The Particle "Zhe" in Mandarin and the Role of Information-Network Technology in Teaching "Zhe"

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Abstract: This paper takes the particle *zhe* (着) in Mandarin as its object of study, explaining its linguistic definition, the structures that use it, and its grammatical meanings. It also explores the role of information-network technology in teaching *zhe* during the COVID-19 pandemic. After defining the identity of *zhe*, we consider *zhe* as a particle following a verb and summarize the structures that use *zhe* and their syntax. Next, we summarize the grammatical meanings of *zhe*. Finally, we explore strategies for using information-network technology to address the challenges involved in teaching *zhe* to students as a foreign language. This paper argues that *zhe*, a particle when following a verb, indicates that an event is complete. It is difficult to teach *zhe* mainly because of its complex grammatical functions. After classes in Chinese as a foreign language moved online during the COVID-19 pandemic, new information-network technologies were used to assist teaching and learning.

1. Introduction

Like $le(\zeta)$ and guo(过), zhe(着) is an important and widely used particle in Mandarin. It can be combined with various types of words to form a wide range of constructions. For example, *zhe* can be used with verbs, as in *deng zhe* (等着) "wait", *zou zhe qiao* (走着瞧) "go and see", and *zou zhe zou zhe* (走着走着) "walk"; with adjectives, as in *hong zhe lian* (红着脸) "red-faced" and *zhi zhe zou* (直着走) "go straight"; with prepositions, as in *chao zhe* (朝着) "towards"; with pronouns, as in *zhe me zhe* (这么着) "just like this"; and with adverbs, as in *ji xu zhe* (继续着) "continue". Among all these possible combinations, a verb followed by *zhe* is the most common and widely used structure, as well as the most complex. For this reason, teaching students to use *zhe* in "V+*zhe*" constructions has always been a difficult challenge in linguistics and teaching Chinese as a foreign language.

With the outbreak of the COVID-19 pandemic, more and more Chinese courses for international students in higher education have shifted from in-person to online venues, relying increasingly on multimedia technology. For this reason, multimedia information technology has become an important auxiliary tool for language teaching. This paper takes *zhe* as its object of study. First, we outline the key functions of *zhe* in linguistics. Then we discuss how to integrate multimedia technology effectively into the teaching of *zhe* and summarize potential teaching strategies.

2. The Identity and Structure of Zhe

2.1. Zhe as a Particle

Zhe is an important particle in Mandarin, belonging to the function-word category. The basic function of the particle *zhe* is to follow a verb, expressing a specific grammatical meaning. That a particle can follow a verb is almost indisputable in the literature. Most authoritative reference books

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include detailed descriptions of the verb-particle structure, and "linked to a particle" is one of the basic verb usages in verb dictionaries. For example, Huang (1998) classify verbs into forty-four categories, seven of which can be followed by a particle ^[1]. Four out of the seven categories of verbs can be followed by the particle *zhe*.

In function-word dictionaries, the basic function of aspectual particles is to "follow a verb to express a certain grammatical meaning". Since different function-word dictionaries classify particles in different ways, there are different views on the attribution of zhe. Bao (1988) has argued that the particle is the least independent function word, with the least concrete meaning ^[2]. A particle indicates that a change of action or property has occurred in a particular span of time. Bao divides particles into three groups: structural particles, tense particles, and tone particles; zhe is a tense particle. According to Wang (1998), the particle has an auxiliary role and expresses an additional meaning. He also regards *zhe* as a tense particle ^[3]. Lü (1999) was the first linguist to define *zhe* as an aspectual particle ^[4]. Lü considers the particle to be the least independent grammatical form; its role resembles morphological changes in other languages. In discussing the characteristics of verbs, Lü has argued that zhe following a verb indicates a "continuous aspect", grouping *zhe* with *le* and *guo* as aspectual particles. Following Lü, most studies have referred to *zhe* as an aspectual particle. Zhu Jingsong's grammatical overview in the appendix to the Mandarin Dictionary of Function Words classifies zhe as an aspectual particle, pointing out that the aspectual particle reflects an action or property in the process of change; it can indicate the progressive or continuous aspect of an event^[5].

2.2. The "V zhe+XP" Structure

Few studies exist on the structure of "V *zhe* +AP" and those that do focus mainly on analyzing the syntax, semantics, and pragmatics of "V *zhe* A". They center on the characteristics of V and A, the relationship between them, their semantic orientation, and the structural pattern they form together. Chen (1987) was among the earliest researchers to study this structure, taking "V *zhe dian er* (V 着点儿)" as an object of study and discussing various transformations of this structure ^[6]. Most later scholars focused on the "V *zhe* A" structure, rather than the specific form "V *zhe dian er*". Shi (2006, 2010) examined the semantic relationship between V and A and the semantic features of "V *zhe*", arguing that when "V *zhe*" has different semantic features, "V *zhe* A" is a adverbial-kernel construction, a contracted construction, or a verb-resultative construction ^[7, 8, 9]. At the same time, the adjectives in the "V *zhe* AP" structure are selective in relation to verbs, requiring the verb before *zhe* to be a human action verb, which reflects multiple semantic orientations, such as pointing to the subject, pointing to the object, and pointing to the action.

Another structure is "V *zhe* + NP". Since this structure can form existential sentences, relatively few studies focus on the "V *zhe* N" structure alone; instead, most studies consider "*zhe*" in relation to existential sentences. A typical example is Zhu's comparative analysis (1980) of two different types of sentences, *tai shang zuo zhe zhu xi tuan* (台上坐着主席团) "the presidium is sitting on the stage" and *tai shang chang zhe xi* (台上唱着戏) "the opera is being performed on the stage"^[10]. He argues that the former indicates existence and the position of things, while the latter indicates continuity of action or behavior. Song (1982, 1988, 1992), who conducted a series of studies on existential sentences, concluded that three kinds of existential sentences ^[11-13]. He analyzes in detail the possibility of using *you* (有) as a replacement, as well as the nature of the verb, the role of *zhe*, and the semantic features of sentences.

The structure "V *zhe* VP" can form serial-verb constructions, which will not be discussed in detail here. A verb with *zhe* can form a serial-verb construction in various patterns, such as "V1 *zhe* V2", "V1 *zhe* V2 *zhe*", "V1 *zhe* V2", most of which reach one of two conclusions, namely, that "V *zhe* V" is either an adverbial-kernel construction or a serial-verb construction.

3. The Grammatical Meaning of Zhe

The grammatical meaning of the word *zhe* is generally understood by academics in two ways: to indicate continuity and to indicate progress.

3.1. *Zhe* for Continuity

The first person to propose the "continuity theory" was Lü (1942), who believed that an action passed through different phases, which could be expressed through different "aspects" (*dongxiang* 动相); "*fangshixiang* 方事相" meant that the action was continuing and the aspectual word was *zhe*^[14].

Zhu Dexi, Tatsuo Ota, Dai Yaojing and other scholars have summed up the meaning of *zhe* as "to continue". According to Zhu (1982), *zhe* is added to a verb to indicate the continuation of an action or change ^[15]. When it is added to a verb that expresses a gesture, it designates a static state; when it is added to a verb that expresses an action, it indicates the state that remains after the action is complete. Dai (1991) argues that *zhe* denotes continuation and summarizes three semantic elements of *zhe*: non-completeness, continuity, and duality of movement and stillness ^[16]. In contrast to other scholars, Dai believes that, regardless of whether *zhe* denotes a dynamic or static state, it is determined by continuity, only the strength of the two shifts, in accordance with the semantic influence of the verb.

Lü (1999) divides the grammatical meanings of *zhe* into four types, in one of which, *zhe* indicates the continuation of a state and is generally not preceded by words such as *zheng* (\mathbb{E}) or *zai* (\mathbb{E})^[4]. Hidetoshi (1983) tends to emphasize that there are two *zhe*: "*zhe* d", which indicates that a state is continuing, and "*zhe* p", which indicates that the action is continuing; these belong to two different grammatical categories ^[17].

3.2. Zhe for Progress

Wang (1943) was one of the first scholars to propose that *zhe* indicates "action in progress", arguing that *zhe* indicated a progressive aspect, and "something that was in progress" ^[18]. Wang proposed that *zhe* was a marker, used to indicate the progressive aspect; at the same time, he said that *zhe*, as a progressive aspect, had changed in contemporary Europeanized writing, becoming merely a postpositive of general verbs. *Zhe* could now be dispensed with, while the use of *zhe* indicated "a modern trend" in language, as in *pang da han he xun cha dou xie le yan yan jiu zhe lao ma zi de gou jian ban de xie jian* (胖大汉和巡察都斜了眼研究着老妈子的钩刀般的鞋尖) "the fat man and the inspector both squinted and studied the hooked and knife-like toe of the old woman's shoe."

At first, Lü (1942) thought that *zhe* signified the progressive aspect of action [14]; later, he proposed that *zhe* was a particle word indicating dynamics. He summarized the meaning of *zhe* using four points. In one of those points, *zhe* meant progressing; it was used immediately after a verb or adjective to indicate that the action was underway. Words such as *zhengzai* (正在) and *zai* (\overline{E}) can be added in front, while the intonation word *ne* (\overline{R}) often appears at the end of the sentence. In the meantime, *zhe* can be inserted between two verbs to form a serial-verb construction, where the two verbs indicate that actions are occurring at the same time, as in *zuo zhe jiang* (坐着讲) "sit and speak". Alternatively, it can show that an action is taking place while a second action occurs, as in *xiang zhe xiang zhe xiao le qi lai* (想着想着笑了起来), to "laugh while thinking"^[4].

Researchers above have focused on the meaning of *zhe* from an aspect perspective. Zeng (2015) places *zhe* in the context of dynamic continuity and considers six main grammatical meanings of *zhe*, namely: action in progress, repeated action in progress, continuous and unchanging action in progress, continuation of the state caused by an action, continuation of the state, and the existence of the state $^{[19]}$. The different grammatical meanings of *zhe* relate to the verb with which it is used.

4. Insights into the Teaching of Zhe in the New Context

4.1. The Main Difficulties in Teaching Zhe

The discussion in the first three sections shows that the linguistic complexity of *zhe* lies in the challenge of understanding its grammatical meanings. Since *zhe* belongs to the category of function words and its semantics are abstract, the meaning and usage of *zhe* always present a challenge when teaching Chinese as a foreign language to second-language learners and teachers. Despite this, there are few relevant studies specifically about *zhe*, and even fewer studies in the field of teaching Chinese as a foreign language. The most common problem for international students attempting to master Chinese particles—especially aspectual particles—lies in comparing aspectual particles such as *le*, *zhe* and *guo* with a certain tense of the foreign verb, or not using any particle element at all. ^[20] Later researchers have also studied the confusion between aspectual particles and native verb tenses, discovering a phenomenon similar to Fang's research results.

4.2. Information Network Technology as a Pedagogical Aid in the Teaching and Learning of *Zhe*

Previous studies of the acquisition of *zhe* have been based on in-person teacher-to-student instruction. However, with the outbreak of COVID-19, international students have been restricted from international travel. As a result, most courses for international students across the country have had to shift from in-person to online delivery mode. During in-person courses, teacher-student interactions, blackboard demonstrations, demonstrations through gestures, and demonstrations of physical materials can all be delivered well. However, these pedagogical activities are constrained in online-delivery mode. Effective information-network technology and multimedia technology can help to overcome the constraints imposed on online teaching.

Technology tools include traditional multimedia tools and new information-technology tools. Traditional multimedia technologies mainly include electronic slide presentations, which are mainly used for teaching with classroom projections; public email, which is generally used for submitting assignments; and Baidu Netdisk, which is used to download course materials. New informationtechnology tools include Kahoot, WeChat, and Quizlet. Of these, Kahoot is an online classroom Q&A platform, which also enables real-time classroom feedback. There is no need to download the application to prepare a lesson using Kahoot; instructors can edit questions after logging into the website and completing registration. The classroom presentation begins with a randomly generated access code. Students can log into the website and enter the access code to participate in an online quiz. Afterwards, the system can display real-time assessment feedback. WeChat is a chatting tool developed by Tencent, which can facilitate daily chats and language-teaching classrooms, where it is mainly used for group discussions. This tool can also be used to share materials, post notifications, assign tasks, and set homework reminders. Quizlet can help students quickly prepare and memorize words by creating and categorizing online memory cards, which can be very helpful in language-acquisition courses. In addition, when the instruction is online, instructors can use other online conferencing software, such as the Tencent conferencing app (free unlimited time), Zoom conference (good global quality and free for 40 minutes, with payment for overtime usage), Skype group call (poor quality), QQ group call (free, limited number of people, poor quality), and WeChat group call (limited number of people).

Take the teaching of *zhe* as an example. With Kahoot, the instructor can quiz students on the usage of *zhe* online in real time, as shown in the figures below.



Figure 1 The interfaces of Kahoot.

Figure 1a presents the interface that allows instructors to set up questions, the number of questions, and the correct answers. Figure 1b shows the interface for students, which allows them to answer questions after the setup is complete. Kahoot will randomly generate a virtual classroom code, which the students can enter after logging onto the website through their mobile phones or computers to answer the questions online in real time. Figure 1c shows the interface when the answer is correct. Figure 2d shows the interface when the answer is incorrect. Figure 1e shows the interface that signals the end of the test, reminding students that they can choose to continue to practice the questions they did not answer correctly. Figure 1f presents a real-time summary of the test process, including the student's correct answer rate and response time. Introducing such interesting information-technology tools can effectively stimulate students' learning motivation and aid the abstract and boring process of language teaching and learning.

5. Conclusions

This paper reviews the structure and grammatical meanings of the particle zhe when used after verbs in Chinese, exploring the role of information-network technology in teaching *zhe* in courses on Chinese as a foreign language during the global COVID-19 pandemic. First, the word zhe following a verb in Chinese is a particle; from a macro-linguistic perspective, it can also be called an aspectual marker, indicating the state of an action or event. Second, the grammatical meanings of *zhe* can be roughly divided into two types, indicating "an action in progress" or "the continuity of a state". However, based on the different types of verbs preceding *zhe*, the grammatical meanings of *zhe* can be further categorized. Third, the grammatical meanings of *zhe*, signifying the state of realization of an event, are difficult to teach in Chinese-as-a-foreign-language classes. Due to the COVID-19 pandemic, the teaching of *zhe* in the classroom has required the assistance of information-network technology. In addition to common multimedia tools, including PPT, audiovisual materials, and public mail, new information-network tools developed in recent years have proven to be immensely helpful in the teaching of *zhe*: Kahoot can deliver real-time quizzes to measure the teaching effectiveness of "zhe" lessons; WeChat group and Quizlet can help students memorize information. WeChat group, Tencent conference, Skype, and other platforms can also assist in online teaching.

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