

Article

A Cognitive Linguistics Approach to Teaching Chinese Classifiers: A Case Analysis for Classifier *tiao*

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Received: 4 February, 2023/Accepted: 28 September, 2023/Published: 7 April, 2024

Abstract

Cognitive linguistics (CL) is defined as the study of language in its cognitive function. While a CL approach to teaching second language (L2) is still at its infancy, it is conducive to adult learners' acquisition of meaningful linguistic units such as prepositions and classifiers. Noticeably, memorising Chinese classifier-noun mapping is one of the most challenging tasks during Chinese L2 learning. Learning Chinese classifiers has been placed peripherally in L2 classroom, with rote memory being the crudest way. However, it is often neglected that Chinese classifiers are unique in their transparent semantic association with corresponding head nouns, which justifies the employment of the CL approach to teaching classifiers. Considering most Chinese classifiers are polysemic in use with nouns, this study proposes to adopt a CL approach to teaching Chinese classifiers and the learning of their associated nouns. A CL approach to teaching classifiers is featured by five essential concepts: image schemas, prototypes, metaphors, semantic networks and principled polysemy. For a didactic purpose, only one frequently used classifier *tiao* (referring to long, flexible nouns) was exemplified to provide a means of differentiating the senses instantiated in principled polysemy. This study concludes that the CL approach is cognitively demanding for learners, and it may take much in-class time for teachers, albeit the potential to alleviate learning memorisation and generalisation issues. Suggestions were made to situate the CL approach to teaching in an online self-learning scenario beyond classroom, and preferably for adult L2 learners.

Keywords

Cognitive linguistics, Chinese classifiers, Chinese as a second language, principled polysemy framework

1. Introduction

Chinese classifiers are idiosyncratic in its duality of grammatical and semantic functions. Chinese classifiers are placed in-between a numeral and a noun, denoting some internal features of the corresponding nouns. Chinese people can often solicit their intuition to answer why a classifier should

be matched to specific head nouns, such as the classifier *zhang* for ‘paper’ and ‘table’, because they are flat-faced objects (Gao & Malt, 2009). It is almost impossible that *zhang* would be associated with ‘ropes’ or ‘rivers’, whose assigned conventional classifier is *tiao* – for denoting long and flexible objects. On the one hand, the Chinese classifier system is more complicated (with more variations in forms and meanings) than gender system that is closely tied to phonological rules (as in French) for the classification of masculine and feminine nouns. On the other hand, the semantic-oriented classifier system is possibly more teachable owing to its semantic transparency in meaning between classifier and noun (Zhang, 2007). Specifically, Chinese classifiers to some extent reflect how people perceive everyday objects, which is consistent with the linguistic relativity theory (Boers & Lindstromberg, 2008) and are not totally arbitrary when viewed in a cognitive linguistics (CL) perspective.

The CL approach to language teaching concerns guiding learners learn language through the experience of the world. In other word, the CL approach aims to connect everyday knowledge with the learning itself, which makes learning more comprehensible and less cognitively demanding (Chen, 2009). This is different from traditional approach that features rule-based learning or rote memorisation of classifiers (Zhang & Jiang, 2016). However, current studies on the CL approach to teaching languages concern themselves mostly with English linguistic components, such as prepositions and idioms (Chen, 2009; Csabi, 2004; Cho, 2010; Hung, 2019; Hung et al., 2018; Tyler, 2012; Tyler & Evans, 2003; Wong et al., 2018). Compared to L2 English classroom studies, there is much less L2 Chinese research; but there has been a considerable number of studies focusing on L2 Chinese pedagogy. There is relatively more research focusing on Chinese classifiers learning (Gao, 2010; Zhang & Lu, 2013), but limited has concerned the teaching (Tio & Lakshmanan, 2021; Zhang & Jiang, 2016; Zhou, 2022). Only two quasi-experimental studies (Zhang & Jiang, 2016; Zhou, 2022) have examined the CL approach with Chinese classifiers specifically, and evidenced that the approach was conducive to learning outcome compared to the traditional approach. However, there still lacks a systematic organisation and documentation of how to use the CL approach to teaching Chinese classifiers, which is one of the research gaps that this present study attempts to fill.

Nevertheless, classifier teaching has long been placed in a peripheral position in the scenario of Chinese L2 teaching, and it remained under-explored in empirical studies thus far. This study hence attempts to fill in this gap by refining a CL approach framework specifically for teaching Chinese classifiers. Coupling with classifiers are usually polysemic in use, we emphasised the incorporation of Evans’s (2004) principled polysemy model (PPM) to explain each classifier’s multiple meanings within the framework of the CL approach.

We will start with a thorough literature review on Chinese classifiers, followed by the CL approach to teaching with its basic tenets. This study will then lead to discussion of relevant empirical studies concerning the approach before the current teaching contexts of Chinese classifiers; and how the CL approach may benefit teaching. A case analysis of classifier *tiao* that combines the CL approach with PPM will be demonstrated, followed by an evaluation of the approach’s pros and cons in teaching contexts and corresponding implications and contribution.

2. Literature Review

2.1 Chinese classifiers

Chinese classifiers are a linguistic device that categorise noun property by shape, taxonomy, functionality, and other parameters, constituting a fine-grained grammatical system (Li & Bisang, 2012; Zhang, 2007). There are over 900 classifiers in Chinese in total (Zhang, 2007). A Chinese classifier is structurally obligatory within a noun phrase when the head noun is quantified, as in (1a) (Jiang, 2017). Chao (1968) was one of the first to distinguish five subcategories of Chinese classifiers systematically: group (e.g.,

yi shuang kuaizi, ‘a pair of chopsticks’), container (e.g., *yi bei shui*, ‘a cup of water’), standard measure (e.g., *yi mi bu*, ‘a metre of cloth’), temporary (e.g., *yi kuai binggan*, ‘a biscuit’¹), and individual classifiers (also called sortal classifiers, e.g., *yi zhang zhuozi*, ‘a table’). Note that container classifiers refers to those objects conventionally used for contain something else, such as ‘bottle’, ‘box’, ‘bucket’. The concept of container classifier is different from temporary classifier that denotes the tentative use with entities. For example, cake as a whole unit, originally is matched with *ge*, but *kuai* is used as the temporary classifier when the cake was cut into pieces.

One type of classifiers resembling English words confining measurement are container classifiers, such as *xiang* (1a) and *dai* (1b); these examples describe a temporary state of quantification involving multiple cups. However, the generic classifier *ge* is required when explicit reference was made for the container, as in (1c).

- (1) a. *yi xiang beizi* (lit. one box cup, ‘a box of cups’)
- b. *yi dai beizi* (lit. one bag cup, ‘a bag of cups’)
- c. *yi ge beizi* (lit. one CLASSIFIER_generic cup, ‘one cup’)

In comparison, a sortal classifier has salient semantic correlation with its head noun’s property. For instance, *tiao* (for long and flexible objects) is associated with ‘rope’ in (2a). Sortal classifiers are often the difficult ones to learn for non-native speakers. Temporary and group classifiers (also the ‘measure words’) indicate an *ad hoc* status of the objects, such as *duan* and *kun* in (2b) and (2c), respectively; they resemble the English words ‘section’ and ‘bundle’, which indicate measurement.

- (2) a. *yi tiao shengzi* (lit. one CLASSIFIER_long, flexible rope, ‘a rope’)
- b. *yi duan shengzi* (lit. one section rope, ‘a section of rope’)
- c. *yi kun shengzi* (lit. one bundle rope, ‘a bundle of rope’)

As the shape-typed classifier *tiao* is the major focus on this study, we would like to expand on shape classifiers about their distinction in dimensionality and shape (Del Gobbo, 2014; Uchida & Imai, 1999). Previous research evidenced that Chinese native speakers and Chinese L2 learners, are able to identify which classifier to use with everyday objects’ (Gao & Malt, 2009) or even artificial objects’ (Li, Huang & Hsiao, 2010) in reference to the objects’ physical features. This includes the differentiation of dimensionality like one-dimensional, two-dimensional, or three-dimensional (Gao & Malt, 2009, Appendix A) and shape itself, such as long, flat, round (Gao & Malt, 2009, Appendix A). For example:

- (3) a. *yi tiao shengzi* (lit. one CLASSIFIER_long, flexible [one-dimensional] rope, ‘a rope’)
- b. *yi zhang zhi* (lit. one CLASSIFIER_flat [two-dimensional] paper, ‘a paper’)
- c. *yi ke zhongzi* (lit. one CLASSIFIER_roundish, small [three-dimensional] rope, ‘a seed’)

The generic *ge* is the most extreme example of Chinese classifiers that stands out as a general, all-encompassing one used broadly for animate and inanimate entities (Jiang, 2017; Ke, 2018). Forty percent of nouns can be used with *ge* (Zhang, 2007), covering animate entities (4a), abstraction (4b), and even non-flat, non-oblong objects of various sizes (4c & 4d).

- (4) a. *yi ge ren* (lit. one CLASSIFIER_generic man, ‘one person’)
- b. *yi ge xiawu* (lit. one CLASSIFIER_generic afternoon, ‘one afternoon’)
- c. *yi ge shijie* (lit. one CLASSIFIER_generic world, ‘one world’)
- d. *yi ge zidan* (lit. one CLASSIFIER_generic bullet, ‘one bullet’)

Ge is often used as a tentative placeholder of unknown or unfamiliar classifiers since language teachers often encourage learners to use *ge* when unsure (Polio, 1994; Zhang, 2007). Still, misuse of classifiers

may affect speech comprehension. For example, when ordering food in a restaurant, you want *yi bei cha* ('a cup of tea'), but if you use the generic classifier *ge* as *yi ge cha** ('one ? tea'), the waiter would probably serve you *yi hu cha* ('a pot of tea') instead. In some other cases, exchanging one classifier for another often incurs ungrammaticality, such as the misuse of *yi tiao zhi** ('one CLASSIFIER_long, flexible paper') for *yi zhang zhi* ('a piece of paper').

As demonstrated above, classifiers construct a complicated system in use. However, it should be acknowledged that most Chinese classifiers, particularly the sortal ones, are not randomly appointed to their paired nouns since each classifier as a character on its own conveys its unique meaning in Chinese. The internal semantic relation between the classifier and its head noun is intercorrelated and not totally arbitrary in most cases, recalling the comparison of *zhang* and *tiao* in the introduction. The intentional "recognition" of object's feature would certainly reduce the chance of learning classifier-object mapping by rote, and therefore it could reduce cognitive load and reinforce attainment (Zhang & Jiang, 2016). To this end, it is meaningful to employ the CL approach for an effective comprehensible teaching of sortal classifiers.

2.2 CL and CL approach to teaching

CL deciphers languages through its cognitive function, which offers new insights into the understanding of linguistic phenomena. As Dirven and Verspoor (2004, p. 13) remark, 'language resides, not in dictionaries, but in the minds of the speakers of that language'. From a CL viewpoint, language acquisition is an operation of cognition to aid learning; and the operation involves universal knowledge aside from purely linguistic knowledge (Achard & Niemeir, 2004; Dirven & Verspoor, 2004; Littlemore, 2009). The cognitive process is considered as a multicompetence of mental representation (i.e., problem-solving skills) comprised of capacity in learning comparison, categorisation, pattern-findings, and knowledge blending (Littlemore, 2009).

In the context of L2 pedagogical research, the CL approach to teaching is still at its infancy. The employment of the CL approach in teaching combines linguistics, cognition, and psychology together, with a usage-based view of language. CL offers a unified account of how languages organise meaning logically, by which explicating that languages are not idiosyncratic or arbitrary (Boers, 2013; Littlemore, 2009; Lu, 2015; Tyler & Evans, 2003). It aims to develop teaching tenets from research on memory, crosslinguistic influence, and other important SLA factors (Richards & Renandya, 2002). The CL approach to teaching regards language acquisition as a fuller picture of mental representation (e.g., learning comparison, categorisation, pattern-finding, and knowledge blending) during the learning process, which interacts with the experience of a learner's physical, social, and cultural surroundings in lieu of mechanically learning linguistic knowledge per se (Achard & Niemeir, 2004; Boers & Lindstromberg, 2008; Boers et al., 2010; Dirven & Verspoor, 2004; Littlemore, 2009; Richards & Renandya, 2002).

In addition, PPM raised by Tyler and Evans (2003) is an essential framework encapsulated in the CL approach to teaching, and it conceptualises that one meaning of a word could be associated with many other associated but distinguishable meanings. (Evans, 2004, p. 97). PPM has been implemented with the teaching of English prepositions (Wong et al., 2018) and Chinese preposition (Lu, 2015). Hence, highlighting the PPM within the CL approach could further promote appropriate use and long-term memorisation, enabling learning analytic and generalisable (Hung, 2019; Hung et al., 2018; Lu, 2015; Zhang & Jiang, 2016).

With the advantage mentioned above, the CL approach to teaching thus has the potential to mitigate negative crosslinguistic influences on the language-learning process as well (Achard & Niemeir, 2004; Richards & Renandya, 2002). Negative transfer, also called 'L1 interference,' often occurs when L1 and L2 differ in a nuanced fashion (Flege, 1995; Gass & Mackey, 2013; Polio, 1994; Zhang & Gnevshva,

2022). For instance, L1-L2 similarity can impede learning when the similarity induces confusion. For example, Japanese classifier 匹 *hiki* for small animals (e.g., dogs), bears the same orthographic form to the Chinese classifier 匹 *pi* that is exclusively for horses and wolves. The exact written form is very likely to hamper Japanese speakers' learning and use of the Chinese classifier *pi* (Zhang, 2019). However, theoretically, such negative L1 transfer is less likely to occur under the CL approach, because the CL approach can guide learners through learning classifier-noun mapping on a cognitively traceable manner (Zhang & Jiang, 2016).

2.3 CL approach to teaching classifiers

We will introduce five principal concepts (image schemas, prototypes, metaphorical extensions of meanings, principled polysemy, and semantic networks) that have been scrutinised and deemed specifically beneficial to language learning under the CL approach (Achard & Niemeier, 2004; Boers & Lindstromberg, 2008; Lakeoff, 1986; Littlemore, 2009; Lu, 2015; McNamara, 2005; Reda, 2015; Rosch, 1978; Wong et al., 2018; Zhang & Jiang, 2016). In what follows, we will discuss the five concepts one by one to offer a comprehensive picture of the potential application and illustration of the CL approach to teaching.

Image schema. The CL approach is advantageous in its intrinsic representation of an image schema (Lakoff, 1986). Image scheme is a recurring structure encoded in mental representation that restores the practice of understanding and reasoning knowledge, highlighting abstract or extended senses of a concept (Croft & Cruse, 2004; Driven & Verspoor, 2004; Lakeoff, 1986; Littlemore, 2009). For instance, the conceptual representation of time in Western thought is structured as horizontal and sequential, as in an oft-cited expression, 'The week flew by' (Verspoor, 2008, p. 267). Namely, the passing of time is like a bird flying by. On the contrary, the Chinese concept of time inclines to vertical dimension as in the expression of *shang zhou* (lit. up week), denoting 'last week' (see empirical results from Boroditsky, 2001). The different preferences on the perceptions of the world reflect cultural and linguistic differences, highlighting the importance to apply the CL approach in language teaching.

With image schema, abstract concepts are embodied in a concrete, straightforward fashion, which can successfully avoid negative L1 linguistic transfer to L2 learning (Akbari, 2008; Mansourzadeh, 2014). In addition, the employment of image schema often involves presentation of visual images and keywords together (see Figure 2-6) to construct meaningful links between expressions and their meanings, so that it is easier for learners to digest and understand the meaning presented. Accordingly, learning motivation is more likely to be ignited and/or enhanced under the CL approach languages than the traditional approach (Csabi, 2004; Zhou, 2022). It hence strengthens learning retention, different from simple repetition or rote learning. Zhou (2022) also documented that shape classifiers are particularly suitable for the CL approach to teaching classifiers, with the incorporation of image schema.

Prototype. The CL approach features a prototype with which each word is described as a radial network with a core sense. The concept of prototype (as a key term in Semantics) concerns the categorisation of objects. A prototype represents a typical exemplar in the centre of each category membership; it draws attention to a concept's core sense that can activate fast categorisation mapping (Del Pinal, 2016; Margolis & Laurance, 1999; Rosch, 1978; Evans & Tyler, 2004). For example, the prototype of bird in Britain is robin but in China it is sparrow. The relationship between prototype and Chinese classifiers has been intensively studied by Gao and Malt (2009). They reported that native Chinese speakers were more likely to name the features of the exemplar (i.e., prototype) that aligned well with its associated classifier. For instance, the classifier *ke* '颗' denotes objects with a 'small, three-dimensional, roundish' feature; hence, objects with prototypicality 'pearls, peas and soybeans' were spontaneously recalled when Chinese participants encountered *ke*. Gao and Malt (2009) illustrate a sensitivity in mapping between a classifier's core sense and its associated nouns. If the mapping mechanism or rule

can be taught to L2 learners, it may effectively enhance their learning outcome. This affords a robust theoretical support to apply CL approach (e.g., image schemas and prototypes) when teaching L2 learners' classifier learning.

Metaphorical extension of meaning. The CL approach highlights a connection to the metaphorical meanings derived from the core sense (prototype). Chinese classifiers derive multiple metaphoric meanings from their core sense, the metaphorical sense reflects the opaque relationship between the classifier and the head nouns it associates with (Achard & Niemeier, 2004). As per Littlemore (2009), it is crucially meaningful to incorporate the CL notion of metaphor into language learning and teaching, especially when teaching meaningful linguistic components. Chinese classifiers construct a large number of metaphorical uses with their associated nouns; and the uses are often elusive if we only refer to literal expressions. To illustrate, the classifier *tiao* can be applied to a concept that denotes a whole unit connected by many individual parts, such as *yi tiao xin* (lit. one CLASSIFIER_long, flexible heart), an idiosyncratic and vivid metaphor for 'a team effortfully collaborating in sync'. With the annotation of the CL approach, the metaphorical use of *tiao* in this sense can be traced back to its core sense – whose primitive semantic features are long and flexible. Accordingly, a classifier's extended metaphorical uses construct an underlying semantic network structure of its historical cognitive biases (Boers, 2013; Gao & Zhang, 2014; Zhang & Jiang, 2016).

Principled polysemy model (PPM). Tyler and Evans's (2003) PPM conceptualises that one meaning of a word could be associated with many other associated but distinguishable meanings. Evans's (2004, p. 97) further proposes a five-level criteria 'Sanctioning Sense' framework for time, including five criteria to categorise polysemic senses: 1) earliest attested meaning; 2) predominance in the semantic network; 3) predictability regarding other senses; 4) a sense with a plausible cognitive antecedent; and 5) a sense relating to lived human experience, i.e., experience at the phenomenological level. As Lu (2015) successfully adapted these principles to analyse Chinese preposition *shang*, we will do so to subdivide Chinese classifiers – *tiao*'s polysemy in Section 3 as a case analysis.

Semantic network. There are internal associations between the multiple uses of a classifier, which, in terms of CL, means that there is a semantic network to connect each classifier's polysemy. Take classifier *gen* as an example. Assuming that L2 learners know 'needle' is associated with *gen*, they are supposed to further reason that 'line' – with a very similar shape with "needle" – is also paired with *gen*. In line with this reasoning, given knowing that *ba* is the classifier for 'knife', learners are supposed to naturally assume that a semantically highly related nouns such as 'scissors', 'hoe', 'saw' are also associated with *ba* (McNamara, 2005). This is because these are tools enjoy a similar physical construction - both have a handle (can be conceptualised by imagine schema and prototype) and are used for cutting (semantically related).

Furthermore, an extended application on the semantic network is lexical extrapolation – another benefit to apply the CL approach to teaching classifiers. L2 learners could, naturally infer that *ti xu dao* ('razor'), *kan dao* ('chopper'), *shou shu dao* ('scalpel'), and *zhi jia dao* ('nail-clipper') all match with *ba*, since these are difference kinds of knife serving for different purposes. As such, learners could acquire morphemes, words, and classifiers simultaneously within the CL approach. The more complicated but rewarding process as such helps to reduce memory load meanwhile bootstrapping classifier generalisation (Shanks, 1995; Zhang & Jiang, 2016).

In a nutshell, this section delineates a nuanced picture of how to administrate the CL approach to teaching. It started with image schema (the visual cues that aid learning), following prototype (the canonical feature of the classifier), metaphorical extension of meaning (from prototype to extended meaning), PPF components (the development of meaning), and finally semantic network (the generational use of one object to another object under the same classifier).

2.4 Empirical studies on the CL approach in teaching scenario

In this section, we will review some of the studies on the CL approach for language teaching in general. Although the CL teaching approach in L2 classroom learning scenario is still at the mere periphery of interest, it has been examined by emerging quasi-experimental teaching studies (Boers, 2013; Gao & Zhang, 2014; Tyler, 2012; Wong et al., 2018; Zhang & Jiang, 2016). Most research investigates education with English as foreign/second language contexts, with results consistently indicating greater efficacy of the CL approach compared to the traditional teaching approach. For example, the CL approach was exercised to teach English prepositions in, on and at to Japanese L1 learners (Cho, 2010). It was reported that elaboration on how various uses (including metaphorical use) of the three prepositions derived from their central image schemas significantly enhanced learning outcome. Likewise, Evans & Tyler (2004) used schematic representations to elaborate on the path and manner of the English preposition over. In terms of English vocabulary and idiom learning, the CL approach boosted learning interest: both adult and young learners were self-motivated to guess word meaning and engage in creative ways of thinking (Csabi, 2004). These spontaneous mental activities were found to facilitate language learning, and thus prolonged learning retention.

More recently, Lu (2015) refined the CL approach featured by the PPM to teach a Chinese polysemic preposition *shang* (equivalent to the English on, over, about, up and forward). A contrastive analysis of the polysemic senses was legitimately instantiated to differentiate meanings. Lu (2015) sets out the theoretical framework for Chinese research in this line and laid a starting point for this present study on classifiers. In a similar vein, the PPM was employed to teach Cantonese speakers English prepositions: in, at and over (Wong et al., 2018). The whole lesson was presented in the form of a sentence–picture matching task, again with image schema illustrating each preposition. The authors demonstrated polysemic uses of each preposition for the purpose of discriminating similarities and differences within and between propositions. Results again substantiated the efficacy of the CL approach in students' learning outcome than those exposed to other teaching conditions.

However, to the best of my knowledge, none of the existing studies has refined PPM into Chinese classifier teaching thus far. The integration of PPM with the CL approach is particularly important in teaching Chinese classifiers, and this has been neglected from existing exploration of classifier teaching (cf. Zhang & Jiang, 2016). The PPM framework is highly associated with the elaboration of semantics, which is tied to the use Chinese classifiers for two major reasons. Firstly, the mapping rule between classifier and noun can be referenced by the PPM framework. For example, *tiao* is almost always paired with elongated objects. Second, there are some internal relational developments among all the objects mapped with the same Chinese classifiers. For instance, it is spontaneously to reason from *tiao*'s prototype – line, and then generalise line to necklace, since both endorse an elongated feature.

2.5 The teaching of Chinese classifiers and the application of CL approach

Classifier learning has been marginalised in teaching Chinese as a second language (Jiang, 2017). Classifiers are always presented in vocabulary sessions in a piecemeal fashion (Liu, 2011). Language teachers often introduce the concept of classifiers at the very beginning of introductory Chinese courses, along with an oversimplified suggestion for students to learn classifier–noun mappings by rote memory (Jiang, 2017; Zhang & Jiang, 2016). Sporadic input like this incurs ramifications: 1) the importance of classifiers is downplayed, which potentially decreases motivation for learning; 2) students heavily rely on rote memory in learning; 3) students lack the ability to generalise the use of classifiers; and 4) students overgeneralise the use of *ge*. The CL approach has the potential to address these issues through a systematic demonstration of classifiers' use, according to which disentangling the intricate classifier–noun semantics connection by comparing and contrasting different senses of use derived from the same classifier (Boers & Lindstromberg, 2008; Jiang, 2017).

Still, very few researchers have proposed the employment of CL approach to teaching Chinese classifiers. Zhang and Jiang (2016) taught English-L1 learners one complicated classifier: *dao* “道”. Although results showed no significant difference between the traditional approach and the CL approach groups in using trained items, the CL group presented a much higher correct use when mapping *dao* and novel nouns. Their study suggests that the CL approach stimulates classifier generalisation. However, one limitation that we may concern is that their study did not fully capitalise on the five CL concepts as mentioned above. For example, there appears to be insufficient application of image schema in the illustration, and the concept of prototype was not explicitly pointed out.

More recently, Zhou (2022) puts forwards the CL approach by teaching Chinese classifiers to children with Chinese as a heritage language in Germany. The major difference between traditional and the CL approach is the part of ‘language focus’ in the latter one: teachers guided students through ‘categorisation’ and ‘image-schemata’ of the classifiers. This is a crucial step to unfold Chinese classifiers’ conceptual perception and their corresponding head nouns. Additionally, one special note goes to the combination of CL approach and task-based language teaching approach in teaching exercise, which advanced prior research that solely focused on the theoretical practice.

Another piece of intriguing finding reported in Zhou (2022) is that the CL approach contributed significantly to classifier *tiao*, suggesting a great potential of employing the CL approach to teaching shape-typed classifiers. First, the application of image schema can effectively visualise shape dimensions (e.g., long, flat, or round). Second, the shape dimensions are probably not ‘transparent’ for non-native speakers (evidence comes from a classifier priming experiment from the author’s self-anonymised research, under review). Third, shape-typed classifiers also have multiple metaphorical senses in use, which could easily lead to confusion during learning (Tai & Wang, 1990). Fourth, more importantly, using the CL approach for teaching classifiers shows a classic problem identified in English prepositions (e.g., Cho, 2010; Tyler & Evans, 2004; Wong et al., 2018). For example, English spatial prepositions *over*, *above*, and *on* all mean certain degree ‘on top of’, but they refer to different nuanced meanings. Likewise, classifiers of a certain group, such as shape classifiers *tiao*, *gen* and *zhi*, all refer to entities with a ‘long’ construction; and they often have similar functions, and these functions divide up the semantic space for expression. To tackle this problem, learners have to assign the correct classifier for each semantic subdomain; namely, to understand differences between the various classifiers.

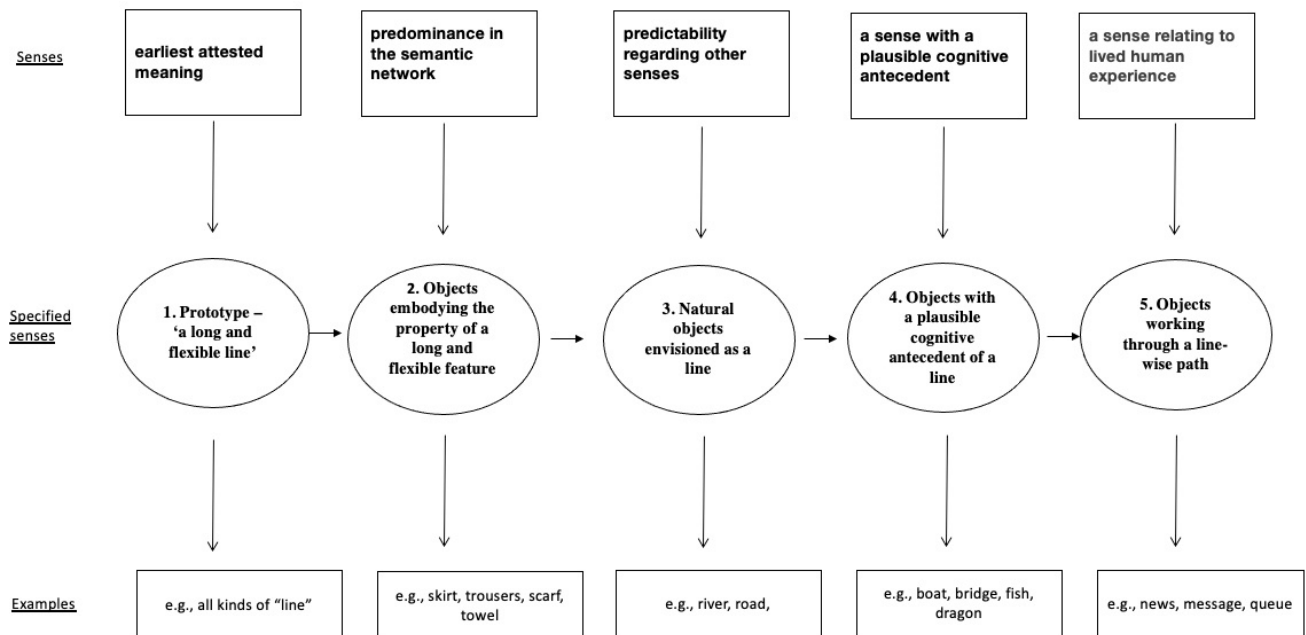
Taken together, this present study aims to expand on the extant research of the CL approach to teaching Chinese classifiers and thus proposes to use CL approach for classifier teaching. In what follow, we will exemplify how to use the CL approach to teach classifier *tiao*.

3. A case analysis of classifier *tiao*

We propose to use the CL approach (Zhang & Jiang, 2016; Zhou, 2022) by featuring Evans’ (2004) PPM. It should be noticed that among various types of classifiers (e.g., shape-, animated-, function- oriented), shape-typed classifiers are the most appropriate ones to be taught under the CL approach guideline. This is because shape can be well illustrated by image scheme and prototype (as in Zhang & Jiang, 2016; and Zhou, 2022). Therefore, for a didactic purpose, the reminder of this study will exemplify the CL approach to teaching classifiers with one frequently used shape classifier *tiao*. Another reason for only exemplifying *tiao* is because it has been systematically reviewed in its semantic layer by Tai and Wang (1990), and it was tested particularly useful with the CL approach to teaching (Zhou, 2022). More importantly, the following demonstration would follow Evans (2004) to offer a stepwise analysis. All the examples in this section were verified using an authoritative Chinese dictionary Handian ‘漢典’ (2004). Figure 1 demonstrates the conceptual overview of the PPM with classifiers.

Figure 1

The conceptual overview of the PPM with classifiers



3.1 Sense 1: Prototype - ‘a long and flexible line’

According to the CL approach, learning classifier–noun agreement is a process that begins with identifying the prototype of the head nouns that matched with a classifier, such as *xian* (‘line’) for classifier *tiao* (Zhang, 2007). Following Evans’ first criteria, Sense 1 for *tiao* refers to its earliest attested meaning, namely, a long, thin, and flexible twig that is often conceptualised as a ‘line’ (Handian, 2004), including *zhi xian* (‘straight line’), *qu xian* (‘curved line’) and *bo lan gxian* (‘wavy line’). Figure 2 shows the demonstration adapted from Zhang and Jiang’s (2016)

PowerPoint design. *Tiao* is presented at the top left panel in red, followed by its written information about the prototype and a brief feature annotation in parentheses. Beneath is *tiao* - the image schema that conceptualised a long and flexible line. In the right panel are images of the corresponding head nouns (both in the pictorial and word forms) matched to *tiao* and the relevant extrapolated words (in word form only). Note that on the first line beneath the figures are the prototypes; where appropriate, the root is marked red.

Figure 2

Sense1 for *tiao*

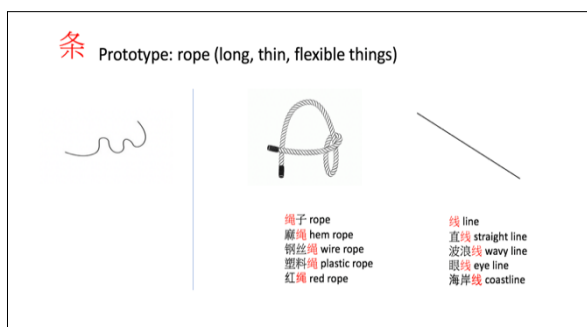
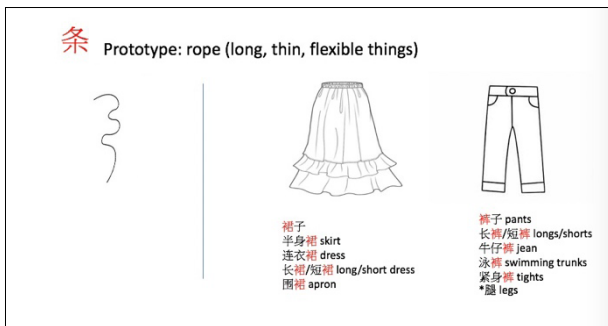


Figure 3
Sense 2 for *tiao*



3.2 Sense 2: Objects embodying the property of a long and flexible feature

The second sense of *tiao* refers to objects that bear similarity to be ‘long in shape and flexible in contexture’, resembling a line. This is the predominance in the semantic network of nouns licensed by *tiao*. Objects pertaining to this sense can be of different sizes in width (Zhang, 2007; Zhou, 2022). For example, *qun zi* (‘skirt’) and *ku zi* (‘trousers’) are representatives that fall into this sense since they can be viewed as long and flexible from the front (Figure 3). Language teachers may explain to students about the right angle to perceive the objects, so as to reinforce the visualisation and memory. These objects can be twisted as a line as well due to their flexibility. Likewise, objects with similar function or property that fit with ‘long and flexible’ such as ‘scarf’ and ‘towel’ also match well with *tiao*.

3.3 Sense 3: Natural objects envisioned as a line

Based on senses 1 and 2, it is reasonable to consider that objects share *tiao*’s property in varying degrees, which is the ‘predictability regarding other senses’. *He* (‘river’) and *lu* (‘road’) can be associated with *tiao* because they enjoy salient similarity with the shape that *tiao* refers to (Figure 4). However, these objects are much bigger in size compared to those in Sense 1 & 2. Noticeably, although with specific rules of the classifier–noun agreement, objects belonging to the same taxonomic category (also ‘lexical taxonomy’ in Zhang, 2007) usually share the same classifier, so ‘brook’ and ‘waterfall’ match *tiao* due to their intrinsic similarity [of containing water] with ‘river’.

Figure 4
Sense 3 for *tiao*

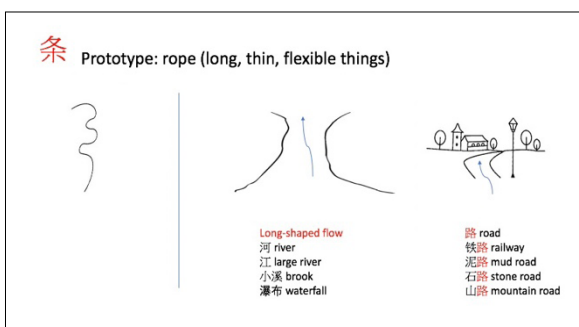
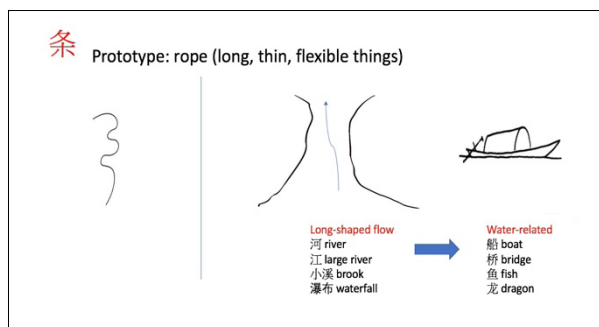


Figure 5

Sense 4 for *tiao*

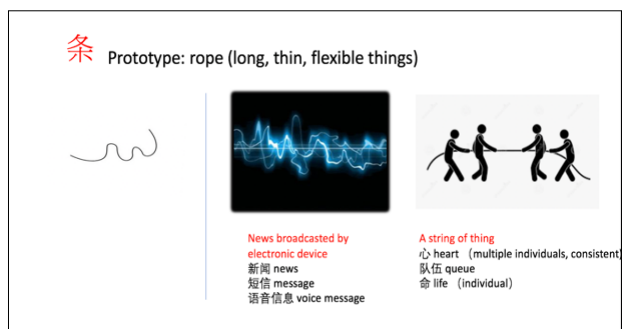
3.4 Sense 4: Objects with a plausible cognitive antecedent of a line

The fourth sense concerns the notion of ‘antecedent cognitive processing’ (Evans, 2004). Apart from merely relying on shape as a baseline, thematically correlated objects of Sense 3, such as ‘river’ and ‘road’, could be *chuan* (‘boat’), *qiao* (‘bridge’), *yu* (‘fish’) and *long* (‘dragon’) (Figure 5). These objects inherit the ‘long’ property, but the ‘flexible’ feature seems to be overshadowed as the foci now shift to the relevant objects’ antecedent. For example, the antecedent objects (e.g., ‘boat’) can be connected to Sense 3’s object ‘river’ through semantic network (Tai & Wang, 1990). In teaching demonstration, teachers are encouraged to emphasise the close relatedness between ‘river’ and ‘boat’ to assist with memorisation, meanwhile reducing cognitive load.

3.5 Sense 5: Objects working through a line-wise path

Aside from the concrete and visual sense of being long and flexible, *tiao*’s iconic sense pinpoints to something resembling a flexible and invisible/abstract transmission medium. This is the so-called metaphorical sense of *tiao*, i.e., the sense about human cognitive experience – the way that human beings perceive the world through everyday life experience (Evans, 2004). For concrete objects, for example, we all know what a ‘rope’ is, and we can list many semantic primitives for the concept of ‘rope’ such as [long], [thin], [flexible], [tool]. The first three primitives are all related to *tiao*’s canonical semantic features. On a metaphorically abstract sense, *tiao* refers to a string of things that link with each other, like a ‘queue’ in the game tug-of-war; and these concepts still share the same semantic primitive - [long], [thin], [flexible] with ‘rope’. That is how *yi tiao xin* (lit. one CLASSIFIER_long, flexible heart) is used to metaphorically describe the status of a group of people working together. Likewise, when imagining the paths of ‘news’ and ‘messages’, a vivid image of long, flexible sonic waves broadcasted from telephone can be visualised as in Figure 6. As an extension (recalling the transition from Sense 3 to Sense 4), the antecedents of ‘message’, such as ‘suggestion’, ‘comment’ and ‘strategy’, can also match with *tiao*.

Figure 6

Sense 5 for *tiao*

4. Instructional context, limitation, implications, and contribution

The above teaching demonstration on the CL approach is purposefully designed for learners who are learning Chinese as their L2 and with relatively matured cognition (Zhang & Jiang, 2016). For one thing, the CL approach requires a higher level of cognitive ability to assist with meaning decoding (Dirven & Verspoor, 2004). This means that younger L2 learners such as pre-schoolers might not be the ideal recipients of the CL approach since they may not be able to fully understand the intricate semantic connections between the classifier and its head nouns (e.g., the [long] feature of *tiao* and that in ‘boat’). For another, the understanding of the connection from original meaning to metaphorical senses is also cognitively demanding (Littlemore, 2009).

However, albeit with the above discussion, this study is not without limitations. It should be noticed that for the sake of a didactic purpose, only one example *tiao* was illustrated in the present study, which may not fully represent the complexities of learning all Chinese classifiers. We should bear in mind that contrasting the *tiao* examples with another showcased the proposed method’s relevance and superiority over the traditional teaching approach. Nevertheless, for those classifiers with a narrower range of exemplars (e.g. *pi* or *horse*) or those lacking a straightforward mapping (e.g., the generic *ge*), learners might still need to rely on a more traditional learning approach such as rote memorization. Another limitation is that this present study just formulated a framework of using the CL approach for classifier teaching, lacking empirical data to verify the idea. Still, researchers or educators who are interested in this line of research could certainly expand on this current stage and exercise the framework with other classifiers. If possible, interested researchers are encouraged to conduct related empirical studies for the validation of the teaching approach proposed.

Nevertheless, this present study provides theoretical and practical implications to the field. Existing studies offer theoretical justifications for employing the CL approach into teaching with its basic concepts to enhance learning outcome (e.g., Cho, 2010; Lu, 2015; Zhang & Jiang, 2016; Zhou, 2022), while none of them has provided a systematic underpinning and overview of the theory into teaching. This study demonstrates the rationale for applying the CL approach to teaching Chinese classifiers and refines the approach. The case analysis for *tiao* exemplified how the CL approach can work well with teaching classifiers. We would also like to emphasise that one imperative aspect and challenge to classifier teaching is how to incorporate and/or extend the use of classifiers with ‘exceptional’ exemplars or non-prototypical examples to reduce the over-reliance on the general classifier *ge*. In this regard, Sense 4 and 5 in the demonstration have the potential to capture unusual classifier-noun pairings, making learning less cognitively loaded and more fun. So the approach could be a great approach to fill that gap.

On a practical level, this study offers a more comprehensive illustration and guidance of how the CL approach can be applied into language teaching. The advantage of the CL approach to teaching manifests itself clearly in disentangling classifiers’ complicated semantic network through a fine-grained presentation of image schema and notion. The CL approach also incorporates the contrastive analysis into teaching, which contributes to understand each classifier’s polysemic meanings (Lu, 2015).

Overall, this study advanced the extant CL framework in teaching scenarios, particularly with the teaching of Chinese classifiers. This study elaborated on the employment of the CL approach by exemplifying classifier *tiao*, which posits the potential to promote the teaching and learning of shape-typed classifiers. However, there is always the concern of time efficiency in real teaching contexts: the whole Chinese teaching course may not allow sufficient time for this teaching practice in the classroom (Zhou, 2022). Alternatively, language teachers may split the teaching of classifiers into several smaller sessions along with the normal teaching. One way to do so is to teach only one classifier each time, which may only take around five minutes. Another possibility is to encapsulate the CL approach to teaching classifier in online learning programs as in Wong et al. (2018), for the teaching of English prepositions. This may first effectively compensate the time issue, and students could learn and practice from these programmes any time anywhere after class. Second, online dynamic elements such as animations and

moving arrows are more likely to vividly present image schema for aiding learning. No less important is the potential that we gain from this study: the learning of classifiers is cognitively related but not solely linguistic oriented.

Note

1. It can also be translated as “a piece of biscuit”, depending on the context.

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借鑒認知語言學的方法之量詞教學：關於“條”的案例 分析

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摘要

認知語言學的定義為對語言認知功能的研究。雖然認知語言學教學方法在第二語言教學中仍處於起步階段，但它有助於學習者習得有意義的語言單位（例如介詞和量詞）。值得注意的是，對漢語二語學習者來說最困難的地方之一在於記憶漢語中量詞和名詞的搭配。此外，漢語中量詞的學習經常在課堂教學中被邊緣化，死記硬背則是其最原始的學習方式。然而，人們常常忽略了漢語量詞與其相搭配的名詞之間存在獨一無二的語義關聯性，這為使用認知語言學的方法來教學量詞提供了理論依據。鑒於大多數漢語量詞與名詞搭配使用時皆存在一詞多義現象，本研究提出採用認知語言學的方法來進行量詞及其相關名詞的教學。認知語言學教學法的五個基本概念為：圖像圖式、原型、隱喻、語意網路和原則性一詞多義。文章中，作者通過常見量詞「條」（指示長而靈活的名詞）來舉例說明如何解析量詞中的原則性多義詞。本研究的結論是，認知語言學的方法對學習者的認知要求較高，儘管此教學法有助於減輕學習記憶和應用問題，但其有可能佔用大量課堂時間。因此本研究建議將此方法置於課堂之外的線上自主學習情境中，且最佳是應用於成人二語學習者。

关键词

認知語言學，漢語量詞，漢語作為第二語言，原則性一詞多義框架

張佳歡，香港大學教育學在讀博士研究生。她在澳大利亞國立大學獲得語言學一等榮譽學士學位，隨後在劍橋大學獲得理論與應用語言學碩士學位（心理語言學方向）。她的主要研究方向為一語和二語習得，心理語言學和認知語言學。她目前主要研究內容是從教育學的角度研究心理因素對閱讀和寫作表現的影響。