

Mapping Issues of the Acquisition of L2 Japanese Aspect Markings by Chinese Learners*

Yuka Fujii

University of Tsukuba

Abstract

This paper considers how Chinese learners of Japanese (CLJs) acquire the L2 Japanese aspect marker *-teiru* in resultative and progressive contexts. It also analyzes the mapping mechanism of the lexical aspect to grammatical markers, with a special focus on achievement and accomplishment verbs. Despite the numerous observations on Chinese aspects (e.g., Dai 2021, Nishizaka 2019, and Sun 2010), only few studies dealt with the issue of acquiring L2 Japanese aspects by L1 Chinese learners. By using the Elicited Acceptability Judgment Test (EAJT) and analyzing the data individually, it was demonstrated that aspect markers corresponding to *-teiru* are building “one-to-many” rather than “one-to-one” relationships, and CLJs are learning the relationships through mapping while making errors due to other uses.

Keywords

Aspect hypothesis, achievement, accomplishment, Chinese learners of Japanese, mapping issue

* I would like to thank the conference chairs, Mineharu Nakayama, Marjorie K.M. Chan, and Zhiguo Xie, and anonymous reviewers of the earlier abstract, who gave me the opportunity to publish this article and gave me many insightful comments and suggestions. My thanks also go to professors and students at University of Tsukuba, particularly Yuichi Ono for his worthwhile suggestions, and Rong Fan for checking grammar and collecting participants. This work was presented at the Buckeye East Asian Linguistics Forum 5 on November 28, 2022. I am indebted to Mineharu Nakayama, Etsuyo Yuasa, and the audience for valuable comments and questions. All remaining errors and inadequacies are my own.

1. Introduction

Aspect is a grammatical category associated with verbs that expresses a temporal view of the event or state expressed by the verb. It is divided into two categories: grammatical aspect and lexical aspect. The former represents aspectual properties by auxiliary verbs and inflection morphemes depending on an individual language. Perfect and progressive aspects exemplify this grammatical aspect type. The latter is encoded in the inherent properties of lexical verbs. According to Vendler (1967), state verbs (State) describe continuous states, Activity verbs (Activity) describe continuous actions, Accomplishment verbs (Accomplishment) describe instantaneous actions, and Achievement verbs (Achievement) describe continuous actions with a specific endpoint. Based on these four types, Muroya (2019) discussed the acquisition of tense and aspect by Japanese learners of English by associating these with different combinations of three key semantic feature oppositions: (1) stative vs. dynamic; (2) durative vs. punctual; and (3) telic vs. atelic.

The aspect hypothesis has been proposed concerning how lexical aspect affects the acquisition of tense-aspect morphemes.

1. Learners use (perfective) past making on achievement/accomplishment verbs, eventually extending use to activity and state verbs.
2. In languages that encode the perfective/imperfective distinction morphologically, imperfective past appears later than perfective past, and imperfect past marking begins with stative and activity (i.e., atelic) verbs, then extends to accomplishment and achievement (i.e., telic) verbs.
3. In languages that have progressive aspect, progressive marking begins with activity verbs, then extends to accomplishment/achievement verbs.
4. Progressive marking is rarely incorrectly overextended to stative verbs (in L1 acquisition).
(Shirai and Kurono 1998: 248-9)

This hypothesis has been tested using a variety of languages in L1 and L2 acquisition and is generally assumed to be universal. This paper focuses on the issue of statement 3 with relevance to the “mapping” issue between grammatical and lexical aspects in the case of CLJs.

2. Grammatical and lexical aspect of Japanese and Chinese

Nishizaka (2019) claimed that there are five uses of the Japanese aspect marker *-teiru*: *resultative state*, *progressive state*, *repetition and habit*, *perfective state*, and *experience*. We focused on two of the most basic usages: *resultative state* and *progressive state*. The aspect marker *-teiru* is attached to achievement verbs to express the resultative state as well as activity verbs to express the progressive aspect, while the tense marker *-ta* is attached to denote a past event (e.g., Shirai and Kurono 1998).

(1) Resultative State

Saifu-ga ochi-teiru.

wallet-NOM fall-ASP-NONPAST

‘The wallet has fallen and it is there.’¹

¹ In all Chinese sentences, translations into English were provided by the author.

(2) Progressive State

Taro-wa gohan-o tabe-teiru.
 Taro-TOP rice-ACC eat-ASP-NONPAST
 ‘Taro is eating rice.’

(3) Past Tense

Kinou, Tokyo-e i-tta.
 Yesterday, Tokyo-GOAL go-PAST
 ‘Yesterday (I) went to Tokyo.’

(Nishizaka 2019)

In Chinese, the marker *-zai* is attached to activity verbs to express the progressive aspect and is not attached to achievement verbs. Based on these general observations, Sun (2010) claimed that CLJs associate *-zai* with *-teiru* to express the progressive aspect.

(4) Progressive

tāmen zài kāihùì ne
 they (在)PROGRESSIVE meeting PARTICLE
 ‘They are having a meeting.’

(TUFS language module)

The marker *-le* is attached to activity and achievement verbs to express the perfective aspect. Sun (2010) associated *-le* with *-ta* to express the perfective aspect in a one-to-one manner. The mismatch between the two languages predict difficulty in the acquisition of the resultative *-teiru* and overuse of *-ta* in the achievement resultative contexts in L2 Japanese.

(5) Perfective

chǎnglǐ jīntiān kāi le hùì
 factory today hold (了)PERFECTIVE meeting
 ‘The factory had a meeting today.’

(Sun 2010)

The aspect of action in progress is easily acquired through a positive transfer by directly associating progressive *-zai*, instead of *-le*, with *-teiru* (Shirai and Kurono 1998). Additionally, analysis by Sheu (1997, 2005) showed that the resultative state is mapped directly onto the progressive *-le* instead of the progressive form *-zai*, leading to the overuse of *-ta* due to negative transfer.

According to Zhang (2001), *-zhe* is generally attached to activity verbs to express the progressive aspect. Further, *-zhe* is able to express a resultative state when the resultative object or situation is clear from the speaker’s perception. In the case of (7), the speaker clearly sees that the object (i.e., blossoms) is on the tree. Thus, Zhang (2001) claimed that CLJs associate *-zhe* with *-teiru* to express the resultative aspect. However, when the event being represented is not a phenomenon in which the resultative object is perceived, *-le*, instead of *-zhe*, is used.

(6) Progressive

chǎnglǐ jīntiān kāi zhe hùì ne
 factory today hold (着)PROGRESSIVE meeting PARTICLE
 ‘The factory had a meeting today.’

(Sun 2010)

(7) Resultative State

yīnghuārshù shàng yīnghuār shèngkāi zhe
 Cherry trees On-LOC blossom bloom (着) RESULTATIVE STATE
 ‘The Cherry blossoms on the cherry tree have bloomed and they are there.’ (Zhang 2001)

To summarize, regarding the resultative state, *-teiru* is associated with *-le* and *-zhe* but not *-zai*. Regarding the progressive aspect, *-teiru* is associated with *-zai* and *-zhe*. As can be seen in Figures 1 and 2, each aspectual expression has a multiplicity of one-to-many relationships, which, I assume, is the cause of the difficulty in the acquisition of *-teiru*.

Figure 1: Mapping as resultative

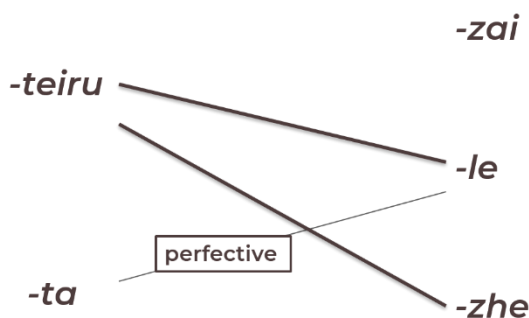
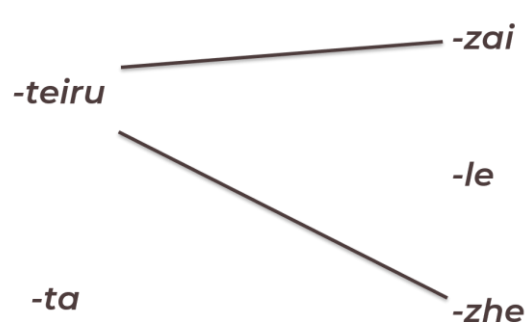


Figure 2: Mapping as progressive



Shirai and Nishi (2005) claimed that *-teiru* is used with high frequency by learners of Japanese in both resultative and progressive states. Therefore, learners are likely to use either the resultative state or progressive state initially in the input in a one-to-one manner. In the case of progressive, *-teiru* is used obligatorily and is relatively easy to learn because the mapping is simple and clear. However, it is considered relatively difficult for learners to map the meaning of the resultative state to *-teiru*, since both *-teiru* and *-ta* are potentially possible (Shirai and Kurono 1998, Sugaya and Shirai 2007).

Previous studies clarified three issues related to this acquisition difficulty. The first is the complexity of the Chinese expression corresponding to *-teiru*. As we have seen, there are three functions that are represented as *-teiru*, but there are few studies that address these relationships. The second issue is the lack of a unified framework for verbs to be taken up. We observed that different papers suggested different observations and descriptions in their definitions of verb types, which makes the comparative linguistic approach to second language acquisition more complicated and difficult. In this paper, the universal ideas of Vender's classification were employed for the comparative approach. The third issue is that few studies have dealt with mapping issues. Previous studies have only pointed out acquisition from an observational perspective and have not yet reached a discussion of the mapping issue, the central topic of second language acquisition. Considering these reviews, the following two research questions (RQs) were set:

- RQ1: How are the markers *-teiru* and *-ta* following achievement verbs associated with grammatical aspects of the progressive and resultative state compared with Japanese native controls?
- RQ2: How do CLJs use *-zai*, *-zhe*, and *-le* in their L1 and associate their Japanese counterparts *-teiru* and *-ta* in their L2?

3. Experimental Study

The materials of the elicited acceptability judgment task (EAJT) conducted in course of this research were constructed according to the following conditions: tense (past, non-past), markers (-*zai*, -*zhe*, -*le* /-*teiru*, -*ta*), and lexical aspect (achievement, accomplishment). Examples are given in Table 1. A total of 21 CLJs and 20 native Japanese speakers as controls participated in the study. The CLJ participants had a Japanese language level of N2 or higher, which is approximately equivalent to CEFR B2-C1. The CLJ participants took two tests: one was the EAJT of their native language in Chinese and the other was the one of their target language Japanese. These tests were administered online using Microsoft forms, assigning the ratings on a five-point Likert scale (5 for grammatical and 1 for ungrammatical).

Table 1. Examples of materials in this study

Condition	Japanese version	Chinese version	English translation
Non-Past/Achievement	現在 4 時 45 分であり、到着予定時刻はこのあと 5 時である。沐宸は空港に到着し（ている/た）。	现在是下午 4 点 45 分，到达时间是下午 5 点。（在）到达（着/了）航空港。	It is now 4:45 pm, and the scheduled arrival time is 5:00 pm. Muchen (is arriving/arrived) at the airport.
Past/Achievement	現在 5 時 30 分であり、到着時刻は 5 時であった。沐宸は空港に到着し（ている/た）。	现在是下午 5 点 30 分，到达时间是下午 5 点。（在）到达（着/了）航空港。	It is now 5:30 pm, and the scheduled arrival time was 5:00 pm. Muchen (was arriving/arrived) at the airport.
Non-Past/Accomplishment	今日は一日中暇なので、茗泽は一枚の絵を描い（てい/る/た）。	今天，茗泽有一整天的空闲时间，所以（在）画（着/了）一幅画儿。	Since Mingze has free time all day today, he (is painting/painted) a picture.
Past/Accomplishment	昨日は一日中暇だったので、茗泽は一枚の絵を描い（てい/る/た）。	昨天，茗泽有一整天的空闲时间，所以（在）画（着/了）一幅画儿。	Since Mingze had free time all day yesterday, he (was painting/painted) a picture.

4. Results and Discussion

The analysis of variance (ANOVA) results of EAJT showed a significant interaction between markers (-*teiru*/-*ta*) and speakers (Chinese/Native controls) ($F(1,39) = 56.74, p < .000^{***}$, partial $\eta^2 = .593$). As mentioned above, CLJs overuse -*ta* in the past Achievement condition by being affected by perfective -*le* and also in the Non-Past Accomplishment condition. Furthermore, CLJs have difficulty acquiring -*teiru* in the achievement condition. Subsequent comparison showed that there was a significance between CLJs and native controls in the Achievement resultative state condition ($t(39) = 2.39, p = .022^*$, Cohen's $d = 0.75$). The individual analysis showed that about 60% of the participants allowed for -*zhe* and -*le* in addition to -*zai* in L1. For each marker, approximately 70% of those who permitted them also permitted the use of -*teiru* for the resultative state, i.e., under the Achievement verb/Past condition, and 100% permitted the use of -*ta*, as shown in Table 2 below. In conclusion, our data showed that there is the possibility that CLJs mapped all three markers, contrary to Sun's (2010) claim, to express the Achievement resultative in L2 with less consistency and showed the tendency to overuse -*ta*, along the lines of Shirai and Kurono's

(1998) study. Thus, the marker *-le* can be a candidate to apply to the resultative *-teiru* in Japanese. This result implies that the issue of association with aspect markers in L1 needs to be carefully reviewed in the field of Second Language Acquisition.

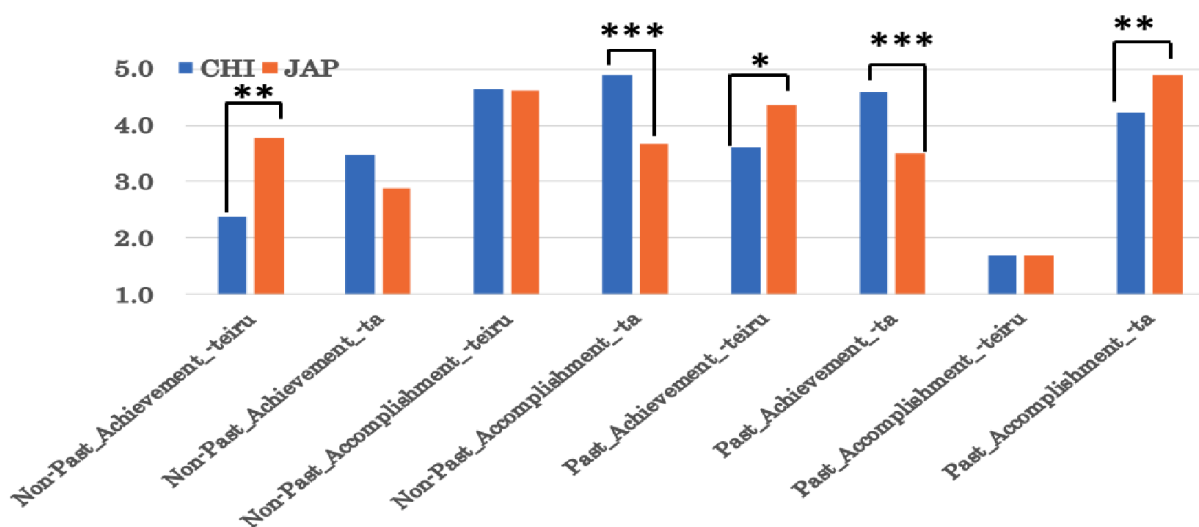


Figure 3: Results of EAJT

Table 2. Results of the individual analysis for result state (*-zai*, *-zhe*, *-le* / *-teiru*)

<i>-teiru</i> \ <i>-zai</i>	acceptable ≥ 2.5	reject < 2.5	<i>-teiru</i> \ <i>-zhe</i>	acceptable ≥ 2.5	reject < 2.5	<i>-teiru</i> \ <i>-le</i>	acceptable ≥ 2.5	reject < 2.5
acceptable ≥ 2.5	9	3	acceptable ≥ 2.5	10	3	acceptable ≥ 2.5	10	3
reject ≥ 2.5	7	2	reject < 2.5	6	2	reject < 2.5	6	2

There are two points to discuss in this section based on the results. First, as was pointed out in section 2, different papers have provided different observations in terms of the use of aspect markers in Chinese, and further descriptive study is necessary to confirm the observational validity. For example, Nishizaka (2019) suggests that Chinese change-of-state verbs occurs with perfective *-le*, instead of stative *-zhe*. The reason, Nishizaka (2019) suggests, is that the choice of aspect markers is mainly determined by whether or not the resultative state is able to be durative. This observation leads us to analyze the mapping relationship between grammatical aspect and its lexical aspect. Another observation by Inoue (2002) suggests that the situation is more complicated. In the case of “die” in Chinese, for example, the durative interpretation entailing the end point of “life” is impossible with the use of *-zhe*. On the other hand, Japanese *-teiru* occurs with “die” to express durative interpretation. We would like to examine whether these factors have an effect on Japanese aspect acquisition in future research.

The second point is concerning the mapping issue and its implications for second language acquisition hypotheses. The results of the individual analysis showed that participants who correctly judged the Japanese resultative *-teiru* chose *-zai*, *-zhe*, and *-le* in the same way, suggesting that, unlike Sun’s assumption, they may have mapped the Japanese resultative *-teiru* to *-zhe* and

-le. In addition, some participants who judged the Japanese resultative *-teiru* as unacceptable in their native language correctly judged the Japanese resultative *-teiru*, suggesting that they may have learned the Japanese aspect from universal knowledge during the acquisition stage. These data not only provide potential evidence in support of the Full Transfer Full Access (FTFA, Schwartz and Sprouse, 1994) hypothesis in aspect acquisition, but also provide a support for the Feature Reassembly Hypothesis (FRH) in tense-aspect acquisition during the intermediate language development (Lardiere 2008, 2009; Muroya 2019). The results of this study should provide new insights into the issue of acquiring semantic universals and their mapping in the process of second language acquisition.

5. Concluding Remarks

This paper has some limitations. First, the number of participants was limited. In future research, it is necessary to increase the number of participants and control the participants' backgrounds, such as studying history and place of origin, in addition to the proficiency level of Japanese. Second, to confirm the mapping issue, bi-directional study is required; i.e., the study of L1 Japanese learners of Chinese is necessary. Third, to generalize the findings of this paper from a second language acquisition study viewpoint, I believe that it is important to include another language like English as an L2 target language. These limitations should be considered in future research.

References

- Dai, Yao Jing (戴耀晶). (2021) *Gendai chugokugo aspect no taiketeiki kenkyu* (現代中国語アスペクトの体系的研究) [A Comprehensive Study of Modern Chinese Aspects]. In Li, Jia Liang and Miyuki Kojima (translators), Osaka: Kansai University.
- Inoue, Masaru (井上優). (2002) "Gengo-no taishoukennkyu" no yakuwari-to igi (「言語の対照研究」の役割と意義) [Role and Significance of "Contrastive Studies of Language"]. In National Institute for Japanese Language and Linguistics (ed.), *Taishokenkyu-to Nihongo kyouiku* (対照研究と日本語教育) [Contrastive Studies and Education of Japanese] 3-20. Tokyo: Kuroshio publishers.
- Ladiere, Donna. (2008) Feature assembly in second language acquisition. In Juana Liceras, Zobl Helmut, and Helen Goodluck (eds.), *The Role of Formal Features in Second Language Acquisition*. 106-140. New York: Lawrence Erlbaum Associates.
- Ladiere, Donna. (2009) Some thoughts on the contrastive analysis of features in second language acquisition. *Second Language Research* 25.2, 173–227.
- Muroya, Akiko. (2019) L1 Transfer in L2 Acquisition of English Verbal Morphology by Japanese Young Instructed Learners. *Languages* 4.1, 1-24
- Nishizaka, Shohei (西坂祥平). (2019) *Chugokugo bogowasha-ni-yoru daini gengo-toshite-no Nihongo-no aspect shutoku* (中国語母語話者による第二言語としての日本語のテンス・アスペクト習得) [Tense-Aspect Acquisition of Japanese as a Second Language by Chinese Speakers]. Doctoral dissertation, Nagoya: Nagoya University.
- Sheu, Shiahpey (許夏珮). (1997) *Chu-jyokyu taiwan-jin nihongo gakushusha-niyoru "teiru" no*

- shutoku-ni kansuru oudan-kenkyu (中・上級台湾人日本語学習者による「テイル」の習得に関する横断研究) [A cross-sectional study on the acquisition of -teiru by intermediate and advanced Taiwanese learners of Japanese]. *Journal of Japanese Language Teaching* 95, 37-48.
- Sheu, Shiahpey (許夏珮). (2005) *Nihongo gakushusha-niyoru aspect-no shutoku* (日本語学習者によるアスペクトの習得) [Acquisition of Aspects by Learners of Japanese]. Tokyo: Kurosio Publishers.
- Shirai, Yasuhiro and Atsuko Kurono. (1998) The acquisition of tense-aspect marking in Japanese as a second language. *Language Learning* 48.2, 245-279.
- Sun, Meng (孫猛), Masatoshi Koizumi (小泉政利), Katsuo Tamaoka (玉岡賀津雄), and Yayoi Miyaoka (宮岡弥生). (2010) Daini gengo-toshite-no “teiru” no shutoku-ni-okeru prototype-no keisei (第二言語としての「テイル」の習得におけるプロトタイプの形成) [The source of the prototype for tei-ru in second language acquisition]. *Journal of Linguistic Science* 14, 27-38.
- Sugaya, Natsue and Yasuhiro Shirai. (2007) The acquisition of Progressive and resultative meanings of the imperfective aspect marker by L2 learners of Japanese: Transfer, Universals, or Multiple Factors? *Studies in Second Language Acquisition* 29.1, 1-38.
- Tai, James H-Y. (1984) Verbs and times in Chinese: Vendler’s four categories. In David Testen, Veena Mishra, and Joseph Drogo (eds.), *Papers from the parasession on lexical semantics*, 288-296. Chicago, IL: Chicago Linguistic Society.
- Vendler, Zeno. (1967) *Linguistics in philosophy*. Ithaca, NY: Cornell University Press.

s2010917@s.tsukuba.ac.jp