

Journal of the National Council of Less Commonly Taught Languages

Volume 27



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601 S Woodcrest Dr, Bloomington, IN 47401.

Subscription Rates:

1 Year	Individual	U.S. \$60
1 Year	Institutional	U.S. \$200

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National Council of Less Commonly Taught Languages (NCOLCTL)

NCOLCTL is an organization dedicated to the teaching and learning of Less Commonly Taught Languages. Membership is open to individuals and organizations that share this interest.

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-

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Editor's Introduction

Danko Šipka
Arizona State University

The spring 2020 issue features eight papers and one review article, representing various topics of interest to the entire NCOLCTL community and various languages in the field, and it comes in two volumes. In this volume, the first two papers *Life after Language Immersion: Two Very Different Stories*, and *Connecting Language Learning in the Classroom with the Local Community: Using Field Performance Tasks in Chinese Study Abroad Contexts* discuss immersion and study abroad, programs that augment our regular classroom activities. The next paper, titled *Temporal Sequencing and Narration in Learner Language: The Case of an Intensive Mandarin Chinese Program*, discusses the issue of narration, one of the key problems in presentative speaking and writing. Testing practices are front and center in *An Analysis of Testing Practices in College Korean Language Classrooms*. This volume concludes with a particularly interesting review article, entitled *Cultural Representations in Foreign Language Textbooks: A Call for Change*.

Temporal Sequencing and Narration in Learner Language: The Case of an Intensive Mandarin Chinese Program

Cheng-Fu Chen
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Abstract

This paper investigates temporal sequencing and narration in learner language. The primary purposes of the study are to examine the temporal elements of different categories that students use, to characterize the distribution of these elements, and to compare the uses of temporal elements among students in a Chinese classroom. Building on the two-component theory of Smith (1997), and the meaning-oriented approach of Bardovi-Harlig (2000), this paper presents the results of a series of cross-semester observations in an intensive Mandarin Chinese language program, and shows that students rely on temporal expressions, morphological aspects, and contextual information to convey different types of eventualities in the progression of narration. The temporal schema presented can be helpful for teachers, and the research results have implications regarding language learning and teaching for both intensive language programs and classroom environments tailored for a critical or less commonly taught language, such as Arabic.

Keywords: narration, temporal sequencing, tense, aspect, intensive program, Mandarin Chinese

Introduction

Among the theories propounded for the nature of foreign or second language teaching, there are ones that focus on imitation or transferring of features from the first language (L1) to the second language (L2), or ones that emphasize a constant comparison of L1 and L2. Both have been argued to be inadequate as an account for L2 learning (cf. Chomsky, 1959; Ellis, 1994; Ellis, 2005; Ellis, 2015; Skinner, 1957). It has also been argued that L2 learners go through a series of transitional stages with a developmental sequence during the development of language (Andersen, 1991). Furthermore, various studies have argued that the emergence of errors can amount to positive evidence of the development of a linguistic faculty of learners (Ellis, 2005; Lightbown and Spada, 2006).

Regarding temporal morphology, studies have shown that development of tense-aspect morphology is affected by the inherent aspect of the verbs in sentences (e.g., Shirai and Andersen, 1995). The inherent aspect can dictate the temporal composition of a situation. For English-speaking students who learn Mandarin Chinese as a second language, one obstacle they frequently encounter while learning concerns the interpretation of time. Since Chinese verbs do not have overt tense marking, sentences provide no obvious linguistic clues as to whether a situation in discussion occurs in the past, the present, or the future (cf. Li and Thompson, 1989; Lin, 2003; Lin 2006). How temporality can be conveyed, interpreted, and assessed in L2 narration is an issue a teacher may encounter in a Chinese learning environment.

This paper investigates temporal sequencing and narration in learner language by presenting a case study about an intensive Mandarin Chinese language program at the Defense Language Institute (DLI), in Monterey, California. Instead of comparing linguistic features of L1 (English) and L2 (Mandarin Chinese), the research examines individual variations and focuses on uses of temporal expressions and aspectual markers in learner language. The obtained data indicates that the development of students' linguistic competence involves at least two properties. First, students transfer linguistic features from L1 to L2 only occasionally. While there are no equivalents of tense in Chinese, there is no rule for the students to apply directly during the learning process. Instead, students rely on various elements such as temporal expressions, morphological aspects, and contextual information, to convey different types of eventualities in the progression of narration. Second, L2 aspectual expressions compensate for the functions which would have been expressed by tenses in L1. Thus, aspectual expressions, which are taken to be morphological means in this study, are used to either specify the durative and dynamic/static property encoded in a sentence, or to indicate whether an event is completed and has a final endpoint (ref. Smith, 1997). A temporal or aspectual expression is an essential indicator of the way a student presents the temporal nature of a situation in a narrative. To be noted in later sections, the findings in this research support other studies related to the acquisition of Mandarin Chinese aspectual markers, such as Liu (2012), Tong and Shrai (2016), and Wen (1997).

This study aims to examine the types of temporal elements students produced, to characterize their distributions in narratives, and to compare individual variations. This is the main research question that guides this study: do individual students show a preference between morphological means or lexical means, and if there is indeed a pattern, can it be generalized to other critical languages, such as Arabic, Japanese, or Swahili? This is one type of research a language teacher could conduct in a small classroom setting. The results could serve to assess learning performance and inform teaching.

The paper is organized as follows: Section 2 discusses the theoretical approaches and assumptions on which this study is based. Section 3 gives an overview about the methodology and participants. Section 4 and 5 discuss data collections, and provide the analyses and results. Section 6 discusses some implications and provides the conclusions.

1. Theoretical approaches and assumptions

The present study builds on the two-component theory of aspect advanced by Smith (1997) (Also see Comrie, 1976; and Andersen and Shirai 1994 for the aspect hypothesis). According to Smith (1997), linguistic aspects are categorized into two kinds, viewpoint aspect and situation type. On one hand, viewpoint aspect involves the way in which an eventuality is presented through grammatical devices. Viewpoint aspect encompasses grammatical aspectual markers, such as the progressive, perfective, and perfect. On the other hand, situation type is the overall interpretation of the type of eventuality conveyed by the predicate-argument pair or the whole sentence construction. Situation type involves notions

such as state, activity, accomplishment, achievement, and semelfactive (Also see Bach, 1986; Dowty, 1979; Vendler, 1957).

This study also builds on the meaning-oriented approach of Bardovi-Harlig (2000) (Also see Stromqvist and Verhoeven, 2004). According to Bardovi-Harlig (2000), “A basic tenet of the [meaning-oriented] approach is that adult learners of second or foreign languages have access to the full range of semantic concepts from their previous linguistic and cognitive experience.” (p.22) Also, “progression of language acquisition corresponds to the use of (i) discourse principles such as chronological order and scaffolding, (ii) lexical meaning such as adverbials and connectives, and (iii) verbal morphology.” (p.25)

The meaning-oriented approach specifies three linguistic means used in learner language, and they are as follows: pragmatic means, lexical means, and morphological means. When a student uses pragmatic means to express a certain temporal relation, one sees scaffolding, chronological order, or implicit ordering in the narratives. Lexical means involve the use of temporal expressions in temporal sequencing, while morphological means involve the use of grammatical morphology in identifying temporal relations.

In this study, temporal elements are used to refer to either viewpoint aspect or lexical items. Regarding the types of temporal elements, this study specifically looks for the use of lexical means and grammatical means in the learner language. On one hand, lexical means are realized as lexical or phrasal elements in Mandarin Chinese; adverbials and sentence connectives belong to this category. On the other hand,

morphological means encompass grammatical aspectual markers, such as *zai* (在), *zhe* (著/着), *le* (了), and *guo* (過/过) (Also see Chao, 1948; Li and Thompson, 1989; Wu 2003 for the uses and functions of these aspectual markers.)

One assumption about the morphosyntax of Mandarin Chinese is that verbs are not overtly marked for tense, and so lexical items and grammatical aspects would take over the functions of expressing temporal relations that would have been otherwise indicated by tense in a tense language. Also, given that the meanings of grammatical aspects are semantically confined to the aspectual domain, it is hypothesized that lexical items would be used more frequently in students' narratives.

As will be shown, the research has obtained results which are in line with Wen (1997), a study about the acquisition of Chinese aspectual markers by university-level English-speaking learners.

2. Methodology and Participants

This research is based on written and spoken narratives collected through text elicitations, spontaneous writing assignments, and story retell tasks. For text elicitations, three types of texts were collected: English-to-Chinese translation (written), elicited narrative (written), and personal narrative (written). Students were given a written English prompt for the translation tasks; students were asked to mention key elements when they provided and completed elicited narratives; and for personal narratives, students talked about their past experiences. These tasks were designed for students who had low or intermediate proficiency. The initial texts used to

evaluate students' production were based on the thirteen temporal relationships discussed in Allen (1984). Errors were annotated and considered.

Retell tasks were given to students when they achieved a higher level of proficiency. For retell tasks (spoken), students were asked to watch clips from the silent movie "Modern Times" (Chaplin, 1936) and describe what they saw. Spoken narratives were recorded using a computer or a voice recorder. The sound files were then transcribed and annotated. Key words such as aspectual morphemes and temporal expressions were marked to indicate where they occurred in the narratives.

The program was about 63 weeks long. Based on the types and amounts of temporal expressions introduced in the curriculum, the program was divided into two stages: Stage I started from Week 1 and concluded in Week 28; Stage II started from Week 29 and continued through Week 63.

The research had ten participants, who were students from the same class of an intensive Mandarin Chinese program at DLI. The participants were university-level students who had various language backgrounds. Although some of them had previous exposures to other Asian languages, all of them studied Mandarin Chinese formally for the first time. As will become clear, not all students participated in all the tasks. During Stage I, data were collected from ten students, in the 21st, 26th, and 27th week; during Stage II, data were obtained from only seven students, in the 48th week. Due to its small size and the variance implicated by numbers in task completion and participation, results obtained in this research have limitations and should be taken to be working hypotheses.

Data collections and results obtained in the two stages are discussed respectively in the following sections.

3. Data Collection and Results: Stage I (Week 1 to Week 28)

Most grammatical aspects were introduced during Stage 1, and they were instructed at different times. In the textbook, 了 is defined as a perfect aspect, which occurs after a verb and indicates completion of an action (L8; Week 6); 過/过 *guo* is described as a particle, which appears after a verb and indicates past experience (L10; Week 7); 著/着 *zhe* is a continuous aspect marker (L16; Week 11); and 在 *zai* means ‘in progress of’ (L29; Week 22). The two types of 了 *le* are defined as follows: (i) the aspectual *le* (instructed as a ‘perfect’ marker, and (ii) the sentence-final *le* (instructed as a ‘modal’). They are called 了 *le* (post-verbal) and 了 *le* (sentence-final) in the analysis.

3.1. Lexical expressions: Week 5

Starting from the 5th week, students learned various temporal elements, in addition to grammatical aspectual markers. For example, Lesson 7 provided an array of temporal expressions for students to learn. The instructed temporal elements included (i) inchoative verbs (e.g., 開始/开始 *kaishi*), (ii) connectives (e.g., 先 *xian*, 以後/以后 *yihou*), (iii) deictic temporal expressions (e.g., 現在/现在 *xianzai*, 早上 *zaoshang*), (iv) temporal interrogatives (e.g., 幾分鐘/几分钟 *ji fenzhong*), and (v) temporals with universal quantification (e.g., 每日 *meiri*, 每夜 *meiye*).¹

¹ See Table 9 in the appendix for more detail.

The temporal elements are given pronunciation in pinyin, provided with Chinese characters and English definitions. Some lexical items have common formational roots but are treated as distinctive lexical items. For example, 然後/然后 *ranhou* is listed with 後/后 *hou*, while 從前/从前 *congqian*, 前 *qian*, and 以前 *yiqian* are included along with each other. Furthermore, some roots are instructed not as individual elements, but as parts of the resulting lexical items, such as 現/现 *xian*, 以 *yi*, 每 *mei*, 然 *ran*, and 從/从 *cong*. Students were expected to learn these terms based on the composite meanings and functions in a sentence.

Note that in this intensive program, students had six class sessions per day, five days a week. Another thing worthy of mentioning is that students started to learn expressions which describe temporal precedence and succession in Week 5. These words are essential in describing temporal sequences in narratives.

3.2. Temporal expressions: Week 6 & 7

Starting from Lesson 8 (Week 6 and onward), students learned more temporal adverbials and temporal demonstratives. Temporal universal quantifiers, along with existential temporal quantifiers such as 有的時候/有的时候 *youde shibou*, were instructed. The composition of the temporal elements also started to show analytic and compositional characteristics of the lexical items being instructed. For example, 左右 *zuoyou* consists of two positional words, and while the denotation of the overall word has a locational connotation, students had the opportunity to infer how spatial location could be related to temporal location. The combination of demonstratives and

temporal roots also gives students information about how temporal demonstratives are formed in Chinese. Examples like 那時 / 那时 *nashi*, 那天 *natian* indicate the use of a demonstrative and a nominal root, while 那一時間 / 那一时间 *na yi shijian* and 那些時候 / 那些时候 *naxie shihou* exemplify the combination of a demonstrative, a nominal root, and a numeral or a quantifier. Another important aspect about the temporal elements at this stage is the instruction of frequency adverbs such as 常常 *changchang* and 總是 / 总是 *zongshi*, which students could use to convey habituality or describe an on-going eventuality.²

3.3. Temporal expressions: Week 9 through Week 26

We have seen that from Week 1 to Week 8 an essential set of temporal elements which express various temporal identifications or sequential relations were introduced. Likewise, there were not many temporal elements introduced from Week 9 through Week 26. Even so, there were crucial temporal elements which students needed to learn in order to express a temporal sequence in a complicated way. Among them, 還沒 / 还没 *haimei*, which can be used to background an eventuality, was introduced in L13 (Week 9); 再 *zai* can be used to describe the iteration of an eventuality, as mentioned in L14 (Week 10); ...的時候 / ...的时候 *de shihou* (L15; Week 10) and 中間 / 中间 *zhongjian* (L16; Week 11) can be used to background a temporal point or an eventuality in narrative. Some temporal adverbials which express imminence or

² See Table 10 in the appendix for more detail

frequency were instructed during this stage; they can be used to embed one eventuality in another.³

Note that some temporal elements were not explicitly instructed but were included in the texts or in activities. Some examples are: *...ge zhongtou* (...個鐘頭/...个钟头) ‘for... hours’; *houlai* (後來/后来) ‘afterwards’; *bua* (花) ‘spend’; *yitian* (一天) ‘a whole day’.

3.4. Text elicitation and analysis

For Stage 1, students were assessed with written elicitation tasks, and writing samples were collected in Week 21, 26, and 27. The data consist of 22 written past narratives from 10 students. Discourse types ranged from English-to-Chinese translation and elicited narrative, to spontaneous personal narrative (For an elicitation task designed with structured planning conditions, see Ellis and Yuan, 2004). The two impersonal narratives are themed, in order to gain comparable results both in vocabulary and grammar. The collected texts are summarized in Table 1.

³ See Table 11 in the appendix for more detail.

Table 1 Elicited text types: Stage I

Learner	Elicited texts	Discourse type
PTC	(1) A night (I) (2) An Imaginary Chinese New Year (3) Work as a research assistant	(1) English-to-Chinese Translation (2) Elicited narrative (3) Personal narrative
MJT	(1) A night (I) (2) An Imaginary Chinese New Year (3) Work at a fast food restaurant	(1) English-to-Chinese Translation (2) Elicited narrative (3) Personal narrative
WM	(1) A night (I) (2) An Imaginary Chinese New Year (3) Work at a bowling alley	(1) English-to-Chinese Translation (2) Elicited narrative (3) Personal narrative
DKL	(1) A night (I) (2) An Imaginary Chinese New Year	(1) English-to-Chinese Translation (2) Elicited narrative

	(3) Work in Peru	(3) Personal narrative
MKL	(1) Work in restaurants (2) A night (II)	(1) Personal narrative (2) English-to-Chinese Translation
WP	(1) A night (I) (2) An Imaginary Chinese New Year (3) Work at a law firm	(1) English-to-Chinese Translation (2) Elicited narrative (3) Personal narrative
GB	A night (I)	English-to-Chinese Translation
SLD	A night (I)	English-to-Chinese Translation
GR	A night (II)	English-to-Chinese Translation
WLF	(1) A night (II) (2) An Imaginary Chinese New Year	(1) English-to-Chinese Translation (2) Elicited narrative

For the translation task, the following unannotated text, titled ‘A Night’, was given as the prompt.

“It was 10pm. The frog hadn’t gone to bed. He was making a meal for himself and his friend. A few minutes earlier, they were singing and dancing. They had also talked for two hours. It was fun.”

The text contains a series of eventualities, including types of situations such as state, activity, achievement, and accomplishment. To complete the task, students needed to demonstrate how to establish reference times, how to place eventualities in either the background or foreground, and how to put them in a sequence if they are temporally related. When annotated, the text contains three indicators: reference times, temporal relations, and morphological cues, as shown below.

“It was 10pm^{RT1}. The frog hadn’t gone to bed^{C1}. He was making a meal for himself and his friend^{C2}. A few minutes earlier^{RT2}, they were singing and dancing^{C3}. They had also talked for 2 hours^{C4}. It was fun^{C5}.”

As is clear in the annotated version, each sentence in the prompt contains at least one piece of temporal information which needs to be specified in the target language, which can be a temporal reference point or a temporal relation. In the schema of temporal structure (Table 2), reference times are presented as RTs, with each numeral specifying a temporal reference point. The temporal relation between two RTs is either precedence ($>$), inclusion (\subset), succession ($<$), or overlap (\circ) (For more discussions about temporal references and relations, see Asher, 1993; Hinrichs 1986; Kamp and Reyle, 1993, among others). Clauses (abbreviated as Cs) can also

provide their event times, which can be compared with an RT. In this specific task, two morphological cues are incorporated, which are the perfect and the progressive. The perfect is unique in conveying an anterior eventuality with regards to an RT.

Table 2 Temporal schema (*A Night*)

Reference points	Temporal relations	Morphological cues
<ul style="list-style-type: none"> ● RT_0, RT_0: unspecified times (contextually established reference times) ● RT_1: “<i>It was 10pm</i>” ● RT_2: “<i>A few minutes earlier</i>” 	<ul style="list-style-type: none"> ● $RT_1 > \text{now}$ ● $RT_1 \subset RT_0$ (RT_1 is included in RT_0) ● $RT_2 < RT_1$ (RT_2 is later than RT_1) ● C_1 vs. RT_1 ● $C_2 \circ RT_1$ ● $C_3 \circ RT_2$ ● C_4 vs. RT_0 ● $C_5 \circ RT_1$ 	<ul style="list-style-type: none"> ● Perfect <ol style="list-style-type: none"> 1. “<i>The frog hadn’t gone to bed.</i>” 2. “<i>They had also talked for two hours.</i>” ● Progressive <ol style="list-style-type: none"> 1. “<i>He was making a meal [...]</i>” 2. “<i>[...] they were singing and dancing.</i>”

For the writing samples, post-task annotation was done according to the temporal schema. As exemplified by the following four samples in Table 3, all students managed to provide the two RTs using a combination of temporal elements they have learned. Some students were able to indicate the perfect with *hai* (還/还), and the perfective with *le* (了) with a time interval. Note that the samples are presented in their original form, which may contain errors.

Table 3 Text samples I (Stage 1)

Student	Text sample
MJT	晚上十点的时候 _{RT1} , 青蛙还 _{Perfect} 没上床 _{C1} 。[他给他和他的朋友做饭了 _{Perfective}] _{C2} 。 几 _{fen zhong} 以前 _{RT2} , 他们唱歌和跳舞 _{C3} 。他们也说两个小时(话) _{C4} 。很有 yisi _{C5} 。
DKL	现在十点 _{RT1} , qingwa hai _{Perfect} 没上床 shui jiao _{C1} 。他 wei 他和朋友做饭 _{C2} 。几个 feng 以前 _{RT2} 他们唱歌和跳舞 _{C3} 。他们 yijing 说话说两个 zhongtou _{C4} 。 Henyouyise _{C5} 。
WM	晚上十点的时候 _{RT1} 青蛙还 _{Perfect} 没去睡觉 _{C1} 。他为自己和他的朋友做饭 _{C2} 。几分钟一前 _{RT2} 他们唱歌跳舞 _{C3} 。他们也说了 _{Perfective} 两个钟头 _{C4} 。很好 war _{C5} 。
SLD	晚上十点的时候 _{RT1} , 这青蛙没有上床 _{C1} 。他对自己和朋友 zuo fan _{C2} 。 Ji fen zhong yi qian _{RT2} tamen ge wu _{C3} . Ta hai liaotian le liang ge zhong tou le _{C4} . Hen you yi ci _{C5} .

In another writing task, a personal description was added to the text to extend the narrative and provide further descriptions about the character in discussion. As annotated in Table 4, the three students all provided identifiable RTs, with the third one providing an additional RT (RT3) to refer to RT1, in which case $RT1 = RT3$.

Table 4 Text samples II (Stage 1)

Student	Text sample
MKL	是晚上十点 _{RT1} 。那个高，看起来 dagai 四十岁的人，还 _{Perfect} 没去床。那时候 _{RT1} 他为朋友和自己做饭。几个 fenzhong 前 _{RT2} ，他们 chengge (唱歌) 和 tiao wu (跳舞)。他们也 tan 一 tan 两个 zhong tou。那个晚上很有意思。
GR	那时晚上十点钟了 _{RT1} ，那看来四十几 sui，个子高的男人还 _{Perfect} 没上床 shuijiao。那时候 _{RT1} 他为自己和朋友在做饭。几分钟以前 _{RT2} ，他在 _{Progressive} 唱歌，在 _{Progressive} 跳舞呢。他们也 liao 两个小时的天了 _{Perfective} 。这真是一个很有 yi se 的晚上。
WLF	晚上十点钟 _{RT1} ，那个显得四十几 sui，个子高的男性还 _{Perfect} 没上床睡觉。他在给朋友跟自己做饭。临几分钟前 _{RT2} ，他们是唱歌，跳舞的。他们以前还谈两个小时的话。那个晚上 _{RT3} ，很有意思。

In a personal narrative, students encountered challenges alluded to in the translation tasks. They would have to provide traceable or context-inferable RTs to maintain a coherent narrative. In the text sample by PTC shown in Table 5, about seven RTs were provided. While only temporal precedence and temporal overlap were expressed, temporal succession was not supplied, but implied by temporal references (RT₃, RT₅, and RT₆). Except for RTs, the students used about ten lexical means and no morphological means to describe the temporal sequence. As the temporal sequencing patterns show, there are at least four types of patterns utilized in this narrative.

Table 5 Temporal schema (PTC)

PTC	Text sample
	大学毕业后 ^{RT1} ，我在一家[...]大学 laboratory 当 research assistant。每天我先喝咖啡和在网上班 ^{RT2} 。早上 9:30 左右我们的老 ban 上班 ^{RT3} 。然后 ^{RT4} ，我们才开是工作。每天的活动比较单调，不有意思。因为我们每日每夜做一样的 experiments，但很少找有意思的结果。午饭后 ^{RT5} 比较不忙因为我们花早上的时间准备一天的 experiments。下午 ^{RT6} 我们常花时间等等 equipment 给我们 experiment 的 jie 果。那些时候 ^{RT7} 我常常给我朋友打电话谈谈...
Analysis	<ul style="list-style-type: none">• Temporal sequencing:<ul style="list-style-type: none">a) $RT_1 > RT_2$: RT_1 precedes RT_2.b) $RT_2 \circ RT_3 > RT_4$: RT_2 overlaps RT_3, which precedes RT_4c) $RT_5 \circ RT_6$: RT_5 and RT_6 overlapd) $RT_6 \circ RT_7$: RT_6 and RT_7 overlap• Temporal sequencing means:<ul style="list-style-type: none">a) Lexical means: 10b) Morphological means: 0

In another student's (WP) text sample as shown in Table 6, temporal sequencing was achieved with a very different approach. About nine RTs, nine lexical means, and three morphological means were identified in the narrative. WP established two separate RTs to co-refer, and used temporal precedence, succession, and overlap to express temporal sequencing. Although WP's narrative contained some incoherence in word choice and temporal referencing, the temporal structure was considerably more complicated than PTC's. As the temporal sequencing means indicate, both lexical and morphological means were utilized in this narrative.

Table 6 Temporal schema (WP)

WP	Text sample
	<p>我第一個工作的地方是在律師所的^{RT1}。那時候^{RT2}我是中學的學生，差不多 14 歲；跟我的朋友聊天的時^{RT3}，他告訴我他在個律師所工作。原來我爸爸很多年前^{RT4}是在本律師所當同師的。學了這些情況以後^{RT5}我讓他帶我看我爸前的同師們。我們馬上就坐公共氣車到成心去律師所^{RT6}，就到了的時^{RT7}我從來 6－7 個年後^{RT8}再看見我爸爸的老朋友們。那時^{RT9}很快樂的團聚。...，後來^{RT10}我在那里開始工作了。</p>
Analysis	<ul style="list-style-type: none"> • Temporal sequencing: <ol style="list-style-type: none"> a) $RT_1 = RT_2$: RT_1 is RT_2 b) $RT_3 < RT_4$: RT_3 is after RT_4 c) $RT_5 > RT_6 > RT_7 > RT_8$ d) $RT_9 \circ RT_{10}$: RT_9 and RT_{10} overlap • Temporal sequencing means: <ol style="list-style-type: none"> a) Lexical means: 9 b) Morphological means: 3

Transfer of first language features greatly entails the emergence of interlanguage (Selinker 1972). While transfer of L1 features into L2 can result in errors, it also shows the creativity on the part of students, and this is especially observable in students' narratives at Stage 1. While not all errors were fossilized and not all accurate forms were fully acquired, errors or mistakes were indeed structured and rule-based. Examples in Table 7 show some non-existent or unconventional Chinese lexical items students created based on their English counterparts. For example, to say 'at that time' in a narrative, a proper way would be to say *na shihou* (那時候 / 那时候) or *nage shihou* (那個時候 / 那个时候). The created form *na yi shijian* (lit. that one time) is not an accurate lexical item but was constructed based on the formation of a noun phrase in Mandarin Chinese, with a demonstrative, a numeral, and then the nominal stem or root.

Table 7 Nonexistent created forms

Temporal elements	Chinese	Intended English counterpart	Speaker
<i>na yi Shijian</i>	那一時間	at that time	
<i>hua zǎoshang de Shijian</i>	花早上的時間	spent the morning	PTC:PWE
<i>natian de shibou</i>	那天的時候	on that day	MJT:PWE
<i>nage tian</i>	那個天	that day	DKL:PWE
<i>Yitian</i>	一天	one day	WM:PWE
<i>yitian gen pengyou tantan</i>	一天跟朋友談 談	talked to friends all day	WM:PWE
<i>diyige yue zhongjian</i>	第一個月中間	in the first month	DKL:PWE

3.5. Interim summary

Based on the results obtained during Stage 1, students were able to construct short, temporally connected sentences using both lexical and morphological means. Lexical items were used specifically to establish temporal references. Students showed variations in expressing the three temporal relations: precedence, succession, and overlap. This indicates that by the end of Stage I students had achieved an intermediate level of proficiency against the benchmarks set forth in the NCSSFL-ACTFL Can-Do Statements by the American Council on the Teaching of Foreign Languages (ACTFL, 2017). Although they showed noticeable mistakes, students were able to present activities or events using a series of connected sentences across various time frames.

The next section discusses data collection and results obtained during Stage II and provides analyses for the data gathered from story retell tasks.

4. Data Collection and Results: Stage II (Week 48)

During Stage II, data were collected based on story retell tasks. Students had shown a decent expansion of vocabulary and had made advancements in sentence and paragraph construction by the time they were asked to complete the tasks.

Students were shown an excerpt, titled “Alone and Hungry”, from the silent film *Modern Times* by Charlie Chaplin (See Bardovi-Harlig (2000) for more detail about the design and execution of this task). The story involved two protagonists, played by Charlie Chaplin and Paulette Goddard.

In the clip, their actions were carried out as sequences of events against the backdrop of the Great Depression. Students were asked to view the movie clip once and retell the story afterwards. The narratives were recorded, transcribed, and annotated. Instead of examining all reference times and all possible temporal sequences (temporal precedence, succession, overlap, inclusion, etc.), the study focused on the strategy a student chose in their narratives, and examined if lexical means or morphological means emerged as a preferred way to achieve temporal sequencing in the learner language.⁴

The results obtained from seven students are summarized in Table 8, which shows that students varied in how they implemented lexical means or morphological means in their narratives. The length of story retold indicates the total time of a student's oral narrative. The relative weight of lexical means and morphological means is simply indicated as 'more' or 'less', if these two categories have different tokens. The sum of temporal items used shows the total number of both lexical means and morphological means in a student's retold story.

⁴ See Figure 7 in the appendix for a sample of the clustered analysis, in which temporal expressions are categorized and timestamps are noted based on the tokens of each type.

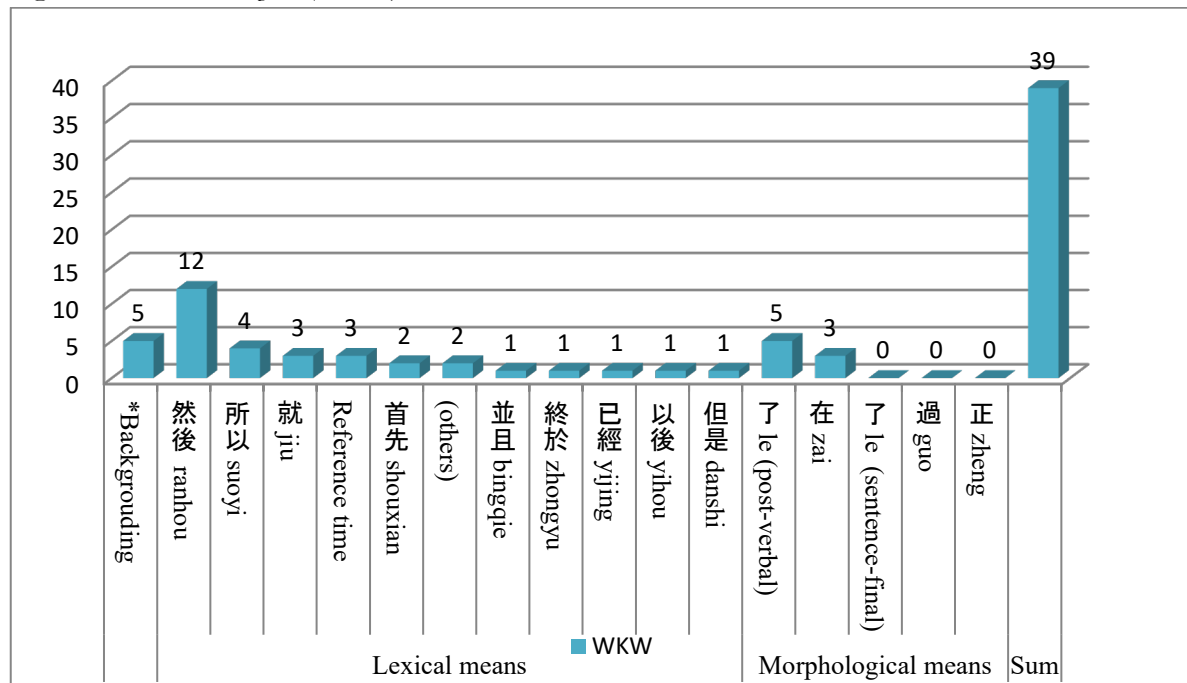
Table 8 Summary of student retell tasks (Alone and Hungry)

Student	Length of story retold (minutes:seconds)	Lexical means	Morphological (grammatical) means	Sum of temporal items used
WKW	9:20	more	less	44
WM	11:42	more	less	43
ZJF	11:55	more	less	94
MKL	11:25	more	less	43
JXZ	11:41	more	less	42
GB	10:03	less	more	34
PTC	10:34	less	more	36

4.1. Lexical means versus morphological means

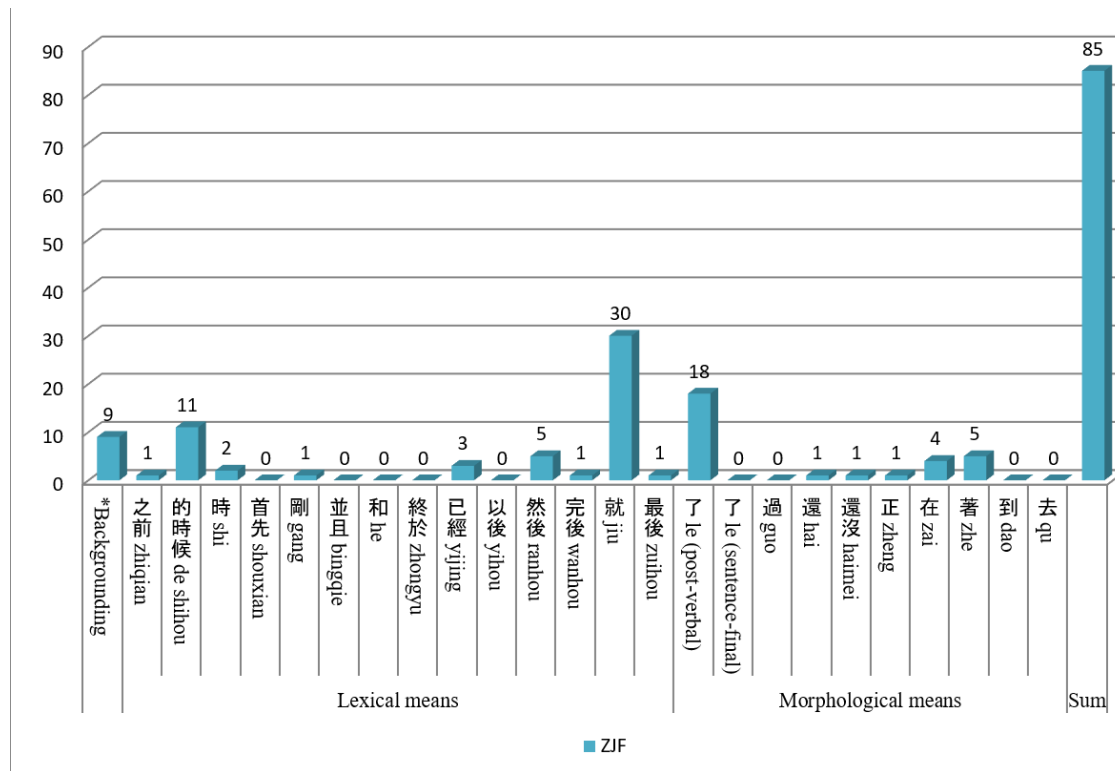
Five out of the seven students implemented more lexical means than morphological means. For example, in the narrative of WKW, summarized in Figure 1, there are five instances of backgrounding, where sentences are used to establish the context or background against which other temporal information is interpreted. As the chart below shows, WKW used *ranhou* (然後/然后) 12 times, *suoyi* (所以) four times. The temporal connective *jiu* (就) was used three times, and there were three RTs. Temporal or transitional elements such as *bingqie* (並且/并且), *zhuangyu* (終於/终于), *yijing* (已經/已经), *yihou* (以後/以后), and *danshi* (但是) were also used. Other infrequent elements are grouped under the category ‘others’. Besides these lexical items, grammatical aspectual markers were used as morphological means in the narrative. As shown in the chart, there are five instances of the perfective *le* and three instances of the progressive *zai* (在). There was no mentioning of the perfect *guo* (過/过) or the imperfective *zhen* (正) in MKW’s narrative. The sum of both lexical means and morphological means is 39.

Figure 1 Clustered analysis (WKW)



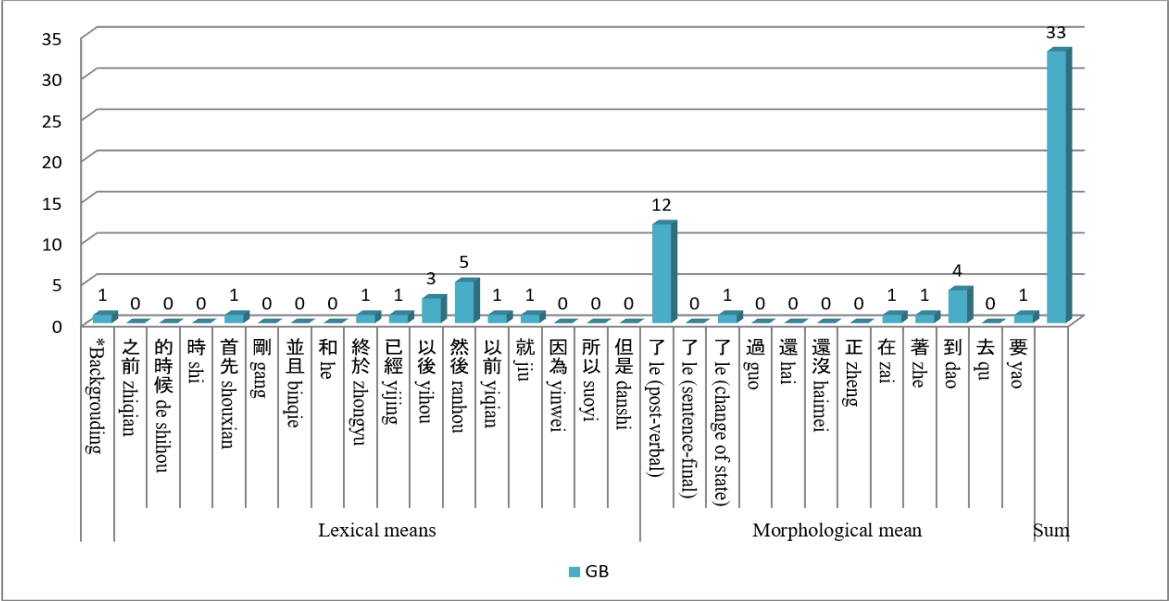
The picture seems rather different in another student's production. In ZJF's retold story, as summarized in Figure 2, there are 85 instances of temporal expressions. This student implemented backgrounding nine times, RTs for 11 times, temporal succession with *ranhou* (然後/然后) for five times, and notable usage of *jiu* (就) for 30 times. There is also a notable use of the post-verbal perfective *le* (了), for 18 times, and the different forms (e.g., *zai* (在), *zhe* (著/着)) to indicate the progressive aspect. When compared to WKW's narrative, ZJF's story gave a significant impression that the story line constantly advanced and moved forward in time. This impression can be attributed to the introduction of RTs with both backgrounding and ...*de shihou* (...的時候/...的时候), coupled with the use of *jiu* (就), which helps move the reference times associated with the eventualities forward. Ultimately, the combination of these means results in a positive impression on the student's fluency and grammar.

Figure 2 Clustered analysis (ZJF)



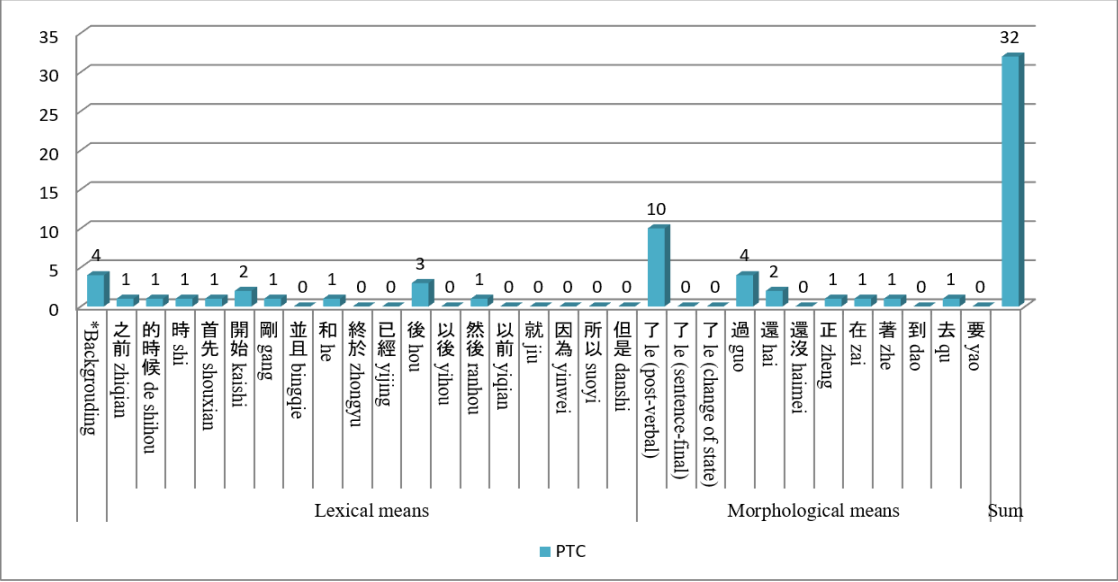
For both students discussed above (WKW and ZJF), they used lexical means more than morphological means. Two other students showed the opposite tendency; in their narratives, more morphological means were found. Consider GB's narrative summarized in Figure 3. It can be seen that fewer lexical items were used, as compared to ZJF. GB used *ranhou* (然後/然后) five times to express temporal succession but only used *jiu* (就) one time. The connective *jiu* (就) contrastively plays a major role in ZJF's narrative to convey temporal succession. The post-verbal perfective *le* (了), however, has an essential role in GB's story, which has 12 instances out of a sum of 33 temporal elements used in the narrative.

Figure 3 Clustered analysis (GB)



Although the next example from another student (PTC) shows a preferred strategy of morphological means, the results show a different picture about the student's word choice. Consider Figure 4. PTC used more morphological means to retell the story but the choice between lexical or morphological means was more equally weighted as compared to GB. As shown in the chart below, PTC varied the ways of establishing RTs and temporal relations more often, and there are more instances of backgrounding. The use of *guo* (過/过) enabled PTC to establish an implicit temporal relation among the eventualities. However, in GB's case, the use of *zhongyu* (終於/终于), *yijing* (已經/已经), *yihou* (以後/以后), and *ranhou* (然後/然后) gives the student a flexibility to tie separate events in a varied and coherent way. Such a flexibility is less obvious in PTC's narrative.

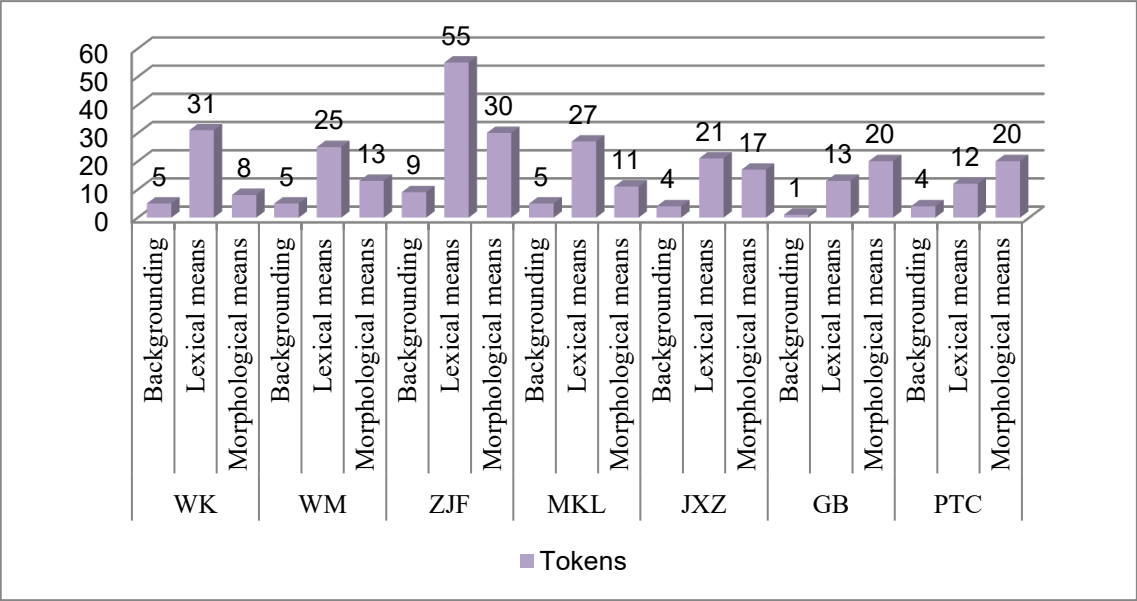
Figure 4 Clustered analysis (PTC)



4.2. Individual Differences

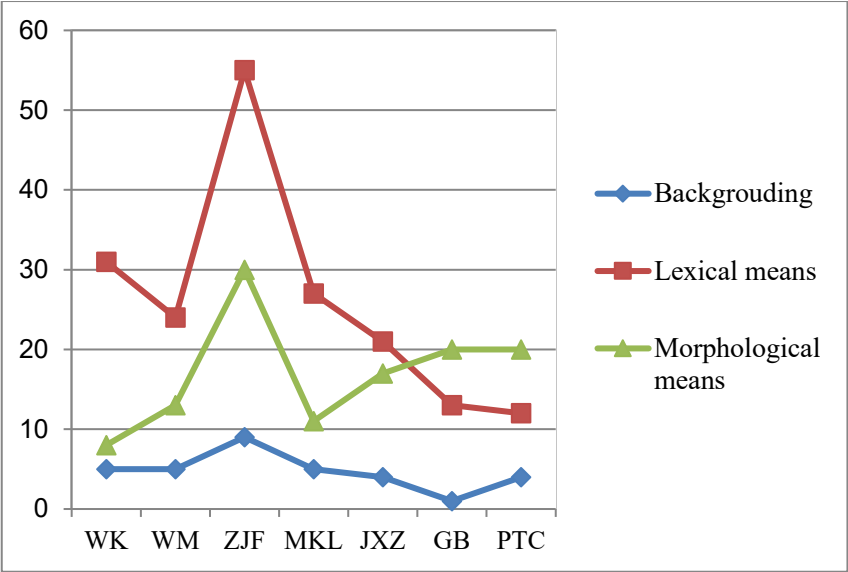
Figure 5 shows the overall tokens recorded in students' story retell tasks. All seven students received the same amount of language instruction (48 weeks) and participated in approximately the same amount of time for language use and practice (reading, writing, speaking, and listening). The results indicate that learners exhibit individual variations in all three domains: backgrounding, lexical means, and morphological means. Backgrounding involves the anchoring of reference times, and lexical and morphological means involve various ways to establish a temporal relation about precedence, succession, or overlap, among the eventualities in a narrative.

Figure 5 Individual variation



Consider Figure 6 shown below. The sum of the three domains indicates that lexical means play a major role in most students’ language production. There are 183 tokens of lexical means (55%) and 119 tokens of morphological means (35%). Lexical means outnumber morphological means for more than half of the students, and each individual had his or her own way of storytelling.

Figure 6 Sum of backgrounding, lexical means, and morphological means



The results obtained at Stage II show that students were able to give a more complex presentation than they were while at Stage I (See Sec. 4.5). Specifically, students could now deliver a more detailed presentation by elaborating and narrating across major time frames. This ability is a

performance indicator of Advanced Low according to the NCSSFL-ACTFL Can-Do Statements (ACTFL, 2017).⁵

At the outset of this paper, it has been assumed that Mandarin Chinese does not have tense and has several morphological means to convey grammatical aspects. It has also been discussed that during Stage I of this intensive program, an array of temporal elements were instructed and taught. It is thus not surprising that lexical means would outnumber morphological means in a student's narrative. Each lexical item is associated with a definite or specific temporal meaning. Once they were acquired, students could use them to specify or anchor a reference point in time. Descriptively speaking, morphological means are comparatively more limited in terms of their morphosyntax (they are bound morphemes attached to other elements in a sentence) and semantics, because they are used to specify the internal temporal structure of an eventuality. In other words, lexical means and morphological means may compete, but they can also complement each other in temporal sequencing. Such a preference among the students can be accounted by Wen (1997), who observes that learners with lower proficiency may rely on time adverbial expressions and lexical aspects more than advanced learners. In a recent study by Tong and Shirai (2016), the authors argue that lexical aspect

⁵ The story retell task focuses on the presentational mode of communication (ACTFL, 2017), and the results have implications on proficiency only as high as Advanced Low (and possibly Level 2 or 2+ according to ILR (1985)) due to the nature of this task. To assess concrete skills, the task can be extended, or changed into the interpersonal mode, to allow students to build on real-life experiences and discuss social or professional topics. I thank one of the reviewers for the suggestions about ACTFL and ILR guidelines.

is closely associated with grammatical aspectual marking for higher-level learners, which indicates that the preference between lexical means and morphological means in the present study can be related to the proficiency level a student has achieved; a student who prefers morphological means may have achieved higher proficiency than the others who prefer lexical means.

While this study leaves it open whether individual variations should be attributed to variance in proficiency, there are other factors to consider. As pointed out by Liu (2012), both the aspect hypothesis and L1 influence have an impact on the production of an aspectual marker in learner language. This study has not discussed the impact from L1. Also, given the intensive nature of the curriculum, how would an intensive program differ from a four-year language curriculum in general? Is ‘pace’ a factor, since each student learns the same language at their own pace? Due to the limited scope of this research, these issues will have to be addressed in a more extensive study.

5. Implications and Conclusions

This study is a general observation about temporal sequencing and narration in learner language concerning an intensive Mandarin Chinese program. It has been shown that pragmatic means, lexical means, and grammatical means are components all students used to construct a narrative. The results have also shown that, in an intensive Chinese language class, lexical means emerge as a prominent device for some English-speaking learners of Chinese with respect to temporal sequencing in narration, and very possibly so for lower proficiency level students. In this case, the learning process of

Chinese temporal expressions is in line with the meaning-oriented approach (Bardovi-Harlig, 2000).

The study has implications on the teaching of temporal elements for other critical or less commonly taught languages. Consider the cross-linguistic comparison in Table 9. English, Arabic, and Mandarin Chinese all have markers (morphological means) which are usually associated with certain temporal contexts (past, present, or future). As compared to English, however, both Arabic and Chinese use morphological means to specify aspect. For example, the perfective aspect in Chinese is used for bounded events; although it is usually associated with a past event, it can be used in the present or future. In this respect, Arabic is similar to Chinese, in that its tenses can be used to convey aspect and not necessarily the temporal location of an event.

Table 9 A cross-linguistic comparison of tense/aspect morphology in English, Arabic, and Mandarin Chinese

	Past	Present	Future	Primary function
English	past tense (e.g., <i>-ed</i> in <i>walked</i> as a suffix; irregular verb form <i>wrote</i>)	present tense (e.g., <i>-s</i> in <i>writes</i> as a suffix)	expressed by a modal plus the present form (e.g., <i>will write</i>)	tense
Arabic ⁶	past tense (e.g., <i>katab</i> ‘wrote’)	present tense (e.g., <i>ktub</i> ‘write’)	expressed by <i>sa-</i> as a prefix plus the present form	tense and aspect
Mandarin	perfective aspect	imperfective aspect	expressed by a	aspect

⁶ The terminology for Arabic is based on Ryding (2005). The combination about the future is given by Allen Clark (p.c.). In recent studies such as Aoun et al. (2009) and Soltan (2011), Arabic verbal forms are considered to express aspect (imperfective vs. perfective), and not just tense.

Chinese	(e.g., 了 <i>le</i> in 写了 <i>xie le</i> as a suffix); experiential aspect (e.g., 过 <i>guo</i> in 写过 <i>xie guo</i> as a suffix)	(e.g., 在 <i>zai</i> in 在 写 <i>zai xie</i> as a prefix)	modal plus a verb (e.g., 将写 <i>jiang xie</i>)	
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According to Allen Clark (personal communication), the co-director of the Arabic Flagship Program at the University of Mississippi, students in an intensive Arabic class frequently encounter issues when learning how to use Arabic tense markers, due to the language's verbal conjugations (e.g., prefixation; suffixation), coupled with vocalic melody. The aspectual use of these tenses adds additional complexities. In comparing Arabic to Chinese, it would be interesting to see how a temporal schema as in Table 2 can be expressed in Arabic, and how learners of Arabic use the markers to convey tense and aspect in narratives.

Given the observations and results, this study is not conclusive and has limitations, as mentioned previously. Although the occurrences of lexical means outnumber morphological means, it cannot be verified at this point whether the lexical means are a preferred strategy over the morphological means, or vice versa. And more importantly, further study should be able to discern whether the lexical and morphological means compete with or sustain each other. If they sustain each other, it would be interesting to ask how much temporal information is conveyed by each. Also, the research could gain more support with a larger pool of students. The lack of a continuous observation prevents a systematic comparison for each individual. A more in-depth observation is needed in order to understand how temporal elements of different categories are acquired at various stages (Lightbown & Spada 2006). Also, studies have shown that a learner's proficiency level may be a contributing factor to how a morphological aspectual marker is associated with a certain situation type or eventuality (Tong and Shirai, 2016; also Shirai

and Andersen, 1995). How temporality can be tied to such a factor remains to be explored.

Lastly, the study provides an example as to what kind of research a language teacher can do in a small classroom. Teachers can help students with their use and practice of lexical or grammatical temporal words or phrases when pragmatic, lexical, and morphological means are incorporated in adaptive teaching, task/activity designs, tailored assistance, and correction of English-like forms created by analogy (language-rule borrowing). Tasks can be designed in the way that temporal expressions (e.g., specification of reference points) or sequences (e.g., temporal succession) are taken as assessing benchmarks. The temporal schema and annotations discussed in Section 3 can be useful for general formative assessments or for preparing students for OPI-style tests.

Acknowledgements

This paper benefits greatly from the comments and suggestions of the reviewers and the participants of the Chinese Language Teachers Association of California (CLTAC) and ACTFL annual conferences. I would like to thank all the student participants, and Su-Chun Liu and Allen Clark for their help in many ways.

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Appendix

Table 10 Lexical expressions: Lesson 7 (Week 5)

Temporal elements		Lesson of instruction	Given definition	Week of instruction
kaishi	開始/开始	L7	begin; start	5
xian	先	L7	first; in advance	5
xianzai	現在	L7	now	5
yihou	以後/以后	L7	after	5
zaoshang	早上	L7	in the morning	5
ji fenzhong	幾分鐘/几分钟	L7 [fen:分]	minute	5
meirimeiyen	每日每夜	L7 [meitian:每天]	everyday	5
meitian	每天	L7 [meitian:每天]	everyday	5
hou	後/后	L7 [ranhou:然後] L7 [yihou:以後]	then after	5
ranhou	然後/然后	L7 [ranhou:然後] L7 [yihou:以後]	then after	5

congqian	從前/从前	L7 [yiqian:以前]	before	5
qian	前	L7 [yiqian:以前]	before	5
yiqian	以前	L7	before	5

Table 11 Temporal expressions-Week 6&7

Temporal elements		Lesson of instruction	Given definition	Week of instruction
cai	才	L8	later than expected	6
changchang	常常	L8	often; frequently	6
zongshi	總是/总是	L9	always	6
zuoyou	左右	L9	about; more or less	6
zhongtou	鐘頭/钟头	L10	hour	7
na ye shijian	那一時間/那一时间	L10 [na:那]	in that case; then	7
nashi	那時/那时	L10 [na:那]	in that case; then	7
natian	那天	L10 [na:那]	in that case; then	7
naxie shihou	那些時候/那些时候	L10 [na:那]	in that case; then	7
you de shihou	有的時候/有的时候	L10 [youde:有的] L9 [youshihou:有時候]	some sometimes	7

Table 12 Temporal expressions: Week 9 through Week 26

Temporal elements		Lesson of instruction	Given definition	Week of instruction
haimei	還沒/还没	L13 [hai:還]	also; still	9
zai	再	L14	again; more	10
...de shihou	...的時候/...的时 候	L15	when; the moment	10
zhongjian	中間/中间	L16	among; between; middle	11
mashang	馬上/马上	L17	immediately; at once	12
tongchang	通常	L26	usually; generally; usual	20
conglai	從來/从来	L33	always; at all times	26

Figure 7 Clustered analysis (ZJF)

	dispos	passiv	PARTI	back	group	time: REF:	nt:	first:	bioge	CONJ:	zhong	ranho	wan	hou	ju	zouho	PFT:	le	o	hai	IMPFV:	IMPFV:	PROG	PROG	PROG	nt:	PECT:	final					
	ai	ba	c	del	CLES	in	shihou	an	gang	e	he	yu	yijie	yihou	u	hou	ju	zouho	PFT:	le	o	hai	IMPFV:	IMPFV:	PROG	PROG	PROG	nt:	PECT:	final			
97	0	0	3			9	1	11	2	0	1	0	0	0	3	0	5	1	30	1	18	0	0	1	1	1	4	5	0	0	85		
Timestamp: 0:00:12.538																																	
qiang kaishi de shihou																																	
Timestamp: 0:00:25.429																																	
back:bu zhidao																																	
Timestamp: 0:00:28.259																																	
raihou																																	
Timestamp: 0:00:36.120																																	
PFT:sile																																	
Timestamp: 0:00:38.289																																	
back:bu zhidao																																	
Timestamp: 0:00:41.221																																	
ju																																	
Timestamp: 0:00:43.622																																	
ju																																	
Timestamp: 0:00:46.200																																	
ju																																	
Timestamp: 0:01:01.714																																	
PFT:fa sheng le																																	
Timestamp: 0:01:09.807																																	
back:bu zhidao																																	
Timestamp: 0:01:14.466																																	
raihou ne																																	
Timestamp: 0:01:15.378																																	
ju																																	