In language learning, learners have to link a word form to its concept. It is said that verb learning is especially difficult for learners because they must take the ever-changing events in the world and transform them into a categorical system represented by language [1,2]. Despite these difficulties, children can still learn verbs efficiently using linguistic cues (e.g., syntactic structures [3,4] or case particles [5]). Although the difficulties have also been reported in L2 [6], the effectiveness of linguistic cues in verb learning has not been examined. We conducted a novel experiment on adult Chinese advanced learners of Japanese (CL) and Japanese native speakers (NS). By utilizing causative events we examined whether L2 verb learning is guided by linguistic cues, based on the following reasons: (1) Japanese expresses an entire causative event involving Action and Result aspects in a single verb while Chinese expresses it in a combination of verbs [7], and (2) Case particles are used in Japanese, but not in Chinese.

Participants (NS=24, CL=17) did a learning phase and then an evaluation phase. In the learning phase, participants heard a Japanese novel verb (e.g., mekerimasu) in one of three conditions: a verb that is preceded by (a) an agent with a nominative marker (Agent-Nom) or (b) a patient with a nominative marker (Patient-Nom), or (c) a verb alone (VerbOnly). Each sentence was accompanied by an animation movie depicting a full causative event involving Action and Result components (Figure1). In the evaluation phase, participants saw a sub-component of the same causative event, that is, either Action or Result part. Then participants responded whether the animation shown in the evaluation phase matches the verb meaning that they had learned in the learning phase.

We predicted that when causative events were described in Agent-Nom sentences, participants would use semantic roles and a case marker as cues to map the verb to an Action or to both Action and Result components of the causative event. On the other hand, participants would map the verb to a Result component when causative events were expressed in Patient-Nom sentences. When no cues that could guide a conceptual-verb mapping were provided as in VerbOnly condition, CL would map the (single) verb to only one aspect of causative events because Chinese speakers understand causative events as a combination of verbs in their native language.

As predicted, in Agent-Nom, both language groups accepted Action more than Result (Action: NS 56%; CL 75% and Result: NS 13%; CL 8%), but the pattern was reversed in Patient-Nom (Action: NS 2%; CL 3% and Result: NS 92%; CL 81%) (Figure2). This indicates that both language groups use case particles and semantic roles as effective cues to map a particular aspect of the event onto the verb meaning. In VerbOnly, an interaction was found between Language and Evaluation \( (F(1,35)=7.34, \ p<.05) \). That is, CL accepted Result more than NS (NS 19%; CL 57%). Our results reveal that (1) CL can abstract an aspect as effectively as NS when a verb is learned with a case particle and a noun and (2) CL employ their L1 knowledge in learning Japanese novel verbs when no syntactic and nominal cues are available.
Experiment Examples
(a) Agent-Nom : “Hito - Ga meker-imasu (someone will mekeru (something)).”
(b) Patient-Nom: “Mono - Ga meker-imasu (something will mekeru).”
(c) VerbOnly : “Meker-imasu ((someone) will mekeru (something)).”

**Figure 1** The Sample Animation of Causative Event

**Figure 2** The proportion that participants accepted the learned verbs

References