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A Study on the Acquisition of L2 Motion Verbs by Chinese Learners of English and French

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Using written narratives elicited by a wordless picture book from six groups of participants (N = 22 per group), this study investigates whether Chinese learners of English and French have acquired the characteristic usage patterns of motion verbs in expressing motion events in English and French. The results show that there are no significant differences in the frequency tokens of manner verbs and path verbs produced by the two groups of English learners and the English native speakers. When comparing the two groups of French learners and French native speakers, only the advanced French learners produced significantly fewer path verb tokens than the French native speakers. Both groups of English learners produced significantly fewer path verb types than the English native speakers. Both groups of French learners produced significantly fewer manner verb and path verb types than the French native speakers. The researcher speculates that proficiency plays a decisive role in the use of motion verbs, while the role of language typology appears insignificant.

Key words: Chinese foreign language learners, motion event, lexicalization pattern, verb use

Introduction

Exploring the factors influencing learner outcomes has always been a topic of interest for second language acquisition (SLA) researchers. The linguistic views of cognitive linguists offer new perspectives for SLA research. Scholars often employ Talmy's (2000) cognitive typology theory and Slobin's (1996b) "Thinking-for-Speaking" Hypothesis as theoretical frameworks to investigate the lexicalization of motion events in learner L2. The frequency of manner verbs and path verbs constitutes a key feature of motion event lexicalization. Talmy (2000) posits that languages like English and Chinese tend to favor manner verbs in motion event lexicalization (S-languages), while languages like French and Spanish tend to favor path verbs (V-languages). Slobin's (1996b) "Thinking-for-Speaking" Hypothesis suggests that during linguistic activities, such as listening, speaking, reading, writing, and translating, even during imagination, speakers are influenced by their language's specific characteristics, leading them to attend to certain concepts while neglecting others, thus forming a particular thinking style. Once, this thinking style is established through native language acquisition, it becomes difficult to change. SLA researchers argue that motion event lexicalization patterns belong to this thinking style, and learners' L2 motion event lexicalization will inevitably carry features of their L1. For instance, when native speakers of an S-language use a V-language to express motion events, they might rely on L1 patterns, producing more manner verbs and fewer path verbs than native speakers of the V-language.

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There is a consensus that English is a typical satellite-framed language and French a typical verb-framed language. However, the typological classification of Chinese remains debated. Talmy (2000) considers Chinese an S-language; Tai (2002) argues it is a V-language; Shen (2003) views it as an atypical S-language; Slobin (2004) and Kan (2010), among others, classify it as an equipollently-framed language. The disagreement primarily centers on whether the manner verb or the path/tendency verb is the core of the sentence in the verb-directional construction (manner verb + path/tendency verb). If the manner component verb is the core, Chinese is an S-language; if the path component verb is the core, it is a V-language; and if the core cannot be determined, it is equipollently-framed. Regardless of the classification, the verb-directional construction is the dominant pattern for expressing motion events in Modern Mandarin, accounting for over 60% of all motion event lexicalizations (Fan, 2016; Slobin, 2004; Zeng & Zhao, 2016). The proportion of using manner verbs or path verbs alone is at most less than 18% (Kan, 2010; Zeng & Zhao, 2016). Considering the dominance of the verb-directional construction, the frequency of manner verbs in Chinese motion event lexicalization is closer to English than to French. If tendency verbs are considered path verbs, then both manner and path verbs are high-frequency words in Chinese motion event lexicalization. From this perspective, Chinese learners of English and French should face no typological obstacles in acquiring the motion event lexicalization patterns of English and French.

Existing literature in this area features relatively small sample sizes and yields inconsistent conclusions. Some studies support the influence of language typology factors on L2 motion event lexicalization (Cadierno, 2004, 2010; Zeng & Bai, 2013; Xu, 2013), while others do not (Navarro & Nicoladis, 2005; Hendriks & Hickmann, 2011). Studies by Zeng and Bai (2013) and Xu (2013) both treat Chinese as an equipollently-framed language but insufficiently discuss the characteristics of such languages. A common problem in existing research might be neglecting the fact that both manner and path verbs are high-frequency in Chinese motion event expressions, simply attributing differences in verb production between English learners and native speakers to typological differences between Chinese and English.

This study continues to investigate whether Chinese learners of English and French exhibit tendencies in using manner and path verbs when expressing motion events that align with those of native speakers—That is, whether they can acquire L2 motion event expression patterns in this regard.

Literature Review

Talmy (2000) categorizes major world languages into Verb-framed languages (V-languages) and Satellite-framed languages (S-languages) based on the lexicalization patterns of motion events. In V-languages, the path component is typically expressed by the main verb of the clause (e.g., “exit,” “ascend,” and “leave”), which simultaneously expresses motion itself. Manner is usually not expressed; if necessary, it is often expressed by a gerund or similar form. In S-languages, the path is primarily expressed by a satellite (adjunct) component to the main verb (e.g., “into,” “out,” and “up”), while the verb simultaneously expresses manner/cause and motion itself (manner verbs). Based on this, we can deduce the characteristics of motion verbs in the two language types: (a) in V-languages, path verb usage frequency is higher than manner verb usage; and (b) in S-languages, manner verb usage frequency is higher than path verb usage.

Building on his L1 motion event lexicalization research, Slobin (1996b) proposed the “Thinking-for-Speaking” Hypothesis. This hypothesis posits that the process of children acquiring their native language is simultaneously a process of forming native language thinking. This native language thinking guides its users to focus on specific concepts in life situations when using that language. Learning a new language means learning

a new way of thinking, and since the native language thinking pattern is formed early and is difficult to change, it poses an obstacle to learning the new language. Motion event lexicalization patterns belong to this type of thinking style, and the regularities in the use of manner and path verbs are considered difficult to alter once established.

The acquisition of motion event expression is a significant topic in SLA, focusing on whether learners can successfully acquire the target language's specific lexicalization patterns for "manner" and "path" information. However, existing research on L2 learners' use of motion verbs (manner and path verbs) shows considerable disagreement. To clarify the positioning of this study, this review will outline these inconsistent findings and analyze their potential causes.

Empirical Studies on L2 Learner Production of Motion Verbs: Inconsistent Findings

Some studies suggest that L2 learners can acquire the target language's lexicalization patterns, showing no significant differences from native speakers in verb use. For example, Navarro and Nicoladis (2005) found that advanced native English learners of Spanish, although using path verbs less frequently than native speakers, showed no significant difference in the proportion of path verb use, indicating successful acquisition of Spanish's core verb-framed feature. Similarly, Hendriks and Hickmann (2011) confirmed that native English learners of French could adapt to French's verb-framed characteristics, primarily using verbs to express path. A case study by Li and Cao (2013) on advanced English learners found their motion event expressions were dominated by manner verbs, consistent with English's satellite-framed characteristics. Cadierno and Ruiz (2006) found no significant differences in manner verb use between native speakers and learners whose L1s were typologically identical (Italian) or different (Danish) from the target language (Spanish), seemingly negating the role of language typology.

However, other studies have reached opposite conclusions. Cadierno (2004) compared native Danish learners of Spanish with Spanish native speakers, finding that learners produced fewer tokens and types of motion verbs overall, suggesting they had not yet fully reached native-like production levels. Studies by Zeng and Bai (2013) and Xu (2013) both found that even high-proficiency Chinese learners of English produced significantly fewer manner verb types than English native speakers, tending to overuse basic-level lexical items like "run" and "walk." These findings collectively point towards the possible negative transfer of the native language (Chinese, an equipollently-framed language) on learners acquiring a satellite-framed language (English). Another study by Cadierno (2010) found that learners whose L1 was also a satellite-framed language (Danish) produced more manner verbs than learners whose L1 was a verb-framed language, again providing evidence for the influence of language typology.

Reflections on Inconsistencies in Previous Research

The confusion in the above findings leaves the question "Can L2 learners truly use manner and path verbs like native speakers?" unresolved. We believe certain methodological and design limitations in previous studies contribute to these inconsistent conclusions:

First, mismatches and gaps in research design. Some studies have core questions that do not align with their design. For instance, Cadierno's (2004) study aimed to examine L2 production, but its design focused more on the influence of lexicalization typology and did not systematically compare learner and native speaker frequency and type differences in the key categories of manner and path verbs, thus failing to provide a clear picture of learners' overall verb use. This is a core aspect our study intends to explore in depth.

Second, limitations in sample size and group setup. Many studies have relatively small sample sizes (e.g., Li & Cao, 2013, had only four participants), and experimental and control groups are often unequal in size, potentially affecting the statistical power and stability of results. Furthermore, several studies (e.g., Zeng & Bai, 2013; Xu, 2013) lack direct comparison with native speakers or use very small comparison groups, lacking a reliable benchmark for judging whether learners "meet the standard."

Third, ambiguity in defining language proficiency. Existing studies vary in their criteria for defining participant "language proficiency" (e.g., only using grade level or years of study). This makes it difficult to determine whether observed differences stem from L1 typology or simply from differences in learners' overall L2 ability. Although Cadierno (2010) found an effect for language typology, the lack of detailed information on participant language level leaves uncertainty in the conclusions.

Finally, uniformity of corpus type. Most research relies on oral storytelling to collect data. Although Slobin's (1996a) "online thinking" hypothesis suggests that oral production reflects real-time thought processes, oral expression is highly susceptible to online processing pressure and language proficiency limitations. This might lead learners to simplify expressions due to insufficient online processing capacity, thereby amplifying the effect of L1 typology or masking their actual acquisition level. Research using written corpora is relatively scarce. Written production allows learners more planning time and might more accurately reflect their underlying L2 knowledge.

Given the various issues in previous research, this study aims to investigate the extent to which Chinese learners of English and French at different proficiency levels have acquired the motion event lexicalization patterns of their target languages. Specifically, this paper addresses the following research questions:

1. Are there differences between Chinese learners of English/French and native speakers in the token frequency of manner and path verbs they produce?

2. Are there differences between Chinese learners of English/French and native speakers in the type frequency (variety) of manner and path verbs they produce?

3. Are there differences in the token and type frequency of manner and path verbs produced by Chinese learners of English and French at different proficiency levels?

Research Method

Participants

A total of 132 participants were involved in this study, divided into four categories: Chinese learners of English, Chinese learners of French, English native speakers, and French native speakers. The Chinese learners of English and French were further divided into two proficiency levels: Low-Level Learners (LEL and LFL) and High-Level Learners (HEL and HFL), resulting in six groups of 22 participants each. All learners were from a key foreign language university in Beijing. Detailed information is provided in Table 1.

Research Instrument

The prompt material for language production was the wordless picture book *Frog, Where Are You?* (Mayer, 1969). It contains 24 pictures telling the story of a little boy, his dog, and his pet frog. One night, while the boy and dog are asleep, the frog escapes. The boy and dog then go searching for it, experiencing several adventures and fortunate events before finally finding the frog. First, this book is a classic elicitation tool used in previous motion event research (e.g., Berman & Slobin, 1994; Chen, 2005; Kan, 2010). It contains numerous motion events, allowing focused examination of participants' motion event expressions. Second, the book has no text,

so no language priming occurs regardless of the participant's language. Additionally, the book targets children, making it understandable for participants of all ages, and lacks specific cultural elements, making it accessible to participants from diverse cultural backgrounds. Using this tool also facilitates comparison with previous studies.

Table 1

The Demographic Information of Participants

Group	*N*	Gender (M/F)	Mean age	Education level	Mean years of L2 study
English native speakers	22	13/9	24.5	>First-year university	-
Low-Level English learners	22	7/15	18.18	First-year university	10.16
High-Level English learners	22	6/16	20.32	Third-year university	10.61
French native speakers	22	13/9	28.95	>Third-year university	-
Low-Level French learners	22	5/17	19.64	Second/Third-year university	approx. 2
High-Level French learners	22	3/19	22.5	Fourth-year university, graduate students	approx. 4

For data collection, the researcher added instructions, identically worded in English and French, to the picture book for use with the English/French native speakers and learners, respectively.

Data Collection

Each participant was given 45 minutes for data collection. Data from the four learner groups were collected during their regular classes by their course instructors. Data from the two native speaker groups were collected individually based on their availability. Participants were asked to first browse the entire story to understand its general content before starting to write. They could refer to the pictures while writing. The instructions also required the story to cover every picture, with the beginning and end having comparable detail. The story had to be a narrative, not a dialogue or poem. Participants were asked to describe the pictures realistically and minimize imaginative or psychological descriptions. The goal was for a person who had not seen the pictures to be able to retell the story content based solely on what was written, encouraging detailed description of the visuals. No word limit was set. Participants completed the story independently without access to dictionaries or other tools. At the end of 45 minutes, regardless of whether they had finished the entire story, the instructor (or the participants themselves for native speakers) requested submission.

Data Processing

The total number of words produced varied across groups. The 22 English native speakers produced a total of 11,029 words; and the 22 French native speakers produced 11,187 words. The low-level and high-level English learners produced English stories totaling 9,518 and 11,396 words, respectively. The low-level and high-level French learners produced French stories totaling 7,160 and 7,902 words, respectively.

Following Talmy (2000) and Chu's (2004) definitions of manner and path components, the researcher manually annotated (manner verbs) and (path verbs) clause by clause in each story. Subsequently, software was used to calculate the token and type frequencies of manner and path verbs in each story. The resulting data were entered into Statistical Package for the Social Sciences (SPSS) 17.0 for statistical analysis.

Results and Discussion

Token Frequency of Manner and Path Verbs of English Learners

To examine differences between English learners and English native speakers in the token frequency of manner and path verbs, and between the two learner groups, one-way ANOVA with pairwise comparisons was conducted.

Table 2 shows no significant differences in the token frequencies of manner and path verbs produced by the two English learner groups compared to the English native speakers, nor between the two learner groups. Regarding means, English native speakers produced higher token frequencies for both verb types than the learners. The mean manner verb tokens for English native speakers, low-level English learners, and high-level English learners were: 23.56, 22.18, and 20.41, respectively. The mean path verb tokens were: 20.23, 19.65, and 16.89, respectively.

Table 2

Comparison of Two Verb Type Tokens Among Three English Participant Groups

Feature	Group	*N*	*M*	*SD*	*F*	*p*	Post-hoc (Bonferroni)
	Eng. Native	22	23.56	7.90			
Manner verbs	Eng. Low	22	22.18	6.34	1.11	0.335	No significant differences between any groups
	Eng. High	22	20.41	6.71			
	Eng. Native	22	20.23	6.33			
Path verbs	Eng. Low	22	19.65	7.41	1.62	0.207	No significant differences between any groups
	Eng. High	22	16.89	5.96			

Notes: All group comparisons are non-significant ($p > 0.05$). "Eng. Native" = English Native Speakers; "Eng. Low" = Low-level English Learners; and "Eng. High" = High-level English Learners.

Token Frequency of Manner and Path Verbs of French Learners

Similarly, one-way ANOVA was used to test for differences in manner and path verb token frequencies between the two French learner groups and French native speakers, as well as between the two learner groups.

Table 3 shows that the mean path verb tokens for both learner groups were lower than those of the French native speakers (Native: 29.88; Low: 24.65; and High: 17.43). A significant difference was found between the high-level French learners and the French native speakers ($p = 0.002$). The difference between low-level learners and native speakers was not significant. No significant differences were found among the three groups in manner verb token frequency (Native: 12.50; Low: 11.05; and High: 10.84). No significant differences were found between the two French learner groups in the token frequency of either verb type.

Table 3

Comparison of Verb Tokens Between Two French Learner Groups and French Native Speakers

Feature	Group	*N*	*M*	*SD*	*F*	*p*	Post-hoc (Bonferroni)
	Fr. Native	22	12.50	7.01			
Manner verbs	Fr. Low	22	11.05	6.55	0.39	0.679	No significant differences between any groups
	Fr. High	22	10.84	6.77			
	Fr. Native	22	29.88	13.48			
Path verbs	Fr. Low	22	24.65	10.18	7.01	0.002	Fr. Native > Fr. High[1]
	Fr. High	22	17.43	9.11			

Notes: [1]$p = 0.002$; no significant differences between Fr. Native and Fr. Low, or between Fr. Low and Fr. High ($p > 0.05$). "Fr. Native" = French Native Speakers; "Fr. Low" = Low-level French Learners; and "Fr. High" = High-level French Learners.

Types of Manner and Path Verbs Used by English and French Learners

This subsection compares the type frequency (variety) of manner and path verbs produced by the different participant groups to identify similarities and differences in verb usage variety between learners and native speakers.

Table 4 shows that while the mean number of manner verb types for English native speakers, low-level learners, and high-level learners showed a decreasing trend (8.50, 7.41, and 6.95, respectively), with learners

producing fewer types than native speakers, the difference among the three groups did not reach statistical significance ($p = 0.099$). This suggests the differences among the three groups are more likely attributable to their overall English proficiency rather than language typology factors, especially considering prior knowledge that Chinese has significantly more manner verb types than English.

Table 4

Comparison of Manner/Path Verb Types Produced by English Learner and English Native Speaker

Feature	Group	*N*	*M*	*SD*	*F*	*p*	Post-hoc (Bonferroni)
Manner verbs	Eng. Native	22	8.50	3.10	2.40	0.099	No significant differences between any groups
	Eng. Low	22	7.41	2.22			
	Eng. High	22	6.95	1.68			
Path verbs	Eng. Native	22	6.95	2.78	5.78	0.005	Eng. Native > Eng. Low[1] Eng. Native > Eng. High[2]
	Eng. Low	22	5.14	1.55			
	Eng. High	22	5.32	1.96			

Notes: [1]$p = 0.009$, [2]$p = 0.022$; No significant differences between Eng. Low and Eng. High for any comparison ($p > 0.05$). "Eng. Native" = English Native Speakers; "Eng. Low" = Low-level English Learners; and "Eng. High" = High-level English Learners.

Table 4 also shows a decreasing trend in path verb types from English native speakers (6.95) to high-level learners (5.32) to low-level learners (5.14), and the difference among the three groups is significant ($p = 0.005$). Pairwise comparisons revealed significant differences between English native speakers and low-level learners ($p = 0.009$) and between English native speakers and high-level learners ($p = 0.022$). No significant difference was found between the two learner groups.

Table 5 shows significant overall differences among the three French participant groups for both manner verb types ($p = 0.001$) and path verb types ($p < 0.001$). Pairwise comparisons indicated significant differences in manner verb types between French native speakers and low-level learners ($p = 0.001$), and between French native speakers and high-level learners ($p = 0.033$). No significant difference was found between the two learner groups, although the high-level learners' mean (4.18) was slightly higher than the low-level learners' mean (3.59).

Pairwise comparisons for path verb types showed significant differences between French native speakers and low-level learners ($p < 0.001$), and between French native speakers and high-level learners ($p < 0.001$). Again, no significant difference was found between the two learner groups, with the high-level learners' mean (6.73) being slightly higher than the low-level learners' mean (6.64).

Table 5

Comparison of Manner/Path Verb Types Produced by French Learner and French Native Speaker

Feature	Group	*N*	*M*	*SD*	*F*	*p*	Post-hoc (Bonferroni)
Manner verbs	Fr. Native	22	5.55	2.02	7.41	0.001	Fr. Native > Fr. Low[a] Fr. Native > Fr. High[b]
	Fr. Low	22	3.59	1.53			
	Fr. High	22	4.18	1.59			
Path verbs	Fr. Native	22	9.09	2.65	10.60	< 0.001	Fr. Native > Fr. Low[c] Fr. Native > Fr. High[c]
	Fr. Low	22	6.64	1.47			
	Fr. High	22	6.73	1.70			

Notes: [a]$p = 0.001$, [b]$p = 0.033$, [c]$p < 0.001$; No significant differences between Fr. Low and Fr. High for any comparison ($p > 0.05$). "Fr. Native" = French Native Speakers; "Fr. Low" = Low-level French Learners; and "Fr. High" = High-level French Learners.

Discussion

The core findings of this study can be summarized in three points:

First, regarding token frequency of motion verbs, Chinese learners of English and French generally showed no significant differences from native speakers (except for advanced French learners' path verbs);

Second, regarding verb type frequency (variety), learners were significantly lower than native speakers in several aspects, notably French learners showing significant deficits in both manner and path verb types;

Third, differences between learners at different proficiency levels were mostly non-significant across various measures, suggesting that language proficiency's role may outweigh that of language typology. The following discussion elaborates on these findings.

From a token frequency perspective, Chinese learners of English and French produced slightly lower means for manner and path verbs compared to native speakers, but most differences were non-significant (except for advanced French learners' path verbs). This result is largely consistent with Navarro and Nicoladis (2005), Hendriks and Hickmann (2011), and Cadierno and Ruiz (2006), but not entirely with Cadierno (2010). It is noteworthy that Cadierno (2010) did not systematically test learners' L2 proficiency. Thus, the differences observed in that study might also stem from proficiency gaps rather than language typology itself.

Based on this, we can preliminarily infer that regardless of typological differences between the native and target languages, learners can essentially acquire the main features of verb use in motion event lexicalization. Any gaps between them and native speakers are likely attributable more to the overall process of L2 vocabulary acquisition (Cadierno, 2004) than to constraints imposed by language typology.

The finding that advanced French learners produced significantly fewer path verb tokens than French native speakers warrants special attention. We speculate three possible reasons:

First, the influence of input genre. The frog story used in this study is a narrative. As advanced French learners progress to higher grades, their exposure to narrative texts decreases while reading in class focuses more on argumentative and expository genres. This reduction in narrative input might lead to a decline in their proficiency with the lexicalization patterns characteristic of French motion events.

Second, differences in picture description strategies. Examination of the written texts suggests that advanced learners described the first picture (which contains few motion events) in more detail, whereas lower-level learners, constrained by their language ability, moved more quickly to subsequent pictures containing a richer array of motion events. This strategic difference could result in advanced learners producing relatively fewer motion events overall in their corpora.

Third, issues with participant composition. Approximately two-thirds of the high-level French learners in this study were master's degree students. These graduate students came from various universities across the country, and their overall French proficiency might be lower than that of the undergraduate students at this particular institution—a key national foreign language university with undergraduate admission scores significantly higher than average universities. Therefore, the actual language proficiency of the so-called "advanced group" might not be significantly higher than that of the "low-level group." This factor could also partly explain why the high-level English learners had slightly lower manner verb token frequencies than the low-level learners. In summary, the performance of advanced French learners on path verb token frequency should be attributed more to language proficiency and participant composition than to language typology.

Unlike the token frequency results, the type frequency results present a more complex picture. From the English perspective, both groups of English learners produced significantly fewer path verb types than the English native speakers, while the trend for fewer manner verb types did not reach significance ($p = 0.099$). This finding is not entirely consistent with Zeng and Bai (2013) and Xu (2013). Zeng's study found significantly fewer manner verb types among learners, possibly due to their use of oral narratives where online processing pressure is higher. The present study used written narratives, allowing learners more time to consider word choice, resulting in performance closer to native speakers. The significant differences in Xu's (2013) study might be partly due to unequal sample sizes (29 native speakers, 15 per learner group) and the statistical method (chi-square test sensitive to total counts).

It is worth emphasizing that English path verbs often originate from Latin or French, appearing relatively infrequently in English and being more formal, thus limited in learner exposure. The conceptual salience (frequency) in the input and opportunities to use the target language for communication influence learners' acquisition of lexicalized or grammaticalized concepts in the target language (Jarvis & Pavlenko, 2008, pp. 150-151). Therefore, the deficiency in path verb types among English learners might reflect input frequency and lexical difficulty more than L1 typological transfer.

From the French perspective, both groups of French learners produced significantly fewer types of both manner and path verbs compared to French native speakers, with no significant difference between the advanced and low-level groups. This result contrasts with the fact that Chinese has significantly more types of both manner and path verbs than French (Ma, 2024). If language typology were the determining factor, Chinese native speakers learning French should not exhibit such comprehensive deficiencies in verb type variety. Therefore, a more plausible explanation is that the learners' overall French proficiency levels constrain the richness of their verb types, especially considering that the French learners had spent relatively less time learning the language compared to the English learners.

Much research framed by Slobin's (1996b) "Thinking-for-Speaking" hypothesis tends to attribute any differences between learners and native speakers to the influence of native language thinking. However, Slobin himself explicitly noted that not all grammaticalized categories pose learning difficulties. He stated:

> ... the grammaticalized categories that are most vulnerable to source-language influence have an important property in common: they are not directly accessible in our percepts, our sensorimotor, and our practical interactions with the world. (Slobin, 1996b, p. 91)

Motion manner is likely a category directly accessible to the human sensorimotor system. It is not a covert feature. Even in verb-framed languages like French, manner information exists, albeit used less frequently. Therefore, differences in the use of motion verbs should theoretically not constitute an insurmountable acquisition obstacle. From this perspective, learners' performance in using motion verbs depends more on whether their overall L2 proficiency exceeds a certain "threshold." In the beginning stages, the influence of native language thinking might be more apparent. As language ability develops, learners gradually break free from L1 constraints and move towards target language thinking patterns. Only when advanced learners possess near-native overall expressive ability yet still exhibit systematic L1 features can we confidently attribute the differences to the entrenched nature of native language thinking.

Given the issues with the composition of the advanced learner groups in this study (especially the French group), we tend to attribute the observed differences to language proficiency. In other words, the current evidence is insufficient to support the conclusion that "language typology constitutes the primary obstacle."

Conclusions

This study indicates that Chinese learners of English and French have essentially acquired the features of verb use in the lexicalization of motion events in their respective L2s, while also revealing a complex picture of motion verb use:

(a) Regarding token frequency: No significant differences were found between the two English learner groups and English native speakers, nor between the two English learner groups themselves; no significant differences were found between low-level French learners and French native speakers, nor between the two French learner groups; advanced French learners showed no significant difference in manner verb tokens but produced significantly fewer path verb tokens than French native speakers;

(b) Regarding type frequency: Both English learner groups produced significantly fewer path verb types than English native speakers; both French learner groups produced significantly fewer types of both manner and path verbs compared to French native speakers.

This study's sample size is limited, and only written data were collected. Future research should involve more participants, ensure more rigorous data collection procedures, include spoken data, and rely on native speaker judgments for the identification of motion verbs. Additionally, learners' overall L2 proficiency should be uniformly tested before data collection to ensure more valid and reliable grouping. Incorporating qualitative materials like interviews might help investigate whether learners are influenced by L1 thinking when expressing motion events.

References

Berman, R., & Slobin, D. (1994). *Relating events in narrative: A cross-linguistic developmental study*. Hillsdale: Lawrence Erlbaum Associates.

Cadierno, T. (2004). Expressing motion events in a second language: A cognitive typological perspective. In M. Achard and S. Niemeier (Eds.), *Cognitive linguistics, second language acquisition, and foreign language teaching* (pp. 13-49). Mouton de Gruyter.

Cadierno, T. (2010). Motion in Danish as a second language: Does the learner's L1 make a difference? In Z. Han and T. Cadierno (Eds.), *Linguistic relativity in SLA: Thinking for speaking* (pp. 1-33). Multilingual Matters.

Cadierno, T., & Ruiz, L. (2006). Motion events in Spanish L2 acquisition. *Annual Review of Cognitive Linguistics, 4*(1), 183-216.

Chen, L. (2005). The acquisition and use of motion event expressions in Chinese (Doctoral dissertation, University of Louisiana at Lafayette).

Chu, C. (2004). Event conceptualization and grammatical realization: The case of motion in Mandarin Chinese (Unpublished doctoral dissertation, University of Hawaii).

Hendriks, H., & Hickmann, M. (2011). Expressing voluntary motion in a second language: English learners of French. In V. Cook and B. Bassetti (Eds.), *Language and bilingual cognition* (pp. 315-340). Psychology Press.

Jarvis, S., & Pavlenko, A. (2008). *Crosslinguistic influence in language and cognition*. Routledge.

Ma, Y. (2024). *A study on L2 motion event lexicalization from the perspective of cognitive linguistic typology*. Beijing: Beijing Institute of Technology Press.

Mayer, M. (1969). *Frog, where are you?* Dial Press.

Navarro, S., & Nicoladis, E. (2005). Describing motion events in adult L2 Spanish narratives. In D. Eddington (Ed.), *Selected Proceedings of the 6th Conference on the Acquisition of Spanish and Portuguese as First and Second Languages* (pp. 102-107). Cascadilla Press.

Slobin, D. I. (1996a). Two ways to travel: Verbs of motion in English and Spanish. In M. Shibatani and S. A. Thompson (Eds.), *Grammatical constructions: Their form and meaning* (pp. 195-220). Oxford: Clarendon Press.

Slobin, D. I. (1996b). From "thought and language" to "thinking for speaking." In J. Gumperz and S. Levinson (Eds.), *Rethinking linguistic relativity* (pp. 70-96). Cambridge: Cambridge University Press.

Slobin, D. I. (2004). The many ways to search for a frog: Linguistic typology and the expression of motion events. In S. Strömqvist and L. Verhoeven (Eds.), *Relating events in narrative: Typological and contextual perspectives* (pp. 219-257). Lawrence Erlbaum Associates.

Talmy, L. (2000). *Toward a cognitive semantics* (Vols. 1-2). MIT Press.

Zeng, Y., & Bai, J. (2013). A study on Chinese students' acquisition of English motion event expressions. *Foreign Languages and Their Teaching*, 5, 44-48. (in Chinese)

Zeng, Y., & Zhao, C. (2016). An empirical study on the lexicalization patterns of motion events in Chinese. *Journal of Shaoyang University (Social Science Edition), 15*(4), 79-85. (in Chinese)

Tai, H.-Y. J. (2002). Conceptual structure and non-autonomous grammar: A preliminary investigation into the conceptual system of Chinese grammar. *Contemporary Linguistics*, *4*(1), 1-12. (in Chinese)

Fan, J. (2016). A typological study of oral expressions of motion events in Chinese and French. *Études Françaises*, 2, 92-100. (in Chinese)

Kan, Z. (2010). A linguistic typological investigation of the lexicalization of displacement events in Chinese. *Contemporary Linguistics, 12*(2), 126-135. (in Chinese)

Li, H., & Cao, Y. (2013). Speech-gesture representations of motion events by Chinese high-proficiency English learners. *Foreign Language Teaching and Research, 45*(6), 886-896. (in Chinese)

Shen, J. (2003). A typological investigation of the "verb-complement structure" in modern Chinese. *Chinese Teaching in the World*, 3, 17-23. (in Chinese)

Xu, Z. (2013). A study on the relationship between the acquisition of English motion event expressions and L2 proficiency. *Foreign Languages in China, 10*(5), 64-71. (in Chinese)