

An Analysis on the Missing of the Adverb 都 *Dou* by CSL Learners Based on an Error-Tagged Learner Corpus



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Abstract Learners' difficulties in correctly using adverbs have long been reported in CSL/CFL research, and findings yielded in previous research have shed some lights on CSL/CFL learners' patterns and causes of misuse. Many of the investigated adverbs in these studies, however, were subjectively selected by the researchers and might not cover the common errors in learners' production. To more objectively identify common adverb-based errors in CSL/CFL learners' writing, this study extracted adverb-based errors from the error-tagged Chinese Learner Written Corpus of National Taiwan Normal University and discovered that missing of adverbs occurred much more frequently than other adverb-based errors. Among the 2,923 tokens of omitted adverbs, missing of the adverb 都 *dou* ranked first, which accounted for 18% of the same error type. Further analysis of the 526 tokens of omitted 都 *dou* revealed that 都 *dou* was mostly misused when serving as a scope adverb (461 tokens). In addition, the omission of 都 *dou* often occurred when the quantified NPs included 每 *mei*, 所有的 *suoyoude*, 任何 *renhe*, 隨時 *suishi*, and 到處 *dao chu*, taking up 56.62% (261 tokens) of the 461 tokens. A follow-up examination of how 都 *dou* is presented in the learners' textbook indicated that the high percentage of omitting obligatory 都 *dou* in these sentences might relate to the inadequate explanation of 都 *dou*'s correct usage in the textbooks. Based on the findings, suggestions for future material writing are offered for CSL/CFL learners' better acquisition of 都 *dou*.

Keywords CSL acquisition · Adverb 都 *dou* · Error analysis

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1 Introduction

1.1 Adverbs in CSL/CFL Research

In Modern Chinese, adverbs are often considered complicated to use because of their abstract meanings and complex syntactical, semantic, and pragmatic functions (Duan, 2008; He, 2006; Zang, 2010), and these features have caused learners of Chinese as a second/foreign language (CSL/CFL) great difficulties in successful acquisition (Zheng, 2006). Hence, many researchers have been working on investigating CSL/CFL learners' erroneous uses of specific adverbs (e.g., Gao, 2011; Zhang, 2007), of certain types of adverbs (e.g., Tan, 2012; Zheng, 2006), and with different first languages (e.g., Jiang, 2013; Rong, 2008). Most of these studies categorized learners' errors into four major types (i.e., omission, addition, misselection, and misordering) and analyzed the causes of identified errors. Although previous research has revealed the types and causes of some adverb errors in CSL/CFL learners' writing, adverbs investigated in these studies were often subjectively selected by the researchers and might not be the most commonly misused adverbs by CSL/CFL learners. To more objectively and systematically identify common adverb errors, employment and analysis of error-tagged corpora are suggested.

In Chap. 5, we error-tagged the two-million-word Chinese Learner Written Corpus of National Taiwan Normal University (NTNU) and identified totally 119 types (48,266 tokens) of error in the learner corpus. Among the top 10 common error types of the total errors, three out of them were adverb-based errors (i.e., missing of adverbs, incorrect selection of adverbs, and redundant adverbs), and the summation of these three error types' tokens accounted for more than 10% of the total errors, showing that adverbs are indeed difficult for CSL learners to use and worthy of further investigation. Among these adverb-based error types, missing of adverbs was more common than the other two types and ranked third among the 119 error types. There were totally 2,923 tokens of errors resulting from adverb missing, and further examination of these errors revealed that the adverb 都 *dou* was the most frequently omitted adverb, which amounted to 18.03% (527 tokens) of the 2,923 errors. Since 都 *dou* was more frequently omitted than other adverbs by CSL learners, this study hence sets out to investigate how and why CSL learners omit 都 *dou* in their writing. Furthermore, we will examine whether the way 都 *dou* presented in teaching/learning materials relates to learners' misuse of the adverb or not.

2 都 *Dou* in CSL/CFL Research

2.1 Research on 都 *Dou* as a Scope Adverb

In Chinese, 都 *dou* generally performs three functions, namely, scope adverb, modal particle, and time adverb (Liu, 2019; Lu, 1980; Zhang, 2003, 2005). As a scope adverb, 都 *dou* is used to quantify universally quantified noun phrases (NPs), plural NPs, bare NPs, and definite singular NPs (Lin, 1998) “to indicate that all items referred to by the subject or object noun have something in common (Teng, 2019, p. 102)”, as shown in sentence (1) a–d.

- (1) a. 她每件事都不喜歡。
Ta meijianshi dou bu xihuan.
 ‘She dislikes everything.’
- b. 他們都是學生。
Tamen dou shi xuesheng.
 ‘They are students.’
- c. 書都放在書架上。
Shu dou fang zai shujia shang.
 ‘Books are on the shelf.’
- d. 那本練習簿我都做完了。
Naben lianxibu wo dou zuo wanliao.
 ‘I have finished that workbook.’

In sentence (1)a, 都 *dou* quantifies the universally quantified NP *sheme* “everything”, In sentence (1)b, 都 *dou* quantifies the plural NP *tamen* “they”. In sentence (1)c, *shu* “books” is the bare NP quantified by 都 *dou*. In sentence (1)d, *naben lianxibu* “that workbook” is the definite singular NP quantified by 都 *dou*.

Liu et al. (1996) generalized about five conditions that the scope adverb 都 *dou* are often required for a well-formed sentence as follows:

1. The quantified subject includes 每 *mei*, 所有的 *suoyoude*, 一切 *yiqie*, and 任何 *renhe*, or there are 隨時 *suishi* or 到處 *dao chu* in the sentence.
2. The quantified subject is a plural NP.
3. The quantified subject is formed by a *wh*-word to express universal meanings.
4. An affirmative sentence which includes 無論 *wulun*, 不論 *bulun*, or 不管 *buguan*.
5. An interrogative sentence which is formed by interrogative pronouns like 誰 *shei*, 什麼 *shenme*, 哪兒 *naer*, or 哪 *na* + quantifier.

Except for Condition 2, 都 *dou* is syntactically obligatory in the other four conditions when the quantified NPs occur in a preverbal position (cf. Cheng, 1995; Li, 2013a, 2013b; Lin, 1998; Yuan, 2009). Absence of 都 *dou* in these conditions will form ungrammatical sentences, whereas absence of 都 *dou* in Condition 2 is still syntactically grammatical (Chao, 1968; Li & Thompson, 1981; Tsai, 2014). Although

the use of 都 *dou* in Condition 2 is syntactically optional, missing of this adverb does cause a difference in meaning. That is, the appearance of 都 *dou* in Condition 2 expresses an exhaustive meaning. For example, in sentence (1)b, the presence of 都 *dou* indicates that each person in the group referred to by *tamen* “they” is a student. On the contrary, absence of 都 *dou* in (1)b does not contain the emphatic meaning on the exhaustiveness of the group. The presence of 都 *dou* in such condition is hence not semantically optional and is often suggested to be used (Liu et al., 1996; Lu, 1980).

While the above occasions require the presence of 都 *dou* to form a syntactically and/or semantically correct sentence, past research on Chinese CSL/CFL learners’ use of 都 *dou* reveals learners’ strong tendency of omitting 都 *dou* in their writing. Luo (2016) investigated CSL learners’ use of 都 *dou* as a scope adverb based on data retrieved from corpora and data generated from a self-made questionnaire, and he identified 28 and 172 erroneous sentences of misused 都 *dou* in the corpora and the questionnaire respectively. He then categorized these misuses into four types (i.e., omission, addition, misselection, and misordering) and found missing of 都 *dou* the second common error type, which accounted for 32% and 30% out of the total errors in the corpora and the questionnaire, respectively. Other studies have even reported that omission of 都 *dou* is the most common error type than others. Li (2013a, 2013b) examined CSL learners’ use of scope adverbs by analyzing a selection of 200,000 words from the HSK corpus, and her analysis of the corpus data revealed that 45.45% (i.e., 10 out of 22) of the misused 都 *dou* resulted from the missing of the adverb. Similar percentage of misused 都 *dou* resulting from omission was also reported in Liu (2014), whose investigation of CSL learners’ misuse of 都 *dou* as a scope adverb via questionnaire revealed that 43.3% (i.e., 203 out of 469) of the erroneous sentences was categorized into missing of the adverb.

In a more thorough study, Yi (2016) retrieved all the misused 都 *dou* as both a scope adverb and a modal particle¹ from the error-tagged HSK corpus. Among the 362 tokens of misused 都 *dou*, 193 out of them resulted from omission, which accounted for 53.31%. In addition, 95.84% (i.e., 185 tokens) of the 193 omission errors occurred when 都 *dou* functioned as a scope adverb, suggesting that the CSL learners often omit 都 *dou* as a scope adverb in their writing. To better understand the CSL learners’ omission patterns, the researcher further analyzed the 185 tokens of omission into five occasions (see Table 1). Among the five occasions, the CSL learners showed a strong tendency of omission when the subject quantified by 都 *dou* included 每 *mei*, 各 *ge*, 所有 *suoyou*, 全部 *quanbu*, 任何 *renhe*, or classifier reduplication, taking up more than 60% of the 185 tokens. In addition to corpus data, the researcher also retrieved CSL learners’ productive knowledge about 都 *dou* via a self-made questionnaire. Analysis of the questionnaire data revealed that the CSL

¹ In Yi (2016), the researcher employed the framework of categorizing the functions of 都 *dou* into scope adverb and modal particle, the latter of which includes functions of (1) expressing a speaker’s displeasure, annoyance, or surprise toward an unexpected or unusual state of affairs and (2) expressing that an incident/situation is approaching or having already existed. The second function is categorized as a time adverb in the current study.

Table 1 Distribution of omitted 都 *dou* as a scope adverb in Yi (2016)

Occasion	Token	Percentage
The quantified subject before 都 <i>dou</i> includes 每 <i>mei</i> , 各 <i>ge</i> , 所有 <i>suoyou</i> , 全部 <i>quanbu</i> , 任何 <i>renhe</i> , or classifier reduplication	115	62.16
The quantified subject is a plural NP	24	12.97
The quantified subject is formed by a <i>wh</i> -word to express universal meanings	8	4.33
There are 無論 <i>wulun</i> , 不論 <i>bulun</i> , or 不管 <i>buguan</i> in the sentence	16	8.65
Others	22	11.89
Total	185	100

learners also tended to omit 都 *dou* when the quantified subject (e.g., 每 *mei*, 不管 *buguan*, 不論 *bulun*, etc.) required the presence of 都 *dou* to form a correct sentence.

Although previous studies have showed CSL/CFL learners' marked tendency to omit necessary 都 *dou* in their writing, researchers have different opinions on the omission rates of syntactically obligatory 都 *dou* and syntactically optional 都 *dou*. Zhou and Wang (2007) examined Chinese CSL learners' misuse of 都 *dou* and concluded that obligatory 都 *dou* is easier to acquire than optional 都 *dou*. They argued that CSL learners tend to omit 都 *dou* when it quantifies a definite singular NP or a plural NP, both of which do not require the syntactical presence of 都 *dou*. On the contrary, omission of 都 *dou* is less likely to happen when it quantifies a universal quantified NP, because learners are more aware of the syntactical necessity of 都 *dou* in such condition and will avoid making syntactically ungrammatical sentences. However, Li (2013a, b) empirically investigated English CFL learners' production of 都 *dou* via a controlled elicitation task and discovered that the learners performed better in correctly using syntactically optional 都 *dou*. She suggested that the learners' better performance in the correct use of syntactically optional 都 *dou* resulted from that they could feel the need for 都 *dou* to express the exhaustive or distributive meaning. Furthermore, her brief survey of the textbooks used by her learners disclosed a lack of introducing obligatory 都 *dou* when quantifying universal NPs in the materials. Her research thus shows that CFL learners' acquisition of optional 都 *dou* was better than that of obligatory 都 *dou*, and inadequate explanation of 都 *dou* as a scope adverb in the textbooks might be the cause of learners' misuse. Similar misuse pattern is also observed in Yi's (2016) study. As presented in Table 1, analysis based on the HSK corpus showed that the CSL learners' omission rate of syntactically obligatory 都 *dou* (i.e., 72.02%) was much higher than that of syntactically optional 都 *dou* (i.e., 12.44%), showing that the CSL learners were not aware of the necessity of employing syntactically obligatory 都 *dou* in these conditions. Findings yielded by Zhou and Wang (2007) are contradictory to those from Li (2013a, b) and Yi (2016), and more studies on CSL/CFL learners' omission rates of obligatory and optional 都 *dou* are thus suggested to better reveal learners' misuse pattern.

2.2 Research on 都 *Dou* as a Modal Particle and a Time Adverb

When 都 *dou* functions as a modal particle, it is often used to express a speaker's displeasure, annoyance, or surprise toward an unexpected or unusual state of affairs (Teng, 2019; Zhang, 2005), as illustrated in sentence 2(a) and (b).

- (2) a. 我都給你這麼多錢了!你還敢說我小氣?
Wo dou gei ni zheme duo qian le! Ni hai gan shuo wo xiaoqi?
 'I have given you so much money! How dare you call me stingy?'
 b. 我怎麼都不知道他們結婚了!
Wo zenme dou bu zhidao tamen jiehun le!
 'I had no idea that they were married!'

In sentence 2(a), 都 *dou* was used to express the speaker's displeasure over the listener's criticism *xiaoqi* "stingy". In sentence 2(b), 都 *dou* was used to express the speaker's surprise of receiving a recent news *jiehun* "marriage". The two 都 *dous* in both sentences were used as a modal particle to emphasize the speakers' emotions, and omission of the modal particle will cause the sentences to be both syntactically and semantically ungrammatical.

When 都 *dou* functions as a time adverb, its meaning is close to another Chinese adverb 已經 *yijing* "already", and a speaker uses 都 *dou* to express that an incident/situation is approaching or has already existed (Zhang, 2005), as illustrated in sentence 3(a) and (b).

- (3) a. 都八點了!趕快起床!
Dou badian le! gankuai qichuang!
 'It's almost eight o'clock. Get up now!
 b. 房子都失火了!你還只顧著找錢包!
Fangzi dou shihuo le! Ni hai zhiguzhe zhao qianbao!
 'The house is on fire! How come you just keep looking for your purse?'

In sentence 3(a), the speaker used 都 *dou* to emphasize that it was already the time (i.e., *badian* "eight o'clock") that the listener should get up. In sentence 3(b), the speaker used 都 *dou* to express that an emergency situation (i.e., *shihuo* "on fire") is approaching and that the listener should leave the house quickly instead of looking for his/her purse. In both sentences, 都 *dou* was used as a time adverb to tell the listeners that an incident/situation is taking place.

Compared to literature on the misuse of 都 *dou* as a scope adverb, there is relatively scant research on CSL/CFL learners' use of 都 *dou* as a modal particle or a time adverb, and Yang and Yuan's (2010) study via a controlled elicitation task is one of the scant research on CSL/CFL learners' use of 都 *dou* among the three functions. In their study, the researchers designed a set of sentences to investigate 20 CSL learners' productive knowledge of 都 *dou* among the three functions, and they discovered that the learners were less likely to misuse 都 *dou* as a scope adverb. In contrast, the

learners made the most omission errors when 都 *dou* functioned as a time adverb. Their research findings suggest that CSL learners' acquisition of 都 *dou* as a scope adverb is more successful than that of other functions. Yi's (2016) corpus-based analysis on CSL learners' writing, however, revealed different results. Among the 193 omission errors, more than 95% of them resulted from the missing of 都 *dou* as a scope adverb. Omission of 都 *dou* as a modal particle or a time adverb accounted for 4.16% (i.e., 8 tokens) only, and most of these errors (i.e., 6 tokens) were found in the sentence pattern 連...都... *lian...dou...* "even". Findings yielded in Yi's suggest that CSL learners have a strong tendency to omit 都 *dou* as a scope adverb as compared to the other two functions, which seems to contradict to those reported in Yang & Yuan. More studies on CSL/CFL learners use of 都 *dou* among different functions are thus required to have a more comprehensive understanding of learners' misuse of these functions.

Because of the conflicting findings regarding CSL/CFL learners' discrepancy in the omission rates of obligatory and optional scope adverb 都 *dou* as well as the limited investigation of learners' misuse of 都 *dou* as a modal particle/time adverb, this study was thus undertaken to examine CSL/CFL learners' omission of 都 *dou* among the three different functions by retrieving and analyzing errors tagged in Chinese Learner Written Corpus of NTNU. In addition to analysis of corpus data, further examination of how 都 *dou* was introduced and explained in the learners' textbook was also conducted to see if information provided in the textbook was adequate or not.

3 Method

Data analyzed in this study was retrieved from the error-tagged Chinese Learner Written Corpus of NTNU, a 2.14-million-character learner corpus containing 4,288 take-home essays written by CSL learners from 64 different countries and across five proficiency levels (i.e., A2, B1, B2, C1, and C2 referring to the Common European Framework of Reference for Languages). In that corpus, errors caused by the omission of adverbs are tagged with the label *Madv*. We hence retrieved all the errors tagged as *Madv* (token: 2,923) and examined these tokens one by one to identify what these omitted adverbs were. Identification of missing adverbs shows that 都 *dou* was the most frequently omitted adverb in the learner corpus (token: 526), accounting for 18% of all the omitted adverbs and making itself a good subject for detailed investigation. After all the instances of omitted 都 *dou* were generated, the researchers examined what functions (i.e., scope adverb, modal particle, and time adverb) these omitted 都 *dou* served by context and counted the tokens. Distribution of omitted 都 *dou* across the three functions will be presented and discussed in the next section.

4 Results and Discussion

As shown in Table 2, there were 461 tokens of omitted 都 *dou* as a scope adverb, taking up close to 90% of the omitted 都 *dou*. By contrast, the percentage of omitted 都 *dou* as a modal particle was only 12.36%, and there was even zero occurrence of omitted 都 *dou* as a time adverb in the corpus. The distribution of omitted 都 *dou* among the three functions is pretty similar to that yielded in Yi (2016), who discovered that more than 95% of omitted 都 *dou* in the HSK corpus functioned as a scope adverb. Findings yielded in the current study and in Yi's are in accordance and suggest that CSL/CFL learners tend to omit 都 *dou* as a scope adverb much more often than other functions in their writing.

4.1 Learners' Omission of 都 *Dou* as a Scope Adverb

To further analyze how 都 *dou* as a scope adverb was omitted in the learner corpus, we employed Liu et al.'s (1996) framework to categorize the 461 tokens, and Table 3 shows the distribution of these tokens among the five conditions.

When serving as a scope adverb, the omission of 都 *dou* occurred more often in Condition 1, which accounted for more than 56% of the 461 tokens. Among the

Table 2 Distribution of omitted 都 *dou* among the three functions

Function	Token	Percentage
Scope Adverb	461	87.64
Modal Particle	65	12.36
Time Adverb	0	0
Total	526	100

Table 3 Distribution of omitted 都 *dou* as a scope adverb among the five conditions in Liu et al. (1996)

Condition	Token	Percentage
1. The quantified subject includes 每 <i>mei</i> , 所有的 <i>suoyoude</i> , 一切 <i>yiqie</i> , and 任何 <i>renhe</i> , or there are 隨時 <i>suishi</i> or 到處 <i>daocho</i> in the sentence	261	56.62
2. The quantified subject is a plural NP	164	35.57
3. The quantified subject is formed by a <i>wh</i> -word to express universal meanings	22	4.77
4. An affirmative sentence which includes 無論 <i>wulun</i> , 不論 <i>bulun</i> , or 不管 <i>buguan</i>	14	3.04
5. An interrogative sentence which is formed by interrogative pronouns like 誰 <i>shei</i> , 什麼 <i>shenme</i> , 哪兒 <i>naer</i> , or 哪 <i>na</i> + quantifier	0	0
Total	461	100

261 tokens of omitted 都 *dou* in Condition 1, 17 out of them occurred when the quantified subject included 所有的 *suoyoude*, 21 out of them occurred when the quantified subject included 隨時 *suishi* or 到處 *daocho*, three out of them occurred when the quantified subject included 任何 *renhe*, and one out of them occurred when the quantified subject included 一切 *yiqie*. When the quantified subject included 每 *mei*, the percentage of omission was the highest among all the others, taking up 84% (219 tokens) of the 261 tokens, as illustrated in concordance lines (4)–(6).

- (4) *而且我也越來越喜歡學中文了, 所以我每天我高興得不得了。

*Erqie wo ye yue lai yue xihuan xue zhongwenle, suoyi meitian wo *(dou) gaoxing de budele.*

‘And I like learning Chinese more and more, so I am very happy every day.’

- (5) *每次選擇的時候, 有好悶的感覺

*Mei ci xuanze de shihou, *(dou) you hao men de ganjue.*

‘I feel so stuffy every time when I have to make choice.’

- (6) *每個世紀, 日本會發生幾次海嘯

*Mei ge shiji, riben *(dou) hui fasheng ji ci haixiao.*

‘Every century, Japan will have several tsunamis.’

The word 每 *mei* is used as a determiner before an NP to ‘reinforce the sense of ‘no exception’’ (Teng, 2019, p. 205), and its occurrence in a sentence should always include 都 *dou* (Liu et al., 1996; Lu, 1980; Teng, 2019). The high percentage of omitting 都 *dou* in sentences with 每 *mei* in the learner corpus might indicate the learners’ lack of awareness of the obligatory use of 都 *dou* in this condition.

The learners were also frequently found to omit the use of 都 *dou* when the quantified subject was a plural NP, as illustrated in concordance lines (7) and (8).

- (7) *如果我遇到困難他們很願意幫助我。

*Ruguo wo yu dao kunnan tamen *(dou) hen yuanyi bangzhu wo.*

‘They are willing to help me if I encounter any difficulties.’

- (8) *台灣在日本和德國最重要的三個城市有代表。

*Taiwan zai riben he deguo zui zhongyao de san ge chengshi *(dou) you daibiao.*

‘Taiwan has representatives in three of the most important cities in both Japan and German.’

When quantifying a plural NP, 都 *dou* is syntactically optional to express the exhaustive sense of the NP. The learners’ omission of 都 *dou* might result from the fact that the use of 都 *dou* in this condition is not syntactically mandatory and they hence omitted it in these sentences.

The use of 都 *dou* in Condition 3 (i.e., a universally quantified NP formed by a *wh-* word) and Condition 4 (i.e., an affirmative sentence including 無論 *wulun*, 不論 *bulun*, or 不管 *buguan*), however, is syntactically obligatory, yet the learners still occasionally omitted 都 *dou* in these conditions. This is illustrated in concordance line (9)–(11).

- (9) *我到哪裏去, 哪裏可以吃到很多好吃的東西。

*Wo dao nali qu, nali *(dou) keyi chi dao henduo hao chi de dongxi.*

‘Wherever I go, I can eat much delicious food.’

- (10) *現在無論別人說什麼我懂得差不多了。

*Xianzai wulun bieren shuo shenme wo *(dou) dongde chabuduole.*

‘Now I understand almost everything that others tell me.’

- (11) *女人不管多麼能幹不能取代男人的地位。

*Nuren buguan duome nenggan *(dou) buneng qudai nanren di diwei.*

‘Women can’t replace men no matter how capable they are.’

When co-occurring with 都 *dou* in the same sentence, the presence of a *wh*-word does not indicate a questions but expresses a distributive meaning. As illustrated in concordance line (9), the *wh*-word 哪裏 *nali* actually expresses the meaning of “everywhere” or “all places”. Without the presence of 都 *dou* in concordance line (9), the sentence would be interpreted as a question. The use of 都 *dou* in sentences like concordance line (9) is thus mandatory. Regarding Condition 4, the presence of 都 *dou* is also obligatory when it is preceded before conjunctions like 無論 *wulun*, 不論 *bulun*, and 不管 *buguan* to express the meaning “in spite of various circumstances, the following fact [following 都 *dou*] remains unaffected” (p. 284, Teng, 2019). Omission of 都 *dou* in Condition 4 would fail to express this all-inclusive meaning and is hence syntactically incorrect.

Findings of the CSL learners’ omission of 都 *dou* as a scope adverb among different conditions mostly echo with those yielded in Yi (2016). In both of the studies, learners were found to omit 都 *dou* much more often when the subject quantified by 都 *dou* included 每 *mei*, 所有(的) *suoyou(de)*, 一切 *yiqie*, 任何 *renhe*, etc., which took up 56.62% in this study and 62.16% in Yi’s respectively and ranked the first in both studies. The second common condition of 都 *dou*’s omission occurs when the quantified subject was a plural noun, which accounted for 35.57% and 12.97% in our study and in Yi’s respectively. Omission rates of the top two conditions constituted more than 75% of the total errors in both studies, whereas the other three conditions together amounted to no more than 25%. The similar distribution pattern of missing 都 *dou* as a scope adverb among different conditions in both studies suggests the following. First, CSL/CFL learners’ omission of mandatory 都 *dou* mainly occurs when the quantified subject includes those formed by a universal quantifier (e.g., 每 *mei*, 所有 *suoyou*) modifying an NP, those expressing universal meaning (e.g., 一切 *yiqie*) and those being plural nouns, showing that learners are more likely to ignore the rule of using 都 *dou* when producing these structures. In addition, both studies found that CSL/CFL learners tend to omit 都 *dou* much more often when it quantifies a subject formed by a universal quantifier or expressing universal meaning, which contradicts to Zhou and Wang’s statement (2007) that CSL learners tend to omit 都 *dou* when it quantifies a definite singular NP or a plural NP. Findings revealed in our study and in Yi’s (2016) hence show that CSL/CFL learners’ mastery of syntactically obligatory 都 *dou* might be less successful than that of syntactically optional 都 *dou*, which might result from learners’ ignorance of the co-occurrence of these universal

quantifiers and the scope adverb, and more efforts should thus be made to teach learners about the necessity of using 都 *dou* in these structures (Yi, 2016).

4.2 Learners' Omission 都 *Dou* as a Modal Particle and a Time Adverb

When used as a modal particle, there were 65 tokens of omitted 都 *dou*, and most of them occurred in the sentence pattern 連...都... *lian...dou...* “even”, as illustrated in concordancing line (12)–(14).

(12) *連海洋生物家不知道遠海的深處隱藏著何種奧秘。

*Lian haiyang shengwu xue jia *(dou) bu zhidao yuanhai de shen chu yincangzhe he zhong aomi.*

‘Even marine biologists don’t know what mystery is hidden in the deep sea.’

(13) *這個地方很熱鬧，連半夜我得到吃的地方。

*Zhege difang hen renao, lian banye *(dou) zhao dedao chi di difang.*

‘This place is very lively, and you can find a place to eat even in the middle of the night.’

(14) *有時候可能連手機沒信號。

You shihou keneng lian shouji mei xinhao.

‘My cellphone sometimes even had no reception at all.’

In this sentence pattern, “the preposition 連 *lian* introduces the focus of a sentence, highlighting a noun against all other related nouns in a given context” (Teng, 2019, p.190). The function of 都 *dou* in this sentence pattern is to emphasize the unusualness or noteworthiness of the focus after 連 *lian* (Ma, 1983), and Cao (2005) also pointed out that *dou* plays a more important role than 連 *lian* in this sentence pattern. She argued that omission of 都 *dou* in 連...都... *lian...dou...* would cause a difference in meaning, even an ungrammatical sentence, while omission of 連 *lian* might not; however, in most textbooks, focus is often placed on explaining and discussing the function of *lian* other than 都 *dou*. The high percentage of omitted 都 *dou* in the pattern 連...都... *lian...dou...* is also reported in Yi (2016), in which 75% of the omitted 都 *dou* as a modal particle occurred in this sentence pattern. The high ratios of 都 *dou*’s omission in the sentence pattern in both studies hence suggest that CSL/CFL learners’ have not yet fully acquired the sentence pattern and that teachers as well as material writers should make more efforts to help learners gain a comprehensive acquisition of the structure.

When used as a time adverb to express the meaning of “already”, there was zero token of omission found in the learner corpus. Although no instance of 都 *dou*’s omission as a time adverb was identified in the learner corpus, this does not mean that the CSL learners had successfully acquired its use. Instead, the zero occurrence might result from the CSL learners’ avoidance of using 都 *dou* as a time adverb. In Yi’s (2016) analysis of the self-made questionnaire, the researcher discovered that

the CSL learners in the study were not familiar with 都 *dou*'s function to express the meaning of "already". When deciding the grammaticality of sentences formed with misused 都 *dou* as a time adverb, low-level learners often misjudged incorrect sentences as correct ones, while higher-level learners would misjudge the presence of 都 *dou* as ungrammatical and cross out the adverb in the sentences. Yi's findings thus show CSL learners' inadequate knowledge about the use of 都 *dou* as a time adverb, and further suggest that the few tokens of omitted 都 *dou* as a time adverb might be caused by learners' avoidance of using it.

In general, the learners in our study omitted 都 *dou* as a scope adverb much more often than they omitted 都 *dou* as a modal particle or a time adverb, which corroborates with findings of previous studies. Our results also echo with other researchers' findings that CSL/CFL learners tend to omit syntactically obligatory 都 *dou* more often than syntactically optional 都 *dou*, and omission is highly frequent when the subject quantified by 都 *dou* includes a universal quantifier (e.g., 每 *mei*). This frequent omission might be due to CSL/CFL learners' unawareness of the co-occurrence of a universal quantifier and the scope adverb 都 *dou*, which is suggested to be rightly emphasized in both the teaching and learning of these universal quantifiers. Although findings in the current study and the previous ones uncover the low omission rates of 都 *dou* as a modal particle and/or a time adverb, this should not be concluded with the statement that learners' mastery of these two functions is better than that of a scope adverb. Instead, the striking difference in error percentages might arise from their underuse of these two functions, which thus lowers their chances of omission. To better understand the reasons for the learners' discrepancy in omitting 都 *dou* among the three functions, we further examined how 都 *dou* was presented in the teaching materials the learners used and whether its presentation influence the way the learners employed the adverb for different functions.

4.3 Examination on the Presentation of Dou in Teaching Materials

Data included in Chinese Learner Written Corpus of NTNU contains essays written by CSL learners at the Mandarin Training Center of NTNU between 2010 and 2012, whose textbook was the second edition of *Practical Audio-Visual Chinese*. We therefore examined how 都 *dou* was presented in the five volumes of *Practical Audio-Visual Chinese* (2nd edition), and Table 4 shows the results.

Examination on the presentation of 都 *dou* in the learners' textbook revealed that 都 *dou* was mainly introduced as a scope adverb, the meaning of which was defined as *all* or *both* in English. However, the rule of using obligatory 都 *dou* when the quantified subject includes 每 *mei* was not mentioned throughout the five volumes of the textbook, neither was the occurrence of the sentence pattern 每... 都... *mei*...*dou*.... The meanings of 都 *dou* and 每 *mei* were defined as "all/both" (Vol.1, L3) and "every" (Vol. 1, L11) in the textbook respectively. Sun (2001) has

Table 4 Presentations of 都 *dou* in *Practical Audio-Visual Chinese*

Vol./Lesson	Page	Usage/Meaning explanation	Example sentence
V1/L3	38	都(<i>dou</i>) all; both	他們都很忙。 <i>Tamen dou hen mang</i> 'They are very busy.'
V2/L3	63	If one wants to express an inclusive such as “everywhere”, “everyone”, and “everything”, or an exclusive like “nowhere”, “no one” and “nothing”, then he must use a question word in conjunction with the adverb 都 (<i>dou</i>). In negative expressions, the adverb 也 (<i>ye</i>) can be used in place of 都 (<i>dou</i>)	他什麼都知道。 <i>Ta shenme dou zhidao</i> 'He knows everything.'
V3/L2	53	連...都/也... (<i>lian...dou/ye...</i>) Even...	連半夜都找得到地方吃。 <i>Lian banye dou zhao dedao difang chi</i> 'I can find a place to eat even in the middle of the night.'
B3/L4	107	除了...以外/之外, 都... (<i>chule...yiwai/zhiwai, dou...</i>) Except for/other than ...all the others...	除了海邊有一些平原以外, 中部都是山。 <i>Chule haibian you yixie pingyuan yiwai, zhongbu dou shi shan</i> 'Except for some plains along the coast, the central part is full of mountains.'
V3/L7	200	不管/不論/無論...都... (<i>buguan/bulun/wulun...dou...</i>) Regardless of whether...(all), no matter whether ...(all)	以前台灣的大學, 不管公立的私立的, 學費都沒有你們這裡這麼高。 <i>Yiqian taiwan de daxue, buguan gongli de sili de, xuefei dou meiyou nimen zheli zheme gao</i> 'In the past, the tuition fees of universities in Taiwan, whether public or private, were not as high as yours.'
V3/L13	367	什麼都..., 就是... (<i>shenme dou..., jiushi...</i>) Everything is..., expect...	聖誕節什麼都好, 就是買禮物、寄聖誕卡太麻煩。 <i>Shengdan jie shenme dou hao, jiushi mai liwu, ji shengdanka tai mafan</i> 'Christmas is good, but buying gifts and sending Christmas cards is too troublesome.'
V5/L2	22	凡是...都... (<i>fanshi...dou...</i>) Every ... (all)...; All ... are (all)...	凡是到過歐洲旅遊的人都讚美歐洲的風景。 <i>Fanshi daoguo ouzhou luyou de ren dou zanmei ouzhou de fengjing</i> 'Everyone who has traveled to Europe praises the European landscape.'

pointed out that simply presenting the meanings of 都 *dou* and 每 *mei* as “all/both” and “every” in textbooks would oftentimes mislead CSL/CFL learners, especially English CSL/CFL learners, over 都 *dou*’s function of emphasizing the inclusive meaning when in conjunction with 每 *mei*. The simplified English translations of 都 *dou* and 每 *mei* and the lack of example sentences of 每-...都... *mei-...dou...* to illustrate the sense of “no exception” might be the reasons for the learners’ frequent omission of obligatory 都 *dou* when using 每 *mei* in their writing. As for optional 都 *dou* in Condition 2, there was in fact one example sentence that formed with a plural NP (i.e., 他們 *tamen*) in volume two of the textbook; however, no further explanation of the semantical function of 都 *dou* to express an inclusive meaning was offered. This might hence cause the learners to omit 都 *dou* when the quantified subject was a plural NP in their writing so often.

都 *Dou* as a modal particle was introduced in the sentence pattern 連...都/也... *lian...dou/ye...* only once among the five volumes, and explanation of the sentence pattern was “the speaker thinks that the situation mentioned after 連(*lian*) is unusual or noteworthy and thus uses this pattern for emphasis. N, SV, V, VO, S-V of a simple sentence all can be place after 連(*lian*)”. The explanation focused on the use of 連 *lian* only, and no effort was made to explain the function of 都 *dou*. This might result to the learners’ ignorance of using 都 *dou* in this sentence pattern and thus caused the omission of this adverb.

In contrast, the function of 都 *dou* as a time adverb did not appear at all among the five volumes. The zero occurrence of 都 *dou* as a time adverb in the textbook could explain why there was also zero token of omitted 都 *dou* as a time adverb in the learner corpus. That is, since the learners merely encountered this function in their textbook, it was thus unlikely for them to use 都 *dou* to express the meaning of “already” and hence underuse the adverb in their writing.

5 Conclusion, Pedagogical Implications, and Suggestion for Future Research

The current study was conducted to investigate how and why CSL learners omit the adverb 都 *dou* based on the error-tagged Chinese Learner Written Corpus of NTNU. Among the 526 tokens of omitted 都 *dou*, more than 87% of the total errors occurred when 都 *dou* was used as a scope adverb, while tokens of omitted 都 *dou* as a modal adverb and a time adverb were 65 and 0 respectively. Examination of how 都 *dou* was introduced in the learners’ textbook reveals the following causes of omission. Firstly, the learners were influenced by the English translation (i.e., all, both) of 都 *dou* in the textbook to misuse 都 *dou* in their writing. Secondly, the learners’ low omission rates of 都 *dou* as a modal particle or a time adverb might be largely due to their underuse of the two usages, since these functions were rarely introduced in the textbook. To better improve CSL learners’ productive knowledge of 都 *dou*, suggestions for material writing are offered here. First, all of the three

functions of 都 *dou* should be introduced in the textbook in the order of scope adverb, modal adverb, and time adverb, so that CSL learners could know that the adverb 都 *dou* can be used for different purposes. Second, when introducing 都 *dou* as a scope adverb, efforts should be made to specifically identify its function to express an exclusive/distributive meaning and simultaneously introduce the universal quantifiers that co-occur frequently with 都 *dou* (e.g., 每 *mei*, 所有 *suoyou*, 任何 *renhe*, etc.).

Although this study showed how CSL learners omitted the adverb 都 *dou* in their writing and identified the possible causes of learners' omission of 都 *dou*, there are still some limitations of the current study. The first limitation that should be considered is the data analyzed in the learner corpus. As described in the previous section, data in the error-tagged Chinese Learner Written Corpus of NTNU consisted of CSL learners' writing assignments, which were produced in a context that the learners could consult different resources in their writing. Since contextual difference of datasets might influence learners' productive output, future studies are suggested to investigate CSL/CFL learners' omission of 都 *dou* in different contexts (e.g., exam scripts). In addition, the current study could only target on investigating the omission of 都 *dou* due to the length limit of the article. There are, however, other adverbs (i.e., 很 *hen* and 就 *jiu*) that were also frequently omitted in the learner corpus. To better understand the reason why CSL/CFL learners omitted these adverbs in their writing, further research on the omission of these adverbs is also suggested.

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