitted] he took her lunch. (*11/13/03, Period two, Sentence-Making*)

Both of these sentences were made by using the required verbs given by his language arts teacher. (7.1) is a nonsense verb plus "-ing". (7.2) is not a grammatical English sentence for two reasons: 1) the punctual semantic feature of "admit" is not compatible with the progressive aspect and 2) the overall past tense setting does not allow the present tense there. The context is obviously a simple past.

Period two to period eight did not see any such contexts at all. There was one such context for both period nine and period 10; however, both of them were provided with non-target forms:

[1] "shimming" is nonsense verb. I just copied as it is.

(7.3) “**Didn’t** you **do** [Aren’t…doing] anything? The snow is so pretty outside… ”, I asked. (*11/14/09, Period nine, Translation*)

(7.4) I hope Nick will be okay, but meanwhile I **was** [am] also **thinking** why and how did this happened. (*02/06/05, Period ten, Journal*)

(7.3) was a sentence translated from a Chinese detective novel. I remember that during that period, his mom was teaching him how to use the progressive aspect. She told him that English progressive aspect is equivalent to the Chinese structure of “*zai”* (an imperfective marker, meaning “*at”*) followed by a verb. That original Chinese sentence, which does not have “*zai*”, is actually a real sentence of the progressive aspect. (7.4) is perfect in terms of the progressive aspect, however, he just did not use the correct tense.

The following two periods (11 and 12) saw two such obligatory contexts, which he provided with the required forms. There was no such context in period 13. The subsequent three periods had two, four, and three such contexts, respectively. This is a substantial progress, despite the overall low frequency of the obligatory context because he provided seven of the nine contexts with the right form. He used the non-target forms only in two places during period 15:

(7.5) My mom **was babysitting** [is babysitting] my neighbor's baby boy, Yang Yang. He is a cute little one-year old boy, with a round, soft face. (*06/12/05, Period 15, Journal*)

(7.6) His ears are big and Smooth, when I touch it, it's like I **am touch** [am feeling] a piece of silk. (*06/12/05, Period 15, Journal*)

In (7.5), he used the past progressive for the present progressive. The tense is not correct, as he was describing his mom's activity during those several months (TT), while TU is the time at which he wrote that sentence, which is *in* TT. Therefore, the present tense was needed. (7.6) is a good example of errors caused by negative language transfer. In Chinese, it is very common to insert a "b*e*" verb in front of a content verb, which does not form a progressive aspect. (7.7) and (7.8) are such examples. When he carried that syntactic feature over to English, he made an error. And this is also one of the stubborn errors that my former middle school students tended to make.

(7.7) *ni* *shi* *lai* *hai-shi* *bu* *lai*?

you be come or not come

"Will you come or not?"

(7.8) *ni* *shi* *zhe* *me* *shuo* *de*?

you be this particle say particle

"You did say it like this."

Although "hai-shi" means "or" in this context, it is a two-character word, the second of which is still the same "shi (be)".

Period 17 had no such context while period 18 had one, which was again given the past progressive form. From period 20 on, he maintained two such contexts for each period except period 21 and period 23 and what's more, he did not make errors any more.

7.1.1.2 Candidates for the present progressive aspect

Table 7.3 lists those periods where non-target forms were supplied for the required the present progressive.

Table 7.3 Non-target forms for the present progressive aspect

Period	Total	Past progressive		Be + base verb	
	n	n	%	n	%
9	1		%	1	100%
10	1	1	100%		
15	2	2	100%		
18	1	1	100%		
Total	5	4		1	

As shown from the table, he provided five of the required contexts with non-target forms, which are composed of four past progressive forms and one “be + base verb” form. As I explained earlier, the most possible reason for his use of the past progressive for the present progressive is that he was not clear about how to mark the relationship between TT and TU. And the reason for his insertion of “be” in front of the base verb is language transfer.

7.1.2 Acquiring the past progressive aspect

7.1.2.1 Period by period analysis of his encoding of the past progressive

Past progressive constructions mark two types of temporal relationships: the priority of TT to TU, and the enclosure of TT inside TSit. It is a combination of the past tense and the progressive aspect. The main writing genres of the data are journal entries, stories, travelogues, and reading summaries, all of which are characterized by the past tense. Therefore, it is predictable that he would produce more obligatory past progressive contexts than present progressive contexts, and this prediction turned out to be true, as shown from Table 7.2. He created 83 total contexts for the past progressive aspect. Although it is still a very small number, it is much larger than the number of the present progressive contexts. Except for the first and the last period, these contexts occur in every period.

The first remarkable progress occurred in period eight, during which he produced three such contexts and provided them with the required form. Two of them

appeared in a journal entry, describing his Halloween trick-or-treat experience (see (7.9)). Unlike reading summaries, every single sentence of journal entries had to be created by himself, which made journal entries a reliable means to test his command of this language.

(7.9) In one garden the witch stood in the air, the ghost **was whining** and the man **was handing out** candies by a toy hand of bones. (*11/01/04, Period eight, Journal*)

The next considerable progress occurred in periods 10 and 11, during which he gave the required past progressive form for seven of the ten occasions (70%) and five of the six occasions (83%), respectively. During periods 12 – 15, a U-shape occurred, in terms of the percentage of the target forms supplied: 57% (period 12), 40% (period 13), 50% (period 14), and 50% (period 15). Considering that the overall data types of these periods are roughly the same, this is a sign of temporary fossilization.

After period 15, the general trend is that he became more and more proficient in using this aspect form. Period 17 had only one token which was correctly supplied and period 19 also had only one token but it was provided with the present progressive. However, as both of these two periods have only one instance, the percentage number is insignificant. Great achievements were made at periods 20 and 22. During period 20, he produced 19 past progressive contexts, which is 4% of the total count of the verbs included. The data of this period consists of a Story that contains 15 of the 19 past progressive contexts, two reaction papers that contains the remaining four, and one argumentation article. He provided the required forms for 16 of the 19 contexts (84%). He produced totally four past progressive contexts during period 22, a period with more data types than period 20. All of them were supplied with the required forms.

7.1.2.2 Candidates for the past progressive aspect

There are two differences of his encoding of the past progressive from his encoding of the present progressive, in terms of non-target forms. First, there are seven types of non-target forms for the past progressive, which are much more diversified than those for the present progressive. Second, the non-target forms of the past progressive crossed more periods than those of the present progressive.

Table 7.4 lists all the non-target forms he produced for the past progressive contexts. The major candidate is the present progressive: it accounts for 16 of the 27 non-target forms are this one, and this non-target form can be found in every period from period four to period 21 (see examples (7.10) – (7.12)), which means that this was really a recurrent error. Recalling that the past progressive was also almost the only candidate for his present progressive, it seems that he sometimes used these two forms interchangeably.

(7.10) He wants to take a picture of them for Family Album U, S, the book he **is** [was] **writing**. Then Alexandra, a Greece exchange student, came up to help him. (*07/01/04, Period four, TV Program retelling*)

(7.11) While they'**re** [were] **digging**, Joe found an old cylinder wrapped in oiled papers. (*06/22/05, Period 16, Story*)

(7.12) Everything **is** [was] **going** great for Jack, he had a perfect beginning and his postures are just right. (*10/10/05, Period 21, Story*)

The second major candidate is the simple past, which occurred three times totally, as illustrated by the following example.

(7.13) Now as we **climbed up** [were climbing up] the building on a track, we began to see scary stuffs.

(*04/23/05-04-26/05, Period 13, Travelogue*)

The third candidate is 3sg simple present tense. By using this form, he ignored the requirements of both the past tense and the progressive aspect. Instead, he paid attention only to the number and person of the subject. There are totally two instances of this form, one of which is example (7.14), describing what he saw in Stone Mountain.

Table 7.4 Non-target forms for the past progressive aspect

Period	**Total**	**Present progressive**		**Were + base**		**Was + base**	
		n	%	n	%	n	%
2	1						
4	1	1	100%				
5	1	1	100%				
6	1						
10	3	2	67%				
11	1	1	100%				
12	3	3	100%				
13	3	1	33%	1	33%		
14	1	1	100%				
15	2	1	50%				
16	5	2	40%			1	20%
18	1						
19	1	1	100%				
20	3	1	33%				
21	2	2	100%				
Total	27	16		1		1	

(7.14) After played [playing over] the mountain, some blue and white boat **floats** [were floating] at the lake.

(03*/18/04,Period 2, Journal*)

Table 7.4 Continued

Period	**Total**	**Am + past**		**0 + past**		**0 + PrP**		**0 + 3sg**	
		n	%	n	%	n	%	n	%
2	1							1	100%
4	1								
5	1								
6	1					1	100%		
10	3					1	33%		
11	1								
12	3								
13	3			1	33%				
14	1								
15	2			1	50%				
16	5			2	40%				
18	1	1	100%						
19	1								
20	3			1	33%			1	33%
21	2								
Total	27	1		4		2		2	

The fourth candidate is bare present participle, which occurred twice as well, one of which is example (7.15).

(7.15) Ralph had s nice, little, and red motorcycle. But his cousins always [was] **trying** to wreck it (*09/15/04, Period six, Reading summary*)

The other candidates are base verbs preceded by various forms of “be” and “am + past”, as illustrated by (7.16) – (7.18):

(7.16) We saw a wrecked ship on our way, two little reptiles **were bite** [biting] a white work shirt. (*04/23/05 - 04/26/05, Period 13, Travelogue*)

(7.17) The cave looks even darker in the night, as the boys proceed without a noise into the cave; it’s almost like the

cave **was swallow [swallowing]** them into its endless darkness.(*06/22/05, Period 16, Story*)

(7.18) The snow had fallen while I **am slept [was sleeping]**. (*8/27/05, Period 18, Journal*)

The non-target forms of (7.16) – (7.18) in a sense indicate that he was approximating the target form of the past progressive. It seems that he knew past progressive constructions are composed of two parts: a "be" verb plus a content verb. The problem was that he didn't know for sure the exact forms of these two verbs. With the increase of his English proficiency level, he would acquire the right form.

7.2 ACQUIRING THE PERFECT ASPECT

Just like grammatical aspect in general, the perfect aspect expresses the relationship between TT and TSit. It specifies that TSit is before TT. It does not concern itself with the relationship between TT and TU, which is the domain of tense. Depending on the deictic relationship between TT and TU, three types of the perfect aspect can be differentiated: the present perfect, the past perfect, and the future perfect, which are illustrated by (7.19), (7.20) and (7.21), respectively:

(7.19) The results have come out.

(7.20) She said that the results had come out.

(7.21) The results will have come out by next Monday.

Take (7.21) for example. TU is the time when this sentence was produced, which is before TSit, which is the actual time at which the results came out (or will come out). TSit in turn is before TT, which is "*next Monday*". Due to these complicated relationships among TU, TT and TSit encoded in the perfect aspect, it is commonly known that the perfect aspect appears and is acquired late.

7.2.1 Acquiring the present perfect aspect

As shown from Table 7.1, J produced the contexts for five types of perfect aspects, which are the present perfect, the past perfect, the past future perfect, the gerund perfect, and the infinitive perfect. The frequencies of the last three types are too low to make sense to discuss them at length. Therefore, only the present perfect and the past perfect are to be looked into.

Table 7.5 Counts and percentages of target and non-target forms of the present perfect and the past perfect

Period	**Present perfect**						**Past perfect**					
	Total		Target-like		Non-target		Total		Target		Non-target	
	n	%	n	%	n	%	n	%	n	%	n	%
1							1	1%	1	100%		
2							1	1%	1	100%		
3												
4												
5	1	2%			1	100%						
6												
7												
8	2	2%	2	100%								
9							1	1%	1	100%		
10	1	1%			1	100%	1	1%	1	100%		
11												
12	1		1	100%								
13	1				1	100%	1				1	100%
14	2	2%			2	100%	1	1%	1	100%		
15	4	2%			4	100%						
16	2	1%			2	100%	1		1	100%		
17							2	1%			2	100%
18	2	1%			2	100%	3	2%	2	67%	1	33%
19	2	2%	1	50%	1	50%						
20	3	1%	1	33%	2	67%	18	4%	13	72%	5	28%
21							10	6%	7	70%	3	30%
22	6	2%	3	50%	3	50%	6	2%	4	67%	2	33%
23							5	4%	5	100%		
Total	28		8		20		51		37		14	

Table 7.5 lists the total amount of the present perfect and the past perfect contexts that he produced, their proportions to the whole verb contexts, and the count and percentage figures of the target forms and non-target forms provided.

7.2.1.1 Features of his acquisition of the present perfect

J produced 28 present perfect contexts, making up 2% of the 3829 verb forms included. Only eight of these 28 contexts were supplied with the required forms, indicating that he had a poor performance in encoding this temporality. Due to the extreme rarity of this verb form, I will analyze both the development trend and the non-target forms for the present perfect in a single section rather than in two separate ones as I did for other verb forms so far. Table 7.6 lists the non-target forms that J used for this aspect form, only those periods with non-target forms listed.

The first feature is that the present perfect appeared very late and infrequently. The first time for its occurrence was during period four, which had been around one year since he started to learn this language. Periods six, seven, nine, 11, 17, 21, and 23 did not see this form either. The late and infrequent appearance of this form cannot totally be attributed to the data type. It should be possible to see the present perfect, if the following two conditions are met: 1) the actual event occurred or is supposed to occur in the past and 2) the outcome of that event is still visible now. Therefore, it is possible that the complicated relationship among TT, TU and TSit made him avoid this form.

The second feature is the low average percentage of target form supplied, which is 28%. In fact, no single obligatory present perfect context was given the required form before period 19. In other words, he had no idea of the function and form of this verb form. The highest correct suppliance percentage occurred during periods 19 and 22, which is 50%.

Table 7.6 Non-target forms for the present perfect (pres_m/a = modal/auxiliary verb in the present tense)

Period	Total	Past perfect		Have + base		0 + past		Is + been PP		Pres_m/a had + past	
	n	n	%	n	%	n	%	n	%	n	%
5	3			1	50%					1	50%
10	1					1	100%				
13	1					1	100%				
14	2					2	100%				
15	4	2	50%			1	25%	1	25%		
16	2					2	100%				
18	2	2	100%								
19	1	1	100%								
20	2	2	100%								
22	3	2	67%	1	33%						
Total	20	9		2		7		1		1	

The third feature is the heterogeneous non-target forms he used to mark this aspect form. During period five, he used “have + base” and “present modal verb + had + past” for the present perfect, as illustrated by:

(7.22) You must **had saw [have seen]** a lot of tops before and they all have a common point: that they are made up of wood, plastic or metal. But have you see a top made up of acorn? (*09/07/04, Period five, Description*)

During periods ten, 13 and 14, the alternative forms he used was the simple past tense, as shown in:

(7.23) So far, some country **gained** [have gained] great fortune from export their natural resource, produce machineries and weapons.(*05/09/05, Period 14, Argumentation*)

Period 15 used the past perfect and the form of “is + been + pp”, in addition to the simple past tense, as in:

(7.24) The highest branch I **ever climbed** [have ever climbed] is as thin as my arm. (*06/10/05, Period 15, Journal*)

(7.25) When he [the baby his mom was baby-sitting] went back to china with his parents for the summer, we felt like something really important is missing. Now he's back, the vacuum in our house **is been filled [has been filled]** again by his happy voice and soft face. (*06/12/05, Period 15, Description*)

It can be seen from Table 7.6 that the first major candidate is past perfect, the second major candidate is the simple past tense, the third one is “have + base” and the least common one is “present modal verb + had + past”.

7.2.2 Acquiring the past perfect

In conventional English grammar books, the past perfect is described as a verb form that marks an event that occurred before a past time point, and that the effect of that happening was still visible at that past time point, or a verb form that marks a state started to exist before a past time point and continued to exist at that past time point. Using the frame of Dietrich et al (1995), Klein (1993), and Klein (1994), the past perfect is not a marker but a type of temporality such that TSit is before TT, which is in turn before TU. Let’s use (7.26) as an example to make this complicated deictic relationship clear.

(7.26) He said that he had watched this movie before.

The TSit of (7.26) is the actual time at which that person watched that movie, its TT is the moment when “his saying” took place, and the TU is the time when this sentence was uttered. Obviously, these three time spans are in a linear relationship: TSit, TT, and TU. In comparison, the present perfect presupposes the existence of a

present situation while the past perfect presupposes a past situation. The vast majority of the genres of the data of this research are narrative, describing something that took place in the past. Taking into account this and the prerequisites of the present perfect and the past perfect, it should be predictable that there are more obligatory past perfect contexts than those of the present perfect. As shown from Table 7.6 above, this predication is verified: J produced 51 obligatory past perfect contexts which is 23 more than those of the present perfect.

7.2.2.1 Features of his acquisition of the past perfect

Table 7.5 displays the following features of his acquisition of the past perfect. First, before period 20, this aspect form was very infrequent. Except period 18, each period either had no such form at all. In the same time, we should be aware that he made few errors during these unproductive periods, which can be interpreted that he was cautious and careful about this aspect: either avoid it or try to use it correctly.

Second, he made considerable progress in producing this aspect form from period 20 till the end of data collection. Period 20 had 13 such contexts, and eight of them were supplied with the correct forms, with the percentage of 72%. The absolute count of this aspect context dropped to ten in period 21 but its proportion to the whole verb contexts rose two percentage points because period 21 contained less data than did period 20. Period 22 had six such contexts and this is not a sign of regression, as the writing genres of this period are less pastness-threaded. Although periods 20, 21 and 22 had different counts of past perfect contexts, their percentages of the target forms supplied did not vary considerably.

Third, he had a very good command of this aspect form in period 23, after 25 months' study. He created five past perfect contexts, which is 4% of the verbs included in this period, and all of them were provided with the required forms.

Table 7.7 lists the non-target forms he provided for the past perfect. The overall feature is that he did not make many errors and they were concentrated in several periods.

Table 7.7 Non-target forms for the present perfect (pres_m/a = modal/auxiliary verb in the present tense)

Period	**Total**	**Pres perf prog**		**Pres perf**		**Pres_m/a have +past**		**0 + base**		**0 + past**	
	n	n	%	n	%	n	%	n	%	n	%
13	1	1	100%								
17	2									2	100%
18	1			1	100%						
20	5							2	40%	3	60%
21	3					1	33%			2	67%
22	2							1	50%	1	50%
Total	14	1		1		1		3		8	

The first error occurred during periods 13, for which he produced only one past perfect context but he provided it with the present perfect progressive aspect:

(7.27) Today is 4/15/05, it's [was] a very exciting day for me,
for it's the band trip which I'**ve** [had] **been waiting** the
whole year. (*04/23/05 - 04/26/05, Period 13, Journal*)

He wrote this travelogue when he returned home from his band trip by reflecting the activities he did. "*waiting*" was something that started in the past, continued to the moment when he was writing that sentence, rather than the current moment. Therefore the present perfect is a non-target form, though the progressive aspect is not problematic. This example, on the other hand, shows that he had become more proficient in using complex combination of various aspects and tenses in a single sentence, though with errors.

The second error appeared during period 18, where he used the simple past tense for the two past perfect contexts. One of them is presented as (7.28) below:

(7.28) The supper is spaghetti, since I am tired from all the swimming I felt like I [had] **never tasted** anything better. (*07/24/05, Period 17, Travelogue*)

The third error appeared also during period 18, for which he produced only one past perfect context but he provided it with its present perfect counterpart, as shown from (7.29) below, which is a typical past perfect context.

(7.29) I lived in the southern part of China, so I **have** [had] **never seen** the snow until we moved to U.S.A. (*07/27/05, Period 18, Journal*)

Periods 20-22 were those very productive periods in terms of this perfect aspect and they were also where he used more diversified non-target forms for the past perfect. During these periods, two other candidates appeared, which are: base verb and "present modal verb + have + past content verb", as illustrated by the following two examples, respectively:

(7.30) Twenty minutes later, after he and Kelvin had wolfed down two energy bars and **rest** [rested] for a bit, the search began again. (*11/08/05, Period 22, Story*)

(7.31) 'I sorta fell off my skies, everything going in a white blur. I think that I **might have broke** [broken] my ankles.' Mumbled Kelvin. (*10/13/05, Period 21, Story*)

What is strange about the error in (7.30) is that the two compound predicates of the same sentence appeared in totally different forms: "had wolfed down" was used perfectly but suddenly he used the base form of "rest" for the same temporality: the past perfect. On the other hand, (7.31) might be caused by that he did not know clearly the difference between the semantic difference between a verb's past tense

form and its past participle: he simply believed that they were the same, as morphologically, these two are the same for regular verbs. Other than this confusion, he was aware of the correct form required in that context. Both of these examples can also indicate that he was playing with these verb forms before he finally mastered the form and function of the past perfect.

7.3 SUMMARY

In this chapter, I looked into his encoding of four temporalities: the present progressive, the past progressive, the present perfect and the past perfect. The complicated relationships both between TT and TU (tense information) and between TT and TSit (aspect information) made them hard for J to master.

His acquisition of the present progressive is characterized by late appearance, low production, high target-form suppliance rate and small varieties of non-target forms. During period one there was an instance of the progressive aspect, but that verb along with its “-ing” inflection was given by his language arts teacher to make a sentence with. So in a real sense, this context did not appear until period nine. The real first correct instance of this aspect appeared in period 11.

His acquisition of the past progressive aspect, on the other hand, is featured by very early and steady appearance, medium-to-high target-form suppliance rate (67% on the average) and much diversified non-target forms. In fact, the number of non-target forms he used to encode the past progressive is only less than that of the non-target forms used to encode the simple past tense. The main reason for his better performance is most of his reading materials are novels, which are characterized by past tense. His general better command of past tense facilitated his acquisition of past aspect in general.

The acquisition of the present perfect is characterized by late appearance, low production, low target-form suppliance rate (28% on the average), and diversified non-target forms. These features indicate that he was still very poor in terms of encoding this function even after two years' learning this language in an immersion environment.

He did much better in acquiring the past perfect than acquiring the present perfect. First, he produced a considerable amount of this form, which mainly appeared in periods after period 19. Second, the target-form suppliance rate was extremely high from the very beginning. Although, the rate dropped in some places, it finally climbed up. Just like his encoding its present counterpart, he used many non-target forms to mark this function.

He tended to use the present progressive and the past progressive to encode each other, if he made errors. Similarly, he used the present perfect and the past perfect interchangeably here and there. The reason for these misuses is due to his lack of a clear understanding of the relationship between TT and TU encoded in these forms. For him, the simple past tense is a common candidate shared by the present aspect and the past perfect, which is reflected in his preference for using this tense form to encode the temporality of both aspects.

In addition to the misunderstanding of the relationship among TT, TSit and TUT encoded in these four aspects, the morphosyntactic difference between English and Chinese also contributed to his miscoding the temporalities. Finally, his attempt of experimenting on language use was also at play, which was reflected in his use of two or more totally different forms in the same sentence for the same temporality.

CHAPTER EIGHT

ACQUISITION OF THE PASSIVE VOICE

Using function-to-form approach, Chapter Six discussed J's acquisition of four common tenses: the simple present, the simple past, the present future, and the past future. Using the same methodology, Chapter Seven investigated his acquisition of four common aspects: the present progressive, the past progressive, the present perfect and the past perfect. For each of these tenses and aspects, the general developmental trend was described and the non-target forms were investigated.

This chapter will look into his acquisition of English passive voice. In addition to following function-to-form approach, I will use form-to-function approach as well.

8.1 CODING

Within function-to-form approach, for each obligatory passive context, the same sets of codes as those of Chapter Six and Chapter Seven were assigned to each verb form, except that the first code was changed into the code standing for the obligatory passive structure. Within form-to-function approach, all of the passive structures that appeared, regardless of their correctness, were assigned two codes: the one standing for the name of that passive structure, followed by "correct", if that form matched its function, or "for" plus the code standing for the non-target function, if it was used incorrectly, as illustrated by (8.1) below:

(8.1) "Sir, Island Bura **had** [has] just **been raided** (PAST_PSV) (FOR_PRES_PSV) by an unknown pirate ship, it's definitely work of a professional…." The young colonel continued

the report about Island Bura's raid in a stiff voice to his chief, General Coleman, commander of the region where Island Bura **is** [was] **located**. (*09/21/2005, Period 20, Story*)

For function-to-form approach, the key questions are:

1) How many obligatory passive contexts did he create totally? How many types are there?

2) What is the token frequency of each type?

3) What forms did he supply for each type? Why did he choose such forms?

For form-to-function approach, all of the well-formed passive structures will be looked into and the key questions are:

1) How many tokens of a passive structure did he produce totally? How many types are there?

2) What functions were those structures used for?

8.2 USING FUNCTION-TO-FORM APPROACH

J produced 223 obligatory passive contexts throughout the 23 periods, making up 6% of the 3829 verb contexts that were included. The general distribution patterns of these contexts are listed in Table 8.1, which are summarized below.

The first row lists the 12 different passive voice types to which the 223 contexts belong. They are 1) the simple present passive (e.g. is/am/are done), 2) the simple past passive (e.g. was/were done), 3) the present future passive (e.g. will/shall be done), 4) the past future passive (e.g. would/should be done), 5) the present progressive passive (e.g. am/is/are being done), 6) the past progressive passive (e.g. was/were being done), 7) the present perfect passive (e.g. has/have been done), 8) the past perfect passive (e.g. had been done), 9) the gerund passive (e.g. being done), 10) the gerund perfect

passive (e.g. having been done),11) the infinitive passive (e.g. to be done), and 12) the present participle passive (e.g. having done).

The last row displays the contribution of each of these 12 types to the total 223 passive contexts. The most dominant contributor is the simple past passive (65%), followed by the simple present passive (16%). All of the remaining ten have very low frequency, the highest of which is the infinitive passive (5%), followed by the past perfect passive (4%), which in turn is followed by the gerund passive (3%). The frequency of the remaining seven is either 1% or 2%. The last two columns display the counts and percentages of all of the obligatory passive contexts of each period against the 223 contexts. period 20 (i.e. 09/13/05 - 10/09/05, two years after he started to learn English) has the highest percentage (22%), followed by period 13 (9%). The percentage of periods 1, 2 and 4 is 0%.

In the following, I will discuss his encodings of those passive functions with a percentage higher than 3%, namely, the simple past passive, the simple present passive, the past perfect passive and the infinitive passive.

8.2.1 Encoding the simple past passive functions

Table 8.2 lists the relevant statistical figures of the forms he used to encode the simple past passive. He created 144 obligatory simple past passive contexts, making up 65% of the total passive contexts. In addition to its dominant high frequency, there are several other features of this form, as follows.

First, the overall percentage of correct suppliance of this passive context is 60%, which is considerably high, given its semantic and syntactic complexities and the different means employed by Chinese and English to encode this function.

Second, this passive context was created as early as period two and stayed in every period ever since.

Table 8.1 Obligatory passive voice contexts, their proportions of the total verb forms, and period distributions (prog = progressive)

Period	Total Passive Forms		Present Passive		Past Passive		Present Future Passive		Past Future Passive		Present Prog Passive		Past Prog Passive		Present Perfect Passive		Past Perfect Passive		Gerund Passive		Infinitive Passive		Present Participle Passive		Gerund Perfect Passive		Period Distribution	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1	0	0%																									0	0%
2	1	1%	1	100%																							1	0%
3	3	3%			3	100%																					3	1%
4	1	3%			1	100%																					1	0%
5	12	9%	2	17%	7	58%					1	8%									2	17%					12	5%
6	5	6%			5	100%																					5	2%
7	4	3%			4	100%																					4	2%
8	7	6%	1	14%	3	43%									2	29%	1										7	3%
9	6	5%	1		4	67%			1	17%																	6	3%
10	4	3%			4	100%																					4	2%
11	7	5%	2	29%	3	43%													1	14%	1	14%					7	3%
12	15	7%	5	33%	9	60%											1	7%									15	7%
13	19	5%			16	84%															2	11%			1	5%	19	9%
14	13	10%	7	54%	5	38%			1	8%																	13	6%
15	13	6%	5	38%	8	62%																					13	6%
16	11	5%	2	18%	9	82%																					11	5%
17	7	5%	2	29%	5	71%																					7	3%
18	10	6%	1	10%	6	60%											2	20%	1	10%							10	4%
19	5	6%	1	20%	4	80%																					5	2%
20	50	11%	4	8%	32	64%	2	4%	2	4%					2	4%	4	8%	2	4%	1	2%			1	2%	50	22%
21	8	5%			5	63%											1	13%	1	13%			1	13%			8	4%
22	13	5%	1	8%	4	31%	1	8%					1	8%					1	8%	5	38%					13	6%
23	9	7%			7	78%											1	11%	1	11%							9	4%
Total	223	6%	35	16%	144	65%	3	1%	4	2%	1	0%	1	0%	4	2%	10	4%	7	3%	11	5%	1	0%	2	1%	223	100%

Third, the general development of his acquisition of encoding this function is displayed in an overall increasing trend with four U-shapes represented by periods four – 11, periods 11– 15, periods 15 – 18, and periods 18 – 22, as shown from Figure 8.1. Fourth, as shown from Table 8.2, he employed as many as six different non-target forms to encode this function, which are discussed below.

Table 8.2 Statistical figures of the past passive voice (PP = past participle)

Prd	**Tot**	**Target forms**		**Non-target forms**													
				Total		Present passive		Past active		is + base		Past perfect passive		was + been PP		Be + PP	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1																	
2																	
3	3	3	100%														
4	1			1	100%			1									
5	7	2	29%	5	71%	2		3									
6	5	2	40%	3	60%	1		2									
7	4	1	25%	3	75%	2				1							
8	3			3	100%	1		1								1	
9	4	2	50%	2	50%	2											
10	4	4	100%														
11	3	3	100%														
12	9	4	44%	5	56%	4		1									
13	16	7	44%	9	56%	6		3									
14	5	3	60%	2	40%	1		1									
15	8	7	88%	1	13%			1									
16	9	4	44%	5	56%	2		3									
17	5	4	80%	1	20%	1											
18	6	5	83%	1	17%	1											
19	4	3	75%	1	25%			1									
20	32	19	59%	13	41%	6		6				1					
21	5	4	80%	1	20%									1			
22	4	4	100%														
23	7	6	86%	1	14%	1											
Total	144	87	60%	57	40%	30	21%	23	16%	1		1		1		1	

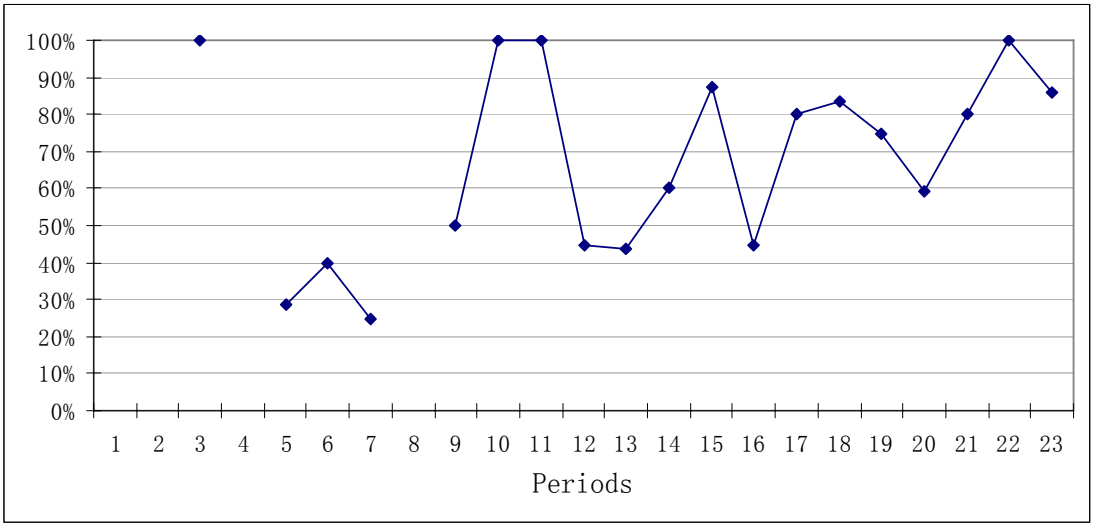

Figure 8.1 Cross-period comparison of correct suppliance of the simple past passive

The number one non-target form is the simple present passive (21%), as illustrated by examples (8.1), (8.2) and (8.3). The temporal settings of these examples were in the past and he had a strong awareness of this because he correctly used the past tense for all of the active voice forms. His strong awareness of the past temporality is also reflected in his overuse of the past tense marker on infinitive forms “helped them connected” and his overuse of the past perfect for the present perfect “Sir, Island Bura had [has] just been raided” by an unknown pirate ship,”. However, he used the present passive voice for the past passive voice. There are three possible reasons for this error. 1) He might be unclear whether it is the auxiliary verb “be” or the content verb that serves as the tense marker. That is, he might be thinking that the past tense was reflected by the past participle, which has the same form as the past tense form for regular verbs. 2) The multilevel complex sentence structure, especially the unrestricted relative clause, made him oblivious of the overall tense requirement, and 3) He was experimenting with various forms, as did by the subjects of Dietrich et al (1995) and Klein (1993)

(8.2) Liz and her friends helped them connected their mother ship at Mars, so they **are** [were] **rescued**. (*09/08/2004, Period five, Reading summary*)

(8.3) He knew that they had captured the General Coleman's daughter, who **is** [was] safely **kept** at his cabin and he also knew that General Coleman was famous for his temper and determination. (*09/22/2005, Period 20, Story*)

The number two non-target form is the simple past active voice (16%), as shown in examples (8.4) and (8.5) below. Like the present passive voice, this non-target form appeared more than half of the periods that have passive forms. This is an indication of his poor command of the syntactic structure of passive forms.

(8.4) Harry and Susan go to the restaurant together. The restaurant [was] **named** Somak, which is [was] a Thai restaurant. (*07/14/2004, Period four, TV program retelling*)

(8.5) The order of lower the rafts that [was] **tied** to Witchmaid reached his men like a whip. (*09/13/2005, Period 20, Story)*

The other non-target forms are the past perfect passive, "was + been + past/past participle", "is + base verb", and "be + past/past participle" (see examples (8.6) - (8.9)). Each of them appeared only once. Except for the past perfect passive voice, all of these forms are illegal syntactic structures. His misuse of the past perfect passive for the simple past passive parallels his preference for using the past perfect for the present perfect. The use of the non-target form of "was + been + past/past participle"

in (8.7) is interesting. In the same sentence, a correct the simple past passive form was used but it was followed by this incorrect form. This along with (8.8) and (8.9) may indicate that he was not sure of the correct form to encode the simple past passive function. These examples do not necessarily indicate that he was deliberately changing different forms to encode the same function, as claimed by Dietrich et al (1995) and Klein (1993), nor do they support the conclusion of Bardovi-Harlig (1992) that correct function lags behind correct form. On the contrary, the lack of explicit concentrated instruction on the correct forms for passive functions and the rarity of passive voice constructions in colloquialism may be the reason for him to jump among various forms.

(8.6) "Cap' tin, our food storage room **had been flooded** [was flooded] during the octopus attack, and most of our foods were spoiled. *(09/27/05, Period 20, Story)*

(8.7) The truth hit him hard: the tree, which the rope was tied, **was been swept** [was swept] away, and he could fell any second now. *(10/19/2005, Period 21, Story)*

(8.8) In the heart of the street it stood an Indian chief statue, the board beside it said that the statue is 50-feet tall, 5 feet wide and it'**s make out of** [was made out of] only piece of red wood. *(10/15/2004, Period seven, Journal*)

(8.9) Second, people in deserted area reported that they always an object gliding in the air with the hug, wide, bat-like wings. And the ground often **be** [was often] **burned** with no reason. *(10/21/2004, Period eight, Argumentation)*

8.2.2 Encoding the simple present passive functions

J created 35 simple present passive contexts, making up 16% of the total verb contexts. In comparison with the obligatory the simple past passive contexts, the frequency of this type of passive context is considerably low. Table 8.3 lists the relevant statistical figures of both the target form and the non-target forms he supplied where such simple present passive was required.

Table 8.3 Statistical figures for the simple present passive voice (16% of the 3829 verb forms)

Period	**Total**	**Target forms**		**Non-target forms**									
				Total		0+base		0 + past/pp		Past passive		been + past/pp	
		n	%	n	%	n	%	n	%	n	%	n	%
1													
2	1			1		1							
3													
4													
5	2	2											
6													
7													
8	1	1											
9	1			1				1					
10													
11	2	1		1						1			
12	5	4		1						1			
13													
14	7	4		3						3			
15	5	4		1				1					
16	2	1		1		1							
17	2	2											
18	1	1											
19	1	1											
20	4	2		2				1				1	
21													
22	1			1				1					
23													
Total	35	23	66%	12	34%	2		4		5		1	

Like the simple past passive, this form has a considerably high correct suppliance rate (66%). It also appeared as early as period two. However, it was supplied with a non-target form during that period (see (8.10)). Periods three and four had no such form. Period five had two such contexts, both of which were supplied with the correct form. The turning point is period 12, where he supplied four correct forms for the five contexts. As the name tells, the simple present passive is the present tense and because the data do not feature the present tense, the total count of this form is as low as 35. This also results in the low count of this type of context allocated to each period. Therefore, the developmental trend is not as clear as that of the simple past passive and no clear U-shape was found.

(8.10) As the term or title suggests, if it **call** [is called] Stone Mountain Park, it must has many stones. *(03/18/2004, Period two, Journal*)

Of the 35 contexts, 12 were provided with non-target forms. As shown from the table, the number one non-target form is the simple past passive. This error is not of voice but of tense. Considering that he also used the simple present passive for the simple past passive, he had difficulty in locating the correct TT of an utterance. And this confusion resulted in his interchangeable use between the simple present and the simple past, between the present future and past future, and between the present progressive (perfect/passive voice) and the past progressive (perfect/passive voice), as discussed previously.

The next two non-target forms for the simple present passive are “0 + base verb” (n = 2) and “0 + past/past participle” (n = 4), as illustrated by examples (8.10) above and (8.11) below, respectively.

(8.11) …. he has a sort of rectangular head, with eyes that [is] **magnified** by a pair of glasses, and that's the retard and laugh stock of our class. *(11/08/2005, Period 22, Journal*)

Although for the sake of methodological consistency I call these non-target forms "0 + base" and "0 + past/past participle", they are actually the simple present and the simple past, respectively. Therefore, these errors are voice oriented as well.

The last non-target form is "been + past/past participle", as illustrated by example (8.12). This and other similar non-target forms for the simple past passive indicate his uncertainty of the right form of the "be" verb of passive constructions.

(8.12) The high sea had hardened him, it also taught him the golden rule on any ship: while the strongest rules, the weakest been ruled [is ruled] (*09/18/2005, Period 20, Story*)

Unlike the simple past passive and the simple present passive, the other passive contexts had very low frequencies, some of which were as low as 1% of the total verb contexts. In the following two subsections, I will discuss the remaining ten obligatory passive contexts in brief.

8.2.3 Encoding other finite passive voice functions

In addition to the simple present and the simple past passive contexts, J created the obligatory contexts for the present and the past future passive, the present and the past progressive passive, the present and the past perfect passive. However, except for the past perfect passive, which has ten instances, the instances of all contexts are in the range of one to four. Therefore, I will just focus on his coding of the past perfect passive. Table 8.14 lists the relevant figures.

There are several points worth mentioning. First, this context was created more than one and half years after he started to learn this language, which was considerably late. Second, it had a very low frequency: during most periods, it only appeared once. Third, the correct suppliance rate is not high (50%). Fourth, the four non-target forms are as diversified as three different types. These features indicate his slow progress and uncertainty in encoding this function.

Table 8.4 Statistical figures for the past perfect passive voice

Period	**Total**	**Target forms**		**Non-target forms**					
				Total		Present perfect passive		Was been + PP	
		n	%	n	%	n	%	n	%
8	1			1		1			
12	1	1							
18	2			2		1		1	
20	4	2		2		2			
21	1	1							
23	1	1							
Total	10	5	50%	5	50%	4		1	

8.2.4 Encoding non-finite passive voice functions

Non-finite verbs are those verbs which cannot serve as independent predicates of sentences. English has four forms of non-finite verbs: infinitives, gerunds, present participles, and past participles. Non-finite verbs can be classified into simple and complex ones. A simple infinitive is a base verb preceded by the particle "*to*", a simple gerund or a simple present participle is a verb with the inflection of "*-ing*", and a simple past participles of a regular verb is a verb with the inflection of "*-ed*". Except for some volition verbs, all simple non-finite verbs are in the active voice. The English complex non-finite verbs express additional information of tense, aspect, and voice with the help of additional morphosyntactic means. Chinese, on the other hand,

simply juxtaposes the verbs for those functions with the help of contexts. The difference between English and Chinese in this aspect plus the complicated tense-aspect-voice information encoded in complex non-finite verbs imposes great difficult for Chinese students learning English as a foreign/second language.

J created the contexts for the infinitive passive, the present participle passive, the gerund passive and the gerund perfect passive. Of these four contexts, the one with the highest frequency is the infinitive passive. Totally, he created 11 infinitive passive contexts, the relevant figures of which are listed in Table 8.5.

Table 8.5 Statistical figures for the infinitive passive voice

Period	**Total**	**Correct**		**Non-target forms**							
				Total		Base as PP		Past as PP		Been + PP	
		n	%	n	%	n	%	n	%	n	%
5	2	1		1		1					
11	1			1				1			
13	2	2									
20	1	1									
22	5	4		1						1	
Total	11	8	73%	3	27%	1		1		1	

As shown from Table 8.5, this context did not start to appear until after a little more than one year after he started to learn this language, and its appearances are not contiguous. Eight of the 11 obligatory contexts were supplied with the required forms. During period 22, four of the five infinitive passive contexts were supplied with correct forms. (8.13) is an example from that period.

(8.13) The wall just seemed **to be made** of granite or even things stronger. (*11/12/2005, Period 22, Story*)

The three non-target forms are different from each other, which are 1) “correct *be* verb + base”, “correct *be* verb + past” and “been + past participle”, as illustrated by (8.14), (8.15), and (8.16), respectively.

(8.14) Here are some reasons why I want the Olympic **to be hold** [held] in Athens. (*08/30/2004, Period four, Letter*)

(8.15) From the other view, the broad countryside has great air condition, less population density and more space for people to live. Imagine to **be woke** [woken] **up** by the mow of the cow, chirping of birds, smell the fresh of sent of wild flowers, what an image that would be? (*03/16/2005, Period 11, Argumentation*)

(8.16) Many people claimed to have seen those fly saucers of UFO, and some even reported to be kidnapped and **been** [to be] **tested** by aliens. (*11/03/2005, Period 22, Argumentation*)

He created one context for the present participle passive, seven for the simple gerund passive, and two for the gerund perfect passive. However, none of these contexts was supplied with the required form.

8.3 USING FORM-TO-FUNCTION APPROACH

Because some of the contexts were not supplied with the required forms and because some of the passive structures were not used to encode passive functions at all, the number of the actual instances of passive structures is not necessarily the same as that of the instances of passive contexts. In fact, the total count of the actual appearances of all passive structures is 200, a little less than the total count of the required contexts. He produced eight types of well-formed passive constructions, four

less than the 12 types of obligatory passive contexts. They are 1) the simple present passive, 2) the simple past passive, 3) the present progressive passive, 4) the present future passive, 5) the past future passive, 6) the present perfect passive, 7) the past perfect passive, and 8) the simple infinitive passive.

Table 8.6 lists the statistical figures of all of the eight passive structures: 1) the number of its total instances, whether it was used to encode the target function or not and 2) the number that it was used to encode the target and non-target functions of

Table 8.6 Composition, distribution and functions of target-like passive structures

Period	**Simple present passive**				**Simple past passive**			
	Target Function	Non-target Functions			Target Function	Non-target Functions		
		Past passive	Simple past	Simple present		Present passive	Simple past	Simple present
1							3	
2			1	2				1
3					3		1	
4								
5	2	2			2			
6		1			2			
7		2			1			
8	1	1						
9		2			2		2	
10					4			
11	1				3	1		
12	4	4	1		4	1		
13		16			7			
14	4	1			3	3		
15	4				7			
16	1	2			4			
17	2	1			4			
18	1	1			5			
19	1				3			
20	2	6			19			
21					4			
22					4		1	
23		1			6			
All	23	40	2	2	87	5	7	1
Total	67				100			

Table 8.6 Continued

Period	**Present Progressive passive**		**Present Future passive**		**Past Future passive**	
	Functions		Functions		Functions	
	Target	Non-Target Function: None	Target	Non-Target Function: Past Future Passive	Target	Non-Target Function: None
1						
2						
3						
4						
5	1					
6						
7						
8						
9				1	1	
10						
11						
12						
13						
14				1	1	
15						
16						
17						
18						
19						
20			2	1	2	
21						
22			1			
23						
All	1		3	3	4	
Total	1		6		4	

individual periods and of the whole period. As shown from the table, the bulk of these structures are the simple past passive and the simple present passive, which are 167 out of 200. The remaining categories have very small token accounts. This distribution pattern matches that of the obligatory passive context types listed in section 8.2.

Table 8.6 Continued

Period	Present perfect passive		Past perfect passive		Simple infinitive passive	
	Target Function	Non-Target Function	Target Function	Non-Target Function	Target Function	Non-Target Function
		None		Future Passive		None
1						
2						
3						
4						
5			1			
6						
7						
8	1					
9				1	1	
10						
11						
12		1				
13			2			
14				1	1	
15						
16						
17						
18						
19						
20		2	1	1	2	
21		1				
22			4			
23		1				
All	1	5	8	3	4	
Total	4		7		8	

8.3.1 The simple present passive structure

As shown from Table 8.6, he produced 67 the simple present passive structures, only 23 of which were used to encode the simple past passive. The earliest appearance of this structure was at period two; however, it was used where the simple present and the simple past tense were required, as illustrated by (8.17) and (8.18), respectively. The error was caused by his idiosyncratic habit of inserting various forms of “be” in front of the base or inflected content verbs. But in terms of their

forms, they were the same as the simple present passive and the simple past passive constructions. The first time when the simple present passive structure was used to encode the required function was at period five, which was one year after he started to learn this language. The remaining 44 instances of the simple present passive structure were used for non-target functions. Among them, 40 were used to mark the simple past passive, which were wrong not in voice but in tense.

(8.17) The queen of England ***is lived*** [lives] in the east north. And we're in west. It must be the magic wand of Harry Potter. (*03/20/2004, Period two, Reading summary*)

(8.18) Today is Saturday, my dad, mom and me **are drived** [drove] to Stone Mountain…. (*03/18/2004, Period two, Journal*)

8.3.2 The simple past passive structure

The clear features of the simple past passive displayed by this particular subject are early appearance, high frequency, and high correct rate. In comparison with other passive structures, it has the highest frequency: 100 of the 200 instances were in such form and 87 of them were used correctly. The earliest time during which this form appeared was period one. However, it was used to mark the simple past tense. It is period three when it was used to mark its target functions, and it maintained an extremely high correct rate ever since. The reason for his marvelous performance on this passive structure is partially due to his better command of the simple past tense and partially due to the writing genres of the data which was characterized by past settings.

In contrast to his preference for using the simple present passive structures for simple past passive contexts, there were only five occasions on which he used the simple past passive structures for the simple present passive structures.

There are seven instances that this form was used to mark the simple past tense and only one instance that it was used for the simple present tense.

8.3.3 The present progressive passive structure

Throughout the 23 periods, he produced only one present progressive passive structure but it was used in the right context. This structure appeared during period five, which is listed below as (8.19).

(8.19) I am really happy that the Olympic Games ***are being held*** in Athens again. (*08/30/2004, Period five, Letter*)

Although he only produced this form once, it signifies the big progress he made after one year's study. First, the progressive passive structure is a relatively complicated structure, which involves different forms of the "be" verb. Considering that "be" is the verb that has the most varieties of inflected forms (i.e. am, is, are, was, were, been, and being), his correct use of this passive structure indicates his good command of verb inflections. Second, this sentence is from the letter that he wrote to an imaginary editor to state the benefits that could be obtained from the event that Olympic Games was to be held in Athens and the overall temporal setting was future. Third, he used the progressive aspect to encode a near future event. Therefore, this sentence reveals his better command of the passive voice, the progressive aspect as well as the future tense.

8.3.4 The present future passive Structure

The present future passive structure appeared six times, half of which were used to mark its target function. It first appeared in period nine, then in period 14.

However, neither of them was used to mark its required function. The first time when it was used to mark the target function was during period 20, which had a wrong use of this form too. Therefore, the appearance of this form was very late and its acquisition was much later. All of the non-target uses of this form are to mark the past future passive, which is right, in terms of marking voice, but wrong, in terms of marking tense, as shown from (8.20). The overall temporal setting of the example is past, as it was a description of the fate of an oak tree.

(8.20) Old Oak is [was] carried to a port; there it **will** [would] **be made** into a ship. (*05/27/2005, Period 14, Fairy tale*)

8.3.5 The past future passive structure

There are three features of the past future passive structure that he used. First, it had very low frequency: totally there were only four instances of this structure. Second, it did not start to appear until period nine, which was 15 months after he started to learn this language. Third, all of the instances were found in the right context. The scarcity and late appearance of this structure lie in its complicated syntactic composition and its putting TU and TT back into past. This scarcity correlates with his low production of the past future tense. The perfect usage of this structure is due to its late appearance when he had had a good command of this language and the overall small amount of appearance, which reduced the probability of going wrong. If the amount of this structure had been much larger than four, he may have produced some errors.

8.3.6 The present perfect passive structure

His production and use of the present perfect passive structure are similar to those of the past future passive structure in late appearance and low frequency: there

were four total instances of this structure and the earliest period that saw this form was period eight. However, unlike the past future passive, this structure has a very low rate of making its target function. Among the four instances, only one was used to mark the target function, which was the one that first appeared (see (8.21)). All of the subsequent instances appeared in the past perfect passive contexts.

(8.21) First, dragons often appears in fictions, stories, songs, riddle and myth, and the important thing is that it'**s be** [redundant be] **told** everywhere, no matter it's West or East. (*10/21/2004, Period eight, Argumentation*)

8.3.7 The past perfect passive structure

The past perfect passive structure did not start to appear until period 12, which was 18 months after he started to learn this language. In addition to its late appearance, this structure had very low frequency as well. Since generally he had a better command of the past tense, it is predictable that the rate of his using this form to mark its target function should be higher than that of the present perfect passive structure. And this prediction turned out to be true. Of the seven such structures, five were used in a native-like manner. The non-target function it was employed to encode is the present perfect passive, as illustrated by the example below.

(8.22) "Sir, Island Bura **had** [has] just **been raided** by an unknown pirate ship, it's definitely work of a professional…." The young colonel continued the report about Island Bura's raid in a stiff voice to his chief, General Coleman, commander of the region where Island Bura **is located**. (*09/21/2005, Period 20, Story*)

This sentence was from one of the stories he wrote that describes the sea battle between a pirate ship and the British Royal Navy. From the sophisticated diction and complex sentence structure, we can see that he had had a very good command of this language by that time. However, he was still jumping between the present tense and the past tense. For example, in this same sentence, he mistakenly used “is located” in place of ”was located” and “Island Bura had been raided by” for ”Island Bura has been raided by”. Since the latter was in a direct speech, the present tense should have been used. However, he used its past counterpart.

8.3.8 The simple infinitive passive structure

No correct passive forms of gerunds or participles were produced, though he created numerous obligatory contexts for them. In other words, like other Chinese students learning English, he was not in a position to supply the correct passive form of these non-finite verbs.

However, there were eight instances of the infinitive passive structure, all of which were used to mark their proper functions. The first time he produced it was during period five, and the last time was period 22 (see example (8.23)). Although this structure appeared late, like all other complex structure, he used it to mark its target function.

(8.23) After 20 minutes and wasted nearly 10 nails, Jack gave up. The wall just **seemed to be made of** granite or even things stronger. (*11/12/2005, Period 22, Story*)

8.4 SUMMARY

Function-to-form approach generated the following findings. During the 25 months, he produced 12 different types of passive contexts, which are: the simple present/past passive voice, the present/past future passive voice, the present/past

progressive passive voice, the present/past perfect passive voice, the simple/perfect gerund passive voice, the present participle passive voice and the infinitive passive voice. Among them, the simple past passive has the highest frequency followed by the simple present passive. However, there are 49 percentage points between them. The remaining ten have very low frequencies.

His encoding of the simple past passive function is characterized by early and steady appearance, relatively high correct suppliance rate, U-shapes, and diversified non-target forms. His encoding of the simple present passive function is characterized by early appearance, high correct suppliance rate, late acquisition, and also diversified non-target forms. His encoding of other finite passive functions is characterized by late appearance, low frequency, low correct rate, and moderately diversified non-target forms. Infinitive passive contexts are featured by late appearance but with 100% correct suppliance rate. Other non-finite passive contexts have the feature of low frequency, late appearance, and zero correct suppliance rate.

Table 8.7 Features of the passive structures that appeared

Passive structures	**Frequencies**	**Appearances**	**Rates of expressing target function**
Simple present passive	High	Early	low
Simple past passive	High	Early	High
Present progressive passive	Low	Late	High
Present future passive	Low	Late	Low
Past future passive	Low	Late	High
Present perfect passive	Low	Late	Low
Past perfect passive	Low	Late	High
Infinitive passive	Low	Late	High

The findings of form-to-function approach are listed in Table 8.7. As shown from the table, the present future passive, the past future passive, the present perfect passive, the past perfect passive, the present progressive passive and the infinitive passive, which have complicated syntactic and semantic compositions, are characterized by low frequency and late appearance. This is understandable, since during the early periods his poor command of English forced him to avoid these structures. The simple present passive, the present future passive, and the present perfect passive have low rate of expressing target their respective functions.

CHAPTER NINE

CONCLUSIONS

Using as data the written production of a Chinese child learning English as a second language in mainstream classrooms in the United States over 25 months, this study employed form-to-function and function-to-form approaches to explore the J's acquisition of tense, aspect and passive voice. This chapter summarizes the conclusions drawn from the investigations conducted in form-to-function and function-to-form approaches.

9.1 THE FORM-TO-FUNCTION INVESTIGATION CONCLUSIONS

Within form-to-function paradigm, it explored the degree to which J used verbal inflections to encode lexical aspect, tense and grammatical aspect, and investigated the functions of the major well-formed passive voice structures that he produced.

As far as J's written production is concerned, the findings of this research contradicted more than supported the Aspect Hypothesis. The association between "-zero" and state verbs has never been confirmed throughout the five periods. He attached this inflection to verbs of every aspectual category. Its motivation is uncertain, due to the limited amount of data. However, it seems unlikely that his assignment of this inflection was driven by the verbs' temporal semantic features. Instead of assigning "-s" to mark stativity of the verbs to which it is attached, it had something to do with the number of the subject of the sentence and his English

proficiency level. The association between “-ing” and activity/accomplishment verbs has been supported fully at periods three and four. On the surface, during period one, he assigned this inflection to activity/accomplishment verbs exclusively, but we should be aware that there were also more than half of the activity/accomplishment verbs that were assigned other inflections as well. This phenomenon became more obvious at period two, when he produced only two instances of such inflection. The association between “-past” and achievement verbs has been only marginally supported in periods two, three, and four but blatantly contradicted at periods one and five. Instead, he seems to use this inflection to mark tense, grammatical aspect and to form other target-like constructions, such as passive structures, attributive participles, and independent nominal structures.

In terms of the degree to which J used verb inflections to encode the tense and grammatical aspect, this project reached the following conclusions. First, the overall degree to which “-zero” and “-s” were used to mark tense/aspect throughout the five periods was very low. Second, he started to produce “-ing” on a large scale only during the last three periods, which were after more than one year’s study of this language. The overall rates of “-ing” used to mark grammatical aspect were high throughout the last three periods. Finally, although he failed to provide “-past” where it was required, once he used it, he used it mainly for marking tense and grammatical aspect, either by constructing the past tense and the perfect aspect or by serving as attributes and adverbials.

In terms of the functions of the passive structures that he constructed, the following conclusions were reached. First, he had an overall good command of the simple past passive structure: he produced it with early start, high frequency and high correct rate. This good performance is due to his overall good command of the simple

past tense and the simple syntactic and semantic components of the simple passive voice, in comparison with other types of passive constructions. Second, of the eight well-formed passive structures that he produce, six appeared late and infrequently, and they are the present/past future passive, the present/past perfect passive, the present progressive passive, and the infinitive passive. His poor command of these passive voice structures correlates with their syntactic and semantic complexities. Third, he sometimes used present passive voice structures to mark their past counterparts, such as using the simple present passive for the simple past passive, the present future passive for the past future passive, and the present perfect passive for the past perfect passive.

9.2 THE FUNCTION-TO-FORM INVESTIGATION CONCLUSIONS

This project also investigated the morphosyntactic means that J employed to encode the functions of the major tenses, aspects, and passive structures.

In terms of his encoding the four major tenses, i.e., the simple present, the simple past, the simple future, and the past future, this study yielded the following conclusions. On the surface, he had relatively high rate of correctly marking the simple present tense. However, this does not imply that he had a good command of encoding this temporality, since he used this form both where the simple present was required and where other forms were needed. In comparison, he displayed relatively strong awareness of past temporality, as reflected in the overgeneralization of irregular verbs and double past. The non-target forms that he used to encode the simple past tense are characterized by great variety and low frequency for each. The major non-target forms are uninflected verbs, verbs with “-s”, and various forms of content verbs preceded by various forms of modal /auxiliary verbs. Comparatively, he

had a much better command of the present future tense than its past counterpart. This may be due to the semantic complexities involved in the latter.

When grammatical aspect began to interact with tense, the acquisition task became more complicated, as he needed to correctly encode the temporal relationships between TT and TU (tense) and between TT and TSit (aspect). His acquisition of the present progressive is characterized by late appearance, low production, high target-form suppliance rate and small varieties of non-target forms. Except for the high target-form suppliance rate, the features of his acquisition of the past progressive are almost opposite to those of the present progressive: early appearance, relatively high production and heterogonous non-target forms. He used many non-target forms to encode both the present perfect and the past perfect. However, in comparison, his encoding of the past perfect is much earlier, more frequently, and more correctly. His better performance of the past perfect is partially due to the less strict distinction between the simple past and the past perfect than that between the simple past and the present perfect.

The picture became even more complicated when grammatical voice came in. During the 25 months, he produced 12 different types of passive contexts. His encoding of the simple past passive function is characterized by early and steady appearance, relatively high correct suppliance rate, U-shapes, and diversified non-target forms. His encoding of the simple present passive function is similar to that of the simple past passive, except for its extremely low production. His encoding of other finite passive functions is characterized by late appearance, low frequency, low correct rate, and moderately diversified non-target forms. Infinitive passive contexts are featured by late appearance but with 100% correct suppliance rate. Other

non-finite passive contexts have the feature of low frequency, late appearance, and zero correct suppliance rates.

In sum, as far as the written production is concerned, the influence of the lexical aspects of the verbs is rather weak on J's selections of the verbal inflections. Instead, the following factors played more important roles. First, the little or no processing effort needed to assign "-zero" contributed to his preference for using uninflected verb forms before he became proficient in this language. Second, the redundant functions expressed by "-s" made this inflection appear and be acquired late. Third, syntactically, the progressive aspect is more complicated than the simple present and the simple past, which may have contributed to the rarity of "-ing' during early periods. Fourth, that he read stories voraciously for himself really enhanced his awareness of the function of "-past", which resulted in his using this inflection to mainly mark past temporality. During the last period of data collection when his English became very proficient, his assignments of inflections were more and more target-like: using "-ing" to form gerunds and using "-ed" to build the perfect aspect, the passive voice and independent nominal structures, for example.

Comparatively speaking, he did better in encoding the past tense/aspect/voice constructions than in encoding their present counterparts, except that he performed more poorly in encoding the past future tense/aspect/voice than their present future counterparts. With the increase of his English proficiency, non-finite aspects and passive voices started to be encoded sparsely; however, the rate that he marked them correctly was low. He was not sure of the right forms of passive voice structures in general, especially the form and function of the "be" verb and the content verb, which resulted in considerable varieties of almost idiosyncratic ill-formed structures to

encode passive functions, such as “was been + past participle”, “be + past participle”, “been + past participle”, “was + base verb”, “was + tense of irregular verbs”, etc.

When tense, aspect, and passive voice were woven together, he tended to be more confused by tense differentiation than by that of voice or that of aspect. For example, 40 of the 44 simple present passive structures were used to mark the simple past passive, but only two were used to mark the simple present and the simple past tense in the active voice. Similarly, he tended to use the present progressive/perfect aspect and the past progressive/perfect aspect interchangeably, but he seldom used progressive/perfect aspect structures for non-progressive/perfect aspect structures. The reason for these misuses may be due to his lack of a clear understanding of the relationship between TT and TU encoded in these forms.

The small mount of data also makes the findings of this dissertation descriptive, rather than conclusive about J's language development. However, together with other findings of similar case studies, a larger and clearer picture can come up about second language acquisition of tense, aspect, and passive voice constructions.

9.3 STRENGTHS AND LIMITATIONS

This study has several strong points. It used both narrative and non-narrative writings to investigate the functions of the verbal inflections used by this particular subject. Scholars in this field like using pure narratives only. For example, the classical method is asking the subjects to retell mute films, either in written form or in oral form. I decided to include some non-narratives on the assumption that if this subject’s use of inflections is merely governed by temporal semantics, as claimed by the Aspect Hypothesis, he would assign “-ed” to telic, or at least punctual verbs, even if the situation is not that of past. This is not the case, as revealed by this study. When

it was a future plan, a description, or an argumentation, the frequency of this subject's use of "-d" was very low.

Second, it investigated the acquisition of tense-aspect together with passive voice. A quick search of the topic of passive voice acquisition reveals that there are not many studies in this area. The scant studies on the acquisition of passive voice make it difficult to compare my findings in this aspect with those of the previous studies. Although this study is more descriptive than assertive in terms of its findings in this subject's acquisition of passive voice, it makes its contributions to this area.

Third, the function-to-form studies take as its goal revealing various means that learners employ to encode certain grammatical functions. However, although they obtained the conclusion that learners follow the order of using pragmatic means, lexical means, and morphosyntactic means to mark tense and/or aspect, they have more findings in the specific pragmatic means used by the learners than in the specific lexical means, with the specific morphosyntactic means least touched upon. For example, Meisel (1987) and Klein (1993) listed the detailed morphosyntactic means that they found their subjects employed to mark tense and aspect, but they did not provide such a list for morphosyntactic means. This research starts where they left off, having revealed what morphosyntactic means this particular subject used to encode tense, aspect, and passive voice.

However, this study has the following limitations as well. First and foremost, it lacks oral data for comparison. The findings would be much more revealing if I could have been allowed to record the ESL classes in which this subject was. Second, this study has no controls. If I had been allowed to record those ESL classes, I would have been able to get more definite conclusions about the influence of first language on learners' second language acquisition, since his ESL classmates were of various

nationalities. With oral data and data produced by learners of different first languages, it would be easier to determine the causes of many of the non-target forms.

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APPENDICS

APPENDIX A: OPERATIONAL TESTS

The operational tests for lexical aspects used in this research.

A. Tests to tell States/Achievements from Activities/Accomplishments

If a verb cannot be used with the progressive aspect at all without giving rise to special meaning, it is a state verb or an achievement verb. Are the following sentences acceptable?

1. *Georgia is belonging to the US.
2. *I'm hearing you.
3. I am working.
4. I am writing a book.

After passing the above general test, do this test. If a verb in its simple present tense is grammatical without relying on adverbials or modal verbs, it is a state. Are the following sentences acceptable?

1. Georgia belongs to the US.
2. * I hear you.

B. Independent test for achievements

a) If a verb in its progressive aspect refers to the pre-stage process leading to the final result rather than the final result *per se*, or a repetitive activity, it is an achievement verb. Are the following sentences refer to the pre-stage process or the final result?

1. She is reaching the summit.
2. She is walking.
3. She is writing a book.

b) If a verb in its progressive aspect refers to a repetitive activity, it is an achievement verb. Are the following sentences refer to a repetitive activity?

1. She was jumping for several minutes.
2. She was working for several minutes.

C. Tests to tell Activities from Accomplishments

If all of the above tests do not apply, the verb is either an activity verb or an accomplishment verb.

a) Imagine that somebody is in the middle of “verb-ing”, raise the question: “has that person “verb-ed” (that activity)?” If the answer is “yes”, the verb is an activity, otherwise, it is an accomplishment verb.

1. He is walking. (Now he stops. Has he walked?)
2. He is writing a novel. (Now he stops. Has he written that novel?)

PERIOD ONE (46)

State Verbs (11)

care, feel, have, know, like, live, look, love, mind, think, want

Activity Verbs (9)

do, eat, fish, help, play, study, swim, work, write

Accomplishment Verbs (18)

adjust, ask a question, come, change, clean up, construct, draw, give, go, grow up, make, put, run away, say, teach, tell, use

Achievement Verbs (7)

attach, begin, buy, find out, get, happen, see

PERIOD TWO (38)

State Verbs (6)

feel, have, like, look, think, want

Activity Verbs (9)

draw, fight, help, invite, need, play, run, study, wear

Accomplishment Verbs (15)

choose, draw a picture , go, make, paint, plan the part, read the same book, run 1 month, say, shove a dog into the bathroom, spoil a birthday cake, steal, tell, use, write

Achievement Verbs (8)

become, buy, finish, get, lose, push, see, win

PERIOD THREE (148)

State Verbs (22)

agree, appear, contain, dare, exist, feel, have, include, know, like, live, look like, locate, mean, need, rest, seem, stand, surround, think, want, wish

Activity Verbs (33)

ask, attack, battle, blow, bother, carry, climb, defend , do, expand, explore, fly, glide, help, howl, keep, laugh, pretend, prison, rain, reckon, reflect, retreat, rise, row, run, sew, show, sing, sit, sleep, smile, study, support, swim, tickle, treat out, travel, visit, wait, watch, whine, work

Accomplishment Verbs (53)

transfer, prove, introduce, bend, bring, burn, call, change, come out, create, creep in, disguise, download, drive home , fart, form, give, glide to, go back to, go to, hand, learn, look up, make, park, place, prepare, pour, read the information, receive, report, rescue, return to, say, search for, send, sink, spend , spoil, swear, sweep, swim to, switch, take, take off, teach, tell, tie up, turn out, untie, use, warm, wrap

Achievement Verbs (40)

arrive, attach, become, begin, break, buy, clatter, decide, defeat, desert, die, enter, escape, explode, fail, find, finish, forget, give up, happen, heard, jump, kill, knock, leave, meet, pay, pick up, pull, release, replace, ring., see , shiver, slay, smash, start, throw, touch, wake up

PERIOD FOUR (220)

State Verbs (29)

grow vegetables, appear, believe, connect, contain, depend on, enjoy, face, feel, fit, grow, hang, have , hold, hope, know, like, look, love, need, occupy, share, sound, stand, stay, suffer, surround, think, want

Activity Verbs (54)

attack, base on, bite, carry, cook, do, drag, drive, eat, echo, fight, force, go, grow, help, laugh, march, mine, move, play, pour, read, reflect, ride, roar, rush, run, sail, say, scream, scare, see, show, shriek, sit, soar, splash, spray, supply, support, swim, talk, taste, test, try, view, visit, wait, warn, watch, wave, wiggle, work, write

Accomplishment Verbs (80)

accelerate, arm, bake potatoes, bend, block, board, broaden, change, charge at, choose, climb, cover, come to, dash into a maze, deafen, depart, describe, design, discover, dress, eat a sausage, enter, export, form, gain, gather, give, go off, grill, grow, hand , head, heat, hug, impress, invest, land, lead to, load, lower, make, manufacture, mix, move to, organize, performed, play Go Karts, pocket, polish, preserve, produce, purchase, raise, reduce, retreat, roast, search for, sell, send, set up stage, shape, sneak, up on her, spend, step, stabilize, stroll into, struggle to a place, suggest, take, teach, tear, tear, tell, tie, turn, undress, unload, use, wrap, zoom

Achievement Verbs (57)

achieve, become, begin, blare, borrow, break, buckle, buy, call, cause, close, cross, defeat, destroy, die, dismiss, drop, duck, fall, find, finish, fire, get, glance, grab, happen, hear, kill, knock, leave, light, meet, notice, occur, open, press, pull, rattle, release, replace, return, ring, shake, shoot, slash, smash, snatch, spit out, stab, start, stick, stop, swing, throw up, touch, wake up, wreck

PERIOD FIVE (233)

State Verbs (20)

agree, appear, believe, belong, crave for, feel, grow, have, know, lie, look, mean, remain, remember, rest, seem, sound, stand, think, want

Activity Verbs (74)

ask, beacon, chase, check, circle around, cling, concentrate, crouch, curve, dash, demand, describe, dreamed of, eat, echo, examine, explore, flame, fly, follow, force, gnaw, go, grip, groan, grumble, hang, hide, hug, hurry, keep , last, laugh, leave, lick, listen, move, mumble, mutter, paint, penetrate, pile, play, point, pretend, race, reflect, roar, roll, rumble, run, sail, scorch, search, shake, shine, shove, show, sit, ski, sleep, squeeze, stand up, stroke, swim, talk, trot, try, wait, waste, watch, work, worm, yell

Accomplishment Verbs (79)

assure, bend, bite, block, bring, build, burn, charge toward, check out, choke, climb up, come, comfort, create, descend, die down, dim to, dive, dodge, escape, fall, fill, fix, form, freeze, frustrate, gather, give away, get out of, get through, get to, give, go back, greet, kiss, land, learn, lift up, look for, make, manage, march to, nail, nudge, pick up, pour down his head, prepare, receive, reheat, remind, rent, retrace, return, rouse, rush down the slop, say, scream, select, sit up, slither through, splint, step into, stick up, stretch, surprise, swear, sweep away, take, take off, tell, terrify, tie, trot back to, turn green, undress, unveil, use, wedge into, wolf down

Achievement Verbs (60)

attract, bark, beat, become, begin, break, bulge out, buy, call, catch up, close, crack, die, dot, excite, exclaim, extinguish, find, flip, get , give up, grab, hammer, happen, hear, jump, kill, knock, land, light, lose, make out, make up one’s mind, nod, notice, open, overcome, puff, pull, ram, reach, realize, reveal, see, seize, settle, snake, shock, shoot, smash, sparkle, start, stop, taste, touch, trap, vanish, wake, whip, win

Sample coded form-to-function data of genres featuring non-past tense

PERIOD ONE

Thankful for my family
(11/15/03, Description)

I will thankful for my family. Because my family is (-S) very when my homework is (-S) very difficult. My mom and dad will help (-ZERO) me. And now my English not is (-S) very good; so my mom and dad teach (ACC)$(-ZERO) me English. My family gave (ACC)(-PAST) me food make (-ZERO) me grow up (ACC)$(-ZERO) and my family make (-ZERO) me clean. So I will thankful my family.

PERIOD THREE

My opinion about dragons
(10/21/04, Argumentation)

Have you ever heard (ach)$(-past) an animal with strong legs and two over the shoulder, have (sta)(-zero) a wing like a bat, with horns on its head, spikes on its back, and breathe fires? IT'S (-s) A DRAGON! Dragons had been told (-past) in fictions over centuries, no matter which place on the Earth. But do they really existed (sta)$(-past) I think (-zero) they did (-past). And here's (-s) a few facts that support (act)$(-zero) me.

First, dragons often appears (STA)$(-S) in fictions, stories, songs, riddle and myth, and the important thing is (-S) that it's be told (-PAST) everywhere no matter it's (-S) West or East.

Second, people in deserted (ACH)$(-PAST) area reported (ACC)$(-PAST) that they always a object gliding (ACT)$(-ING) in the air with the hug, wide, bat-like wings. And the ground often be burned (ACC)$(-PAST) with no reason.

Third, no one can tell (-ZERO) the dragon is (-S) a real thing or imagination like Iron-masked man in Paris.

And once again I think (-ZERO) they do exists (STA)$(-S).

How to make a mini motor
(11/02/04, Explanation)

We will always use (-ZERO) motors in our lie, like the movement of car, planes took (-PAST) off or rockets. But do you know (-ZERO) how to make (-ZERO) a mini motor of your own.? Well, if you don't, then it's (-S) time for you to learn (ACC)(-ZERO). First you need (-ZERO) prepare (-ZERO) some wire with the outer skin. You bend (ACT)$(-ZERO) it into a shape of square, cut (-ZERO) the skin on both end of

the wire. Use (-ZERO) some equipment to bend (ACT)(-ZERO) two paper clips to make (-ZERO) two supports and attach (ACC)$(-ZERO) them on the cupboard. The supporters should be touch (ACH)$(-ZERO) the ends of the wire. Put (-ZERO) the wires on the supporters, then place (ACC)$(-ZERO) a magnet under the wires. And it's (-S) done. Pull (ACH)$(-ZERO) the wire a little bit, then it will go (ACT)(-ZERO) on forever We will always use (ACT)$(-ZERO) motors in our lie, like the movement of car, planes took off (ACH)$(-PAST) or rockets. But do you know (STA)$(-ZERO) how to make a mini motor (ACC)$(-ZERO) of your own.? Well, if you don't, then it's (STA)$(-S) time for you to learn (ACC)$(-ZERO). First you need prepare some wire (ACC)$(-ZERO) with the outer skin. You bend (ACT)$(-ZERO) it into a shape of square, cut (ACH)$(-ZERO) the skin on both end of the wire. Use (STA)(-ZERO) some equipment to bend (ACT)$(-ZERO) two paper clips to make two supports (ACC)(-ZERO) and attach them on the cupboard (ACC)$(-ZERO). The supporters should be touch (ACH)$(-ZERO) the ends of the wire. Put the wires on the supporters, then place (ACC)$(-ZERO) a magnet under the wires. And it's (STA)(-S) done. Pull (ACH)$(-ZERO) the wire a little bit, then it will go (ACT)$(-ZERO) on forever.

PERIOD FOUR

Bow and Arrow

(04/07/05, Explanation)

Today I made (acc)$(-PAST) a bow and a few arrows. It was terrific, when I released (ACH)$(-PAST) the arrow; the arrow soared (ACT)$(-PAST) through the air and stuck (ACH)$(-PAST) on the target which is a tree. The bow and arrow are (STA)$ the most common used (-PAST) weapons in the world. From the giant longbow which could be as long the archer himself, to the smart, destructive crossbow, the basic method is all the same. All kinds of bows are using (-ING) a strong, thin string. The wood is curved (-PAST); the string was bent (ACC)$(-PAST) to the both end of the wood. When pulled (ACH)$(-PAST) the string, you forced (ACT)$(-PAST) the wood to bend (-PAST) farther, when released (ACH)(-PAST) it, the inertia caused (ACH)$(-PAST) the string to pull (ACH)$(-ZERO) the arrow out. If you are interested in making (ACC)$(-ING) your own bow, the paragraphs will teach (ACC)$(-ZERO) you how to make (ACC)$(-ZERO) them.

First you need (STA)$(-ZERO) a bow to shoot (ACC)$(-ZERO) an arrow. to make (ACC)$(-ZERO) a bow, you need (STA)(-ZERO) a strong, but soft stick. I personal suggest (ACC)$(-ZERO) the tree branches at the top, you can bend (-ZERO) them into many shapes and they won't break (-ZERO). then you need (ACC)(-ZERO) a string to tie (ACC)(-ZERO) to the wood. I used (-PAST) a string which came (ACC)(-PAST) off on a tennis racket (don't do (-ZERO) this to your tennis racket unless you have (-ZERO) your parents' permission). It has (-S) great flexibility and it's (-S) as strong as the steel wire. to tie (ACC)(-ZERO) the string to the stick, use (-ZERO) a knife or scissor to cut a groove in the wood at both end. then tie (ACC)(-ZERO) your string tightly inside one of the grooves. after that, put the stick on the floor, step (ACC)$(-ZERO) on it and bend (-ZERO) it with your hand, be careful not to break (-ZERO) it. when it's (-S) shaped (ACC)$(-PAST) like a new moon, tied (ACC)$(-PAST) the string to the other end and test (-ZERO) it by grab (ACH)$(-ZERO) the string and release (ACH)$(-ZERO) it; if it makes (ACC)$(-S) a little buzzing sound, then it's (-S) good enough, if not, it needs (STA)(-S) to be tighter.

After making (ACC)(-ING) the bow, you still need (STA)(-ZERO) an arrow to shot (ACH)$(-PAST) choose (ACC)$(-ZERO) the right stick is very important; if the stick is too heavy it won't go (-ZERO) very far, if it's (-S) too light, it will go (-ZERO) off course. in my case I used (-PAST) a kind of reed, it was straight and light, I cut the bottom part off to make (ACC)(-ZERO) the arrow. after that I used (-PAST) a knife to broaden (-ZERO) any bugle parts, I also cut the tail to a U shape so it will fit (STA)$(-ZERO) into the string. at last I made (ACC)(-PAST) a cut that's (-S) about 10% of the reed and put a feather in it, when I finished (ACH)(-PAST) put the feather in, I xxx a fishing line around the cut tightly to close (-ZERO) it.

When shooting (ACH)$(-ING) the arrow, put the tail of the arrow on the string and pull (ACH)(-ZERO) them with your first, second and third finger, when you let it go, it will zoom (-ZERO) through the air in a perfect straight line.

Why Should Not a Country Rely On Only One Natural Resource?

(05/09/05, Argumentation)

So far, some country gained (ACT)$(-PAST) great fortune from export (ACC)$(-ZERO) their natural resource, produce (ACC)$(-ZERO) machineries and weapons. But should we really put all efforts on one natural resource? From my personal view, I say (ACT)$(-ZERO) no.

Here are some facts that support (ACT)$(-ZERO) my point. First, natural resources can be used up (ACC)$(-PAST) . If a government and its people invested (ACC)$(-PAST) greatly on one major project based (ACT)$(-PAST) on a certain kind of natural resource, then when all the machine are purchased (ACC)$(-PAST) and in place, but the raw material, which is this natural resource got (ACH)(-PAST) used up (ACC)(-PAST) or can’t be supplied (ACC)$(-PAST) by anybody; all the money will be gone (-PAST) and no progress can be made (ACC)(-PAST).

Another situation is (-S) that the price of a resource is (-S) very unstable. When a kind of resource is (-S) on a very high sale price, then everybody wants (STA)$(-S) to mine (ACT)$(-ZERO) it, manufacture (ACC)$(-ZERO) it, so when everybody achieved (ACH)$(-PAST) this goal, that natural resource’s price will drop (ACH)$(-ZERO) low in a short time. For instance, at middle ages; the spices are (-ZERO) as rare as gold. So, many merchants sailed (ACT)$(-PAST) to the distant lands to find (-ZERO) it. After a hundred years or so, the spices are as common as ants, so they were (ACT)$(PAST) sold at very low price.

The last one is (-S) that some natural resources depend (STA)$(-ZERO) on weather, like the growth of bananas, coffee beans and other outdoor fruits. Since Caribbean Seas’ weather is (-S) tropical, many plantations grow (ACC)$(-ZERO) coffee beans, bananas, pineapples and others. On the other point of view, Caribbean is (-S) a place where hurricanes and typhoons occur (ACH)$(-ZERO) every year. If a terrible hurricane destroyed (-PAST) all the crops, the islanders will suffer (STA)$(-ZERO) the shortages on food, money and other necessary needs.

The writing above is (-ZERO) only a briefing of many reasons why a country should not depend on (STA)(-ZERO) only one natural resource; I hope (-ZERO) this can change (ACC) the destinies of many people and country.

Aaron 1
(11/10/05 Description)

We have (STA)(-ZERO) an unique or weird person in our classes and that's (-S) Aaron.

We all make (ACH)(-ZERO) fun of her, I mean (-ZERO) him (I am (-AM) used to the word 'her' when I describe (ACC)$(-ZERO) him). He has (STA)$(-S) a really high voice, he sounds (STA)$(-S) like a five-year old girl when he talks (ACT)$(-S). He also talk (ACC)$(-ZERO) slow, there's (-S) about a 5 second interval between each word.

Like Jane, he laughs (ACT)$(-S) a lot, too. But when he laughs (ACT)(-S), the sound come (ACC)(-ZERO) out in a thrilling high pitch and he wouldn't stop (-ZERO) once he started (ACH)$(-PAST), and that makes (ACH)(-ZERO) us laugh (ACT)$(-ZERO), too.

Despite his minor abnormal, he is (-S) still a good friend (and clown) of us!

[1] For the sake of privacy, I didn't use the real names of the persons that he described.