An Analysis of Some Errors Made in Writing Chinese Characters by Learners at the University of Nairobi

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Abstract

The present study investigated some of the errors made in writing standard Chinese characters by Year 1 to Year 4 undergraduate students at the Confucius Institute, University of Nairobi (UoN), Kenya. One of the authors, who teaches at the Institute, observed that learners experienced considerable difficulty in writing Chinese characters. This observation motivated the study, which sought to identify the types of errors made, explore their possible causes, and propose pedagogical solutions. Although none of the learners were native speakers of Chinese, they had the advantage of being instructed by several native speakers of the language. Each participant was issued with a questionnaire to provide personal details and was further required to write a short essay. All responses were produced using Chinese characters and were subsequently analyzed for writing errors. The analysis revealed two major categories of errors: errors in sentence structure and errors related to the writing of strokes within characters. The present paper focuses specifically on errors associated with stroke writing. The findings indicate that learners committed significantly more errors of stroke omission than stroke addition. The strokes most frequently added were *piě* (丿), *héng* (一), *diǎn* (丶), and *shù* (丨), while the strokes most commonly omitted included *piě* (丿),

héng (一), *diǎn* (丶), *shù* (丨), and *tí* (𠂉). Errors of stroke omission accounted for 73.7% of the total errors, whereas errors of stroke addition constituted 26.3%, making omission errors almost three times more frequent than addition errors. In addition, two radicals were omitted in some instances. These errors may be attributed partly to the learners' level of proficiency in Chinese. However, the high frequency of stroke omission errors appears to stem primarily from an inadequate understanding of the correct stroke order in character writing, coupled with insufficient practice.

Keywords: Writing, Chinese characters, order of strokes, omission of strokes, and addition of strokes

Introduction

This article contains an analysis of some of the errors made in writing characters by students learning the Chinese language in the Confucius Institute at the University of Nairobi, Kenya. Writing is a key way of assessing whether one has learnt Chinese or not. It is the most difficult part of the Chinese learning process. When learning Chinese, learners need to learn how to write the strokes clearly to avoid errors. This study was motivated by the fact that one of the authors of this paper, a native speaker of Mandarin, observed that learners made a number of errors when writing characters. Learners were tested through a questionnaire and a short essay. They were expected to respond to questions by writing characters. A number of errors were identified in their answers. In this paper, errors of addition of strokes and omission of strokes are discussed. Error analysis is important because not only does it help reveal the strategies used by learners to learn a language, but it also assists teachers, as well as other concerned educators, to know what difficulties learners encounter in order to improve their teaching and help them to reduce or eradicate the errors.

In the sections that follow, Chinese characters are discussed in the context of how to write them. A brief literature review on errors in the context of the teaching and learning process is provided. A brief methodology is stated, followed by a discussion of the errors made by the learners at the University of Nairobi's Confucius Institute and their possible solutions. Lastly, the conclusion is given.

Chinese Characters

Writing Strokes and the Rules of Character Formation

Chinese writing has undergone significant evolution over the centuries, transitioning from the use of pictorial diagrams for communication to the present standardized writing system. The contemporary system, which no longer relies on diagrams, is officially approved by the Government of China for use in schools as well as in print media. Chinese characters are commonly described as pictographs or logographs. Unlike alphabetic writing systems such as those of English, Kiswahili, and many other languages, the Chinese writing system does not allow words to be decomposed into individual phonemes (Koda, 2004).

According to Zhang (2008), Chinese characters are often referred to as *square characters* because each character is structurally independent and is designed to fit within a four-sided space. This spatial balance contributes to the aesthetic quality or elegance of the characters. A well-written or elegant character is therefore one in which the strokes are appropriately sized and proportionally arranged. Each Chinese character consists of three fundamental components: form, sound, and meaning. For example, the character 日 consists of a square form containing the stroke 一, known as *héng*; its pronunciation is *rì*, and its meaning is *sun*.

Jiang (2005) observes that in the process of learning Chinese, "you learn first the characters, then the word" (p. 1). For instance, when learning to write the Chinese word 大学

(*dàxué*), meaning *university*, learners must first acquire the individual characters 大 (*big*) and 学 (*study* or *learn*), as the word 大学 is formed by combining these two characters. Although the meaning of 大学 is semantically related to both 大 and 学, it is not a simple sum of their individual meanings, that is, it does not mean "big study" or "big learn" (Jiang, 2005).

Zhang (2008) observes that Chinese characters appear difficult for learners to both write and remember (p. 25). Writing Chinese characters involves adherence to numerous rules, yet many foreign learners come from linguistic backgrounds in which reading and writing rely on alphabetic systems consisting of between twenty and thirty letters. Because Chinese characters are ideographic in nature, familiarity with the meanings of different radicals and components helps learners to understand and remember characters more effectively. Zhang (2008) further notes that many Chinese characters are compound characters (p. 25), meaning that they can be broken down into smaller, more manageable parts that are easier to learn.

Zhang (2008) emphasizes that if the positions and relative sizes of character components are clearly explained to learners during instruction, the process of writing becomes easier. He further argues that many foreign learners of Chinese become proficient in writing Chinese characters within a relatively short period of time and do not regard the task as extremely difficult when systematic instruction is provided (p. 25). Zhou (2005), on the other hand, highlights a crucial distinction by pointing out that writing Chinese characters is fundamentally different from drawing. According to Zhou (2005), learners are expected to follow a fixed stroke order in order to write characters quickly, correctly, and aesthetically. He further argues that correct stroke order enhances memory and is also fundamental to certain computer-based character input methods, many of which are stroke-order dependent.

These considerations underscore the importance of mastering stroke order in the acquisition of Chinese character writing (Zhou, 2005, p. 9).

Zhang (1997) introduces an additional dimension to the discussion by noting that since most Chinese characters consist of more than one stroke, learners must pay attention not only to the order of strokes but also to the direction in which each stroke is written (p. 20). Similarly, Shi (2005) explains that the sequence governing the writing of strokes in a character is referred to as *stroke order*, and that adherence to this order facilitates both the efficiency and elegance of character writing (p. 7). Chin, Ling, and Man (2018) further observe that for centuries, Chinese scholars and learners alike have regarded knowledge of basic strokes as essential for correct character writing (pp. 2–3).

Zhou (2005) also notes that although Chinese characters often exhibit complex structural patterns, breaking them down into their minimal components allows basic strokes to become more visible and accessible to learners (p. 4). This analytical process enables learners to recognize and internalize individual strokes more easily. As a result, mastery of basic strokes constitutes a necessary foundation for writing characters that are both correct and aesthetically pleasing.

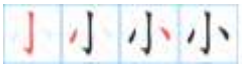
In a related discussion on error typology, Deng and Hu (2022) distinguish between two major categories of errors in Chinese character writing: wrongly written characters and misused characters (p. 42). Both error types are viewed as manifestations of interlanguage development in learners of Chinese, reflecting varying levels of awareness regarding character components and configuration rules. A wrongly written character is one in which the strokes or their arrangement violate established rules of Chinese character formation. For example, Deng and Hu (2022) cite incorrect renditions of the characters 身 and 貌, in which essential strokes are omitted or improperly configured. In the case of 身, the incorrectly

written form lacks the initial three *héng* strokes, indicating insufficient understanding of character formation principles. Deng and Hu (2022) further argue that although learners of Chinese as a foreign language (CFL) may be able to recall a target character, they often lack adequate knowledge of its form, pronunciation, and meaning, which can lead them to produce an incorrect character instead of the intended one (p. 42).

A central principle underlying Chinese character writing is the fixed order in which strokes are written. While minor disagreements may occasionally arise among native speakers regarding specific details, this system has been refined and standardized over centuries of practice and experience (McNaughton & Fan, 2013, p. xx). The rules summarized in Table 1 provide a general explanation of this system by illustrating how Chinese characters are written. In the column labeled *Order of Writing Strokes*, each successive cell introduces an additional stroke from left to right, visually demonstrating the correct sequence of stroke production. The final cell in each row, located on the far right, contains the complete character, which corresponds to the example provided in the column labeled *Example of a Character*.

Table 1: General Rules of Writing Characters

Rules of character formation	An example of a character	The meaning of a character	The order of writing strokes
Write from top to bottom	三	Three	
Write from left to right	他	he/him	
Write from upper left corner to lower right corner	您	You	
Write from outside to inside	田	Field	

When two or more strokes cross, write horizontal strokes before perpendicular strokes	十	Ten	
Write a slanting stroke to the left before a slanting stroke to the right	人	People	
Write the center stroke before the symmetrical wings	小	Small	

Learning how to write Chinese characters from the outset is crucial because it facilitates vocabulary acquisition and comprehension. When learners have knowledge of individual characters, they are better positioned to infer the meanings of new words formed through character combinations. For example, a learner who knows the characters 车 (*chē*, 'vehicle') and 马 (*mǎ*, 'horse') can reasonably infer the meaning of the compound 马车 (*mǎchē*), which means 'carriage'. By contrast, reliance on *pinyin* alone, the Romanized transcription system for Chinese, poses challenges, since a single syllable such as *mǎ* can correspond to multiple characters with distinct meanings. Without character knowledge, it becomes difficult for learners to determine which of the several characters pronounced *mǎ* is relevant in a given context.

Character recognition therefore plays a critical role in enabling learners to distinguish meanings accurately and to interpret new lexical items more efficiently. As noted in instructional materials on Chinese character learning, familiarity with characters significantly enhances word recognition and semantic inference (DigMandarin, 2017). Table 2 below illustrates several examples of how the character 马 (*mǎ*) combines with different characters to form new words with distinct meanings, thereby demonstrating the importance of character-based knowledge in Chinese vocabulary development.

Table 2: Pinyin mǎ with Different Characters and Words

Characters (Pinyin in brackets)	Meaning	Character combination to form words (Pinyin in brackets)	Meaning
马（mǎ）	Horse	马虎 (mǎhu)	Careless
吗（mǎ）	Question particle	吗啡 (mǎfēi)	Morphine
玛（mǎ）	Agate; cornelian	玛瑙 (mǎnǎo)	Agate
码（mǎ）	weight; number; code; yard	码头 (mǎtou)	Pier
蚂（mǎ）	Ant; leech	蚂蚁 (mǎyǐ)	Ant
犸（mǎ）	Mammoth	猛犸 (měngmǎ)	Mammoth

According to McNaughton and Fan (2013), there are four major types of Chinese characters that can assist learners in understanding the Chinese writing system. These categories help learners conceptualize how characters are formed and how meaning is encoded visually and structurally.

First, there are pictographs, which are characters that originated as visual representations of concrete objects. For example, the character for ‘person’ or ‘human being’ (人) is a simplified stick-like depiction of a human figure, while the character for ‘child’ or ‘baby’ (兒) is a drawing of an infant with an open fontanel. In some cases, modern characters are highly stylized versions of earlier pictorial forms, making the original resemblance less transparent. As a result, an understanding of the historical evolution of a character is sometimes necessary to recognize the pictorial connection. For instance, the character for ‘moon’ (月) and that for ‘eye’ (目) were originally more pictorial in form than their modern counterparts (McNaughton & Fan, 2013, p. xii).

Second, symbols constitute another category of Chinese characters. These characters function as visual symbols, some more arbitrary than others, for abstract concepts. Examples include 上 (‘above’), 下 (‘below’), 一 (‘one’), 二 (‘two’), and 三 (‘three’). In these cases, meaning is conveyed through symbolic representation rather than direct pictorial resemblance (McNaughton & Fan, 2013, p. xii).

Third, there are sound–meaning compounds, which are among the most common types of Chinese characters. In these characters, one component provides a semantic clue, while another offers a phonetic cue. For example, the character 包 (‘to wrap’) is pronounced *bāo*. When this character is combined with 鱼 (‘fish’), the resulting character 鲍 (‘salted fish’) is pronounced *bào*. In this compound, the 鱼 component signals the meaning domain related to fish, while 包 suggests the pronunciation. Such characters illustrate how meaning and sound are systematically encoded within a single written form (McNaughton & Fan, 2013, p. xiii).

Fourth, meaning–meaning compounds are formed by combining two characters whose juxtaposition produces a new meaning through conceptual association. For instance, the character 女 (‘woman’) combined with 子 (‘child’) forms 好, meaning ‘to love,’ ‘to be lovable,’ or ‘to be good.’ Although the logic underlying such combinations is not always transparent enough to allow learners to infer meaning independently, these associations are often useful as mnemonic aids, especially when encountering a character for the first time (McNaughton & Fan, 2013, p. xiii).

Even with these four guidelines, mastery of Chinese characters requires sustained exposure and deliberate study. An and Hu (2021) emphasize that the teaching of Chinese characters is foundational in Chinese as a Foreign Language (CFL) instruction. They argue that character instruction constitutes the cornerstone of Chinese language teaching and liken it to laying the foundation of a high-rise building. According to An and Hu (2021), instruction in strokes and stroke order is a critical component of this foundation. If learners are not taught the correct stroke order, they are unlikely to develop effective strategies for writing characters accurately and consistently (p. 86). Writing strokes and their prescribed

order are therefore essential aspects of character acquisition, and teachers must ensure that learners understand and master them from the outset.

In view of the challenges faced by learners without prior exposure to Chinese characters, Liu (2013) proposes a structured approach to character learning. He outlines a progression that begins with simpler forms, such as basic strokes, character components, and single-component characters, before advancing to more complex characters. Liu further recommends that during the initial stages of instruction, particularly in the first six lessons, character writing should be taught separately from other language skills. This approach allows learners to focus exclusively on character formation without the cognitive load of simultaneous grammar or vocabulary learning. The instructional process begins with the introduction of 60 characters, alongside selected character components. The objective of this method is to enable learners to acquire multi-component characters by first mastering their constituent components (Liu, 2013, p. ix). Multi-component characters are those composed of more than one component.

Chinese characters are constructed from a limited set of basic strokes. There are six fundamental strokes, namely: *dian* (丶), a dot; *heng* (一), a horizontal stroke written from left to right; *shu* (丨), a vertical stroke written from top to bottom; *ti* (㇀), a rising diagonal stroke from left to right; *pie* (丿), a falling diagonal stroke from right to left; and *na* (㇏), a falling stroke from left to right (iChineseLearning, n.d.). These strokes combine to form character components, which function as the building blocks of Chinese characters. In most cases, a component consists of more than one stroke and is smaller than the complete character. For example, the character 件 is composed of two components: 亻 and 牛. These components can be further decomposed into strokes: 亻 consists of *pie* (丿) and *shu* (丨), while 牛 is

composed of *pie* (丿), *heng* (一), *heng* (一), and *shu* (丨) (Wikipedia, n.d.). As Shi (2005) notes, the stroke constitutes the most basic unit in the construction of Chinese characters (p. 3).

Radicals

Yun (2009) states that radicals function as word-building components that assist readers in learning the meanings of Chinese characters and that knowledge of radicals also helps learners memorize both the structural patterns and meanings of characters (p. 15). Similarly, Shu and Anderson (1997) observe that, in most cases, a radical signals the conceptual category to which a character belongs (p. 5). In other words, there is typically a member–set relationship between a character and its radical. For instance, the characters for 'sister' (姐) and 'aunt' (姨) are among the many characters that contain the female radical (女), indicating their association with the semantic domain of femininity.

In some cases, the relationship between the radical and the character's meaning is more direct. For example, the character 唱 ('to sing') contains the 'mouth' radical (口), which clearly reflects the role of the mouth in the act of singing. Although the Chinese writing system is complex, it is governed by an underlying logic that may not be immediately apparent to learners. Those who understand this logic generally find it easier to acquire reading and writing skills in Chinese.

Chin, Ling, and Man (2018) further explain that in Chinese, each radical represents a morpheme and that the combination of morphemes results in the formation of words with distinct meanings (pp. 2–3). For example, the character 惜 (*xī*), meaning 'to cherish,' 'to begrudge,' or 'to pity,' consists of the left-hand radical 忄 (*xin*), which is associated with emotions or feelings, and the right-hand component 昔 (*xī*), meaning 'formerly' or 'ancient.'

In this character, 忄 contributes semantic information related to emotion, while 昔 functions primarily as a phonetic component, providing a cue to pronunciation.

Errors Made When Learning to Write Characters

According to the *Collins Chinese Dictionary* (2011), learning Chinese can be easier at the initial stages if learners are not required to memorize characters immediately. However, the dictionary also notes that learners who do not study characters may later encounter increasing confusion as they progress (p. xii). Learning how to write strokes is particularly challenging for non-native learners, yet it remains a crucial component of Chinese language acquisition.

Research on the learning of Chinese characters has largely focused on visual–spatial memory demands rather than grammatical structures, since Chinese relies on logographic symbols rather than phonetic alphabets (Olivier, 2022). Correcting stroke-related errors often requires an understanding of character structure and radical meanings. In contrast, correcting spelling errors in Latin-based writing systems typically depends on phonological awareness and familiarity with orthographic patterns.

Cognitive approaches to second language acquisition propose that a deeper understanding of language learning can be achieved by examining how the human brain processes and acquires new information (Mitchell & Myles, 1998, p. 72). Although certain types of learner errors may be universal due to shared cognitive processes, the specific linguistic features of a language, such as grammatical morphology in alphabetic languages versus logographic representation in Chinese, result in distinct learning challenges. Learners of alphabetic languages such as German primarily grapple with phoneme–grapheme correspondence, whereas learners of Chinese must master complex visual symbols.

The cognitive processing of Chinese characters involves several interrelated elements, including visual features, writing skills, and neural mechanisms. Chinese characters are composed of strokes, radicals, and spatial configurations that are essential for recognition. While some studies argue that characters are processed holistically, others emphasize the role of sub-character units such as strokes and radicals (Luo & Zhang, 2020). This study aligns with the latter perspective by emphasizing the importance of learning stroke order and understanding radical meanings as foundational skills for character acquisition.

As An and Hu (2021) observe, in the teaching of Chinese as a foreign language, instruction in Chinese characters can significantly enhance learners' interest while deepening their understanding of both the characters themselves and the culture they embody (p. 86). As previously discussed, Chinese characters belong to an ideographic writing system in which form conveys meaning. Serving as a "stepping stone" in Chinese language instruction, character learning occupies a central role in the teaching of various linguistic components of Chinese as a foreign language (An & Hu, 2021, p. 86).

Methodology

The Participants

The study targeted all undergraduate students enrolled in the Chinese language course at the Confucius Institute, University of Nairobi. The study population comprised 39 students distributed across four levels: 19 Year 1, 7 Year 2, 7 Year 3, and 6 Year 4 students. Of these, 30 were female and 9 were male. A total of 33 students participated in the study, representing 84.6% of the target population. Among the participants, 25 (76%) were female and 8 (24%) were male. The remaining six students were excluded from the study because they had not met specific University of Nairobi academic requirements.

Participants were introduced to the basic strokes used in writing Chinese characters after completing the first six lessons on pinyin. During subsequent instruction, learners were

taught principles of character formation and were expected to progressively develop accuracy and fluency in character writing through sustained and guided practice.

Data Collection

A questionnaire was designed and administered to students in Years I to IV. The instrument elicited both biographical information and written language samples, which were used to analyze errors in Chinese character writing. All participants first responded to questions requesting their personal details. Thereafter, students completed writing tasks appropriate to their level of study. Year I students were asked to write a short paragraph describing their family using Chinese characters. Year II students wrote a short paragraph, in Chinese characters, describing their experiences as University of Nairobi students learning Chinese. Year III students were required to write a short composition titled *My Hobby* in Chinese characters, while Year IV students wrote an essay titled *Introduce Your Country*, also in Chinese characters. All written responses were required to be produced in Chinese characters rather than pinyin, as this provided the most direct and reliable means of assessing learners' character-writing ability. Each script was subsequently collected and subjected to systematic error analysis.

Data Analysis Procedure

Each student's response was read to find out if they were able to write correctly in Chinese characters. Errors were identified where the learners failed to write characters correctly. The researcher took pictures of the wrongly written characters and categorized them further according to errors of addition and omission of strokes. They were further classified into the types of strokes added and omitted in order to find out if a particular stroke was added to or omitted from characters more than others. The percentages of the strokes added or omitted and their types were presented on tables for further interpretation.

Results and Discussion

Error and Mistake

This section discusses the errors identified in the learners' written data. Ellis (1999, p. 51) distinguishes between *errors* and *mistakes* by explaining that an error arises from a lack of underlying linguistic knowledge and reflects a deficiency in learners' competence. Errors result from processing difficulties that prevent learners from accessing appropriate target-language rules, leading them to rely on alternative, non-standard rules that are easier to retrieve. In contrast, mistakes are attributed to performance-related factors such as competing processing demands, memory limitations, or a lack of automaticity, rather than to gaps in linguistic competence.

In the context of Chinese character writing, Chin, Ling, and Man (2018, pp. 2–3) similarly differentiate between mistakes and errors. They define mistakes as improper writing of strokes that may cause misunderstanding but are generally less severe. Errors, on the other hand, involve incorrect stroke writing that violates the rules of character formation and may significantly impede readers' comprehension.

Overall, two broad categories of errors were identified in the data: errors occurring at the sentence-structure level and errors related to character formation at the word-structure level. The present paper focuses exclusively on the latter category. Specifically, errors in character formation are examined in terms of stroke addition and stroke omission. These two types of errors are analyzed systematically by grouping them according to the specific Chinese stroke that was either added or omitted.

Errors in Character Formation (Word Structure Errors)

This section describes the errors made by the students in writing characters. Errors in character formation are word structure errors. Errors in character formation means that the learners did not write the strokes as expected in the Chinese writing system. Characters were written incorrectly for various reasons. For instance, while they had a general idea of the way

the character should look, they either omitted or added strokes. There is a possibility that they followed the wrong order of writing strokes. As result, they added or omitted some thereby resulting in incorrect characters. The errors in the sub-sections that follow occurred in individual words.

Addition of Strokes

As the title of this section shows, the focus of discussion is on the addition of strokes. The students wrote more strokes than was expected during the particular character formation. That was a major mistake because the meaning of each affected word was lost and as a result, there was interference with sentence meaning. Students should therefore be keen as they write the characters to avoid such mistakes.

Additions Involving 'Pie'(丿)

In the illustrations below, (a) shows the error made while (b) shows the correct form or the expected character and below it, it's meaning.

1. (a) Error

(b) Expected response

口

mouth

In example (1a) above,  was written instead of 口 (mouth). An extra stroke was added on top of the correct character. The stroke that was added is 丿 called 'pie' in Chinese. The character created by the student has no meaning in Chinese and therefore it resulted in an error. It is therefore not a Chinese character. Writing Chinese characters demands precision

and a small mistake on a character can make it a non-word, which makes a whole sentence to lose its meaning.

Additions Involving 'Heng' (一)

In examples (2), (3), (4), (5), and (6), the errors involve the same stroke, known as *heng* (一) in Chinese. In example (2), the *heng* stroke was incorrectly added to the squarish component of the character.

2. (a) Error

(b) Expected response

很

very

In this example,  was written instead of很(very). A close comparison of the two characters will show that there was an added stroke to the component of the character that is on the right-hand side. The 'box-like' part of it has two strokes called heng (一) instead of one. Such a mistake, which may appear to be minor, makes a big difference in Chinese writing because the resulting character has no meaning. Learners should pay attention to the number of strokes in any given character and practice writing them regularly.

The stroke 'heng' was added to the top part of the correct character in (3) as seen below.

3. (a) Error

(b) Expected response

大

big

In example (3) above, the character  , which means day, was written by a learner instead of 大which means big possibly because they are similar except for one stroke. When writing Chinese, learners should be wary of similar characters and be able to differentiate between them. This can only be achieved by constant practice in both writing and using them in sentences.

Once again in (4a), the error involves the use of the stroke 'heng' in the wrong place.

4. (a) Error

(b) Expected response

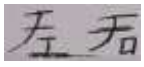
京剧

Peking opera

In this example,  was written by the student instead of 京剧which means Peking opera. The extra stroke '一'(heng） was added to the middle part of the first component of the second character. Learners should pay attention to detail when writing strokes to avoid making mistakes.

In (5), 'heng' was added to the top part of each character as illustrated in (5a).

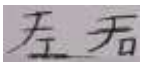
5. (a) Error



(b) Expected response

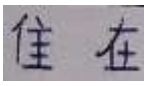
左右

about

In the example (5a) above,  was written by a student instead of 左右which means about. What the learner wrote is a non-word in Chinese.

In (6a) ‘heng’ was added to the first component of the character 住在.

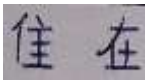
6. (a) Error



(b) Expected response

住在

live

In this example,  was written instead of the character住在which means to live. The stroke一‘heng’ was added to the component of the character that appears on the left-hand side, therefore making them more than the required number. It may look like a small mistake but it creates a non-word. This addition could be equated to a spelling error. In Chinese, missing strokes are common, like omitting letters in English or German. Similarly, extra strokes in Chinese characters mirror adding extra letters in Latin scripts (Olivier, 2022).

Additions Involving ‘Dian’ (丶)

The error identified in (7a) involves the stroke called dian (丶).As already stated, this is yet another stroke used in writing Chinese characters.

7. (a) Error

(b) Expected response

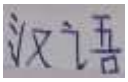
很

very

In example (7a) above, the character  was written instead of很 (very). An additional stroke丶‘dian’ was added to the top part of the component on the right-hand side of the character. Consequently, that small stroke made the character meaningless. The rules for the order of writing strokes in Chinese characters are constant, therefore, learners, and writers in general, should take time to practice the rules to reduce errors in writing.

The error identified in (8) involves the character dian (丶), just as in (7) above. It should also be noted that in the character written by the learner, ‘ti’ (𠂉） is longer than usual in the first component of the first character though this observation falls outside the scope of this paper.

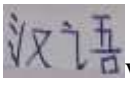
8. (a) Error



(b) Expected response

汉语

Chinese

In the example (8a) above  was written instead of 汉语which means Chinese. A close look at the bottom left component of the character shows the existence of an additional stroke丶also called ‘dian’. The ‘dian’ strokes should be three and not four. Although the character is very similar to that of the word ‘Chinese’, it is incorrect.

Additions Involving ‘Shu’(丨)

The error described in (9a) involves a different kind of stroke called ‘shu.’ It is represented by the vertical symbol/stroke ‘丨’ in Chinese.

9. (a) Error

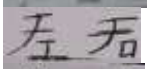
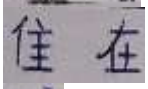
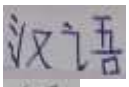
(b) Expected response

很

very

In this example,  was written instead of 很 (very). An additional stroke called ‘shu’(丨) was seen on the top right-hand side of the character, in the ‘box-like’ component of the character. This faulty character has no meaning in Chinese. In summary, there were nine errors of addition of strokes to characters. The strokes involved were ‘pie’(丿), ‘heng’(一), ‘dian’(丶) and ‘shu’(丨).

Table 3: Errors of Addition of Strokes

Serial No	Error in Character Writing	Meaning	Expected Character	Meaning of Expected Character	Name of Stroke Added	Stroke	No. of Times Added
1		Non-word	口	mouth	pie	丿	1
2		Non-word	很	very	heng	一	1
3		day	大	big	heng	一	1
4		Non-word	京剧	Peking opera	heng	一	1
5		Non-word	左右	about	heng	一	2
6		Non-word	住在	live	heng	一	1
7		Non-word	很	very	dian	丶	1
8		Non-word	汉语	Chinese	dian	丶	1
9		Non-word	很	very	shu	丨	1

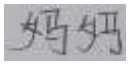
Omission of Strokes

Omission of strokes means that the students left out some strokes when writing characters. In other words, the characters they wrote were incomplete. In three of the errors identified they left out radicals. Omission of strokes can interfere with the meaning intended in a statement.

Omissions Involving 'Heng' (一)

The illustrations below show the strokes students omitted.

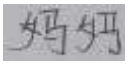
10. (a) Error



(b) Expected response

妈妈

mother

In the example (10a) above,  was written instead of 妈妈 (mother). The stroke 一'heng' was omitted from the bottom right-hand component of the right-hand character. The one on the left-hand side was written correctly. There is a possibility that the student who made this error simply forgot to write it. The learners should be advised to proofread their work before handing them in to the teacher.

A similar error as that of (10) above is seen in (11). The stroke 'heng' was omitted. In example (11), it was omitted from the bottom of the character.

11. (a) Error

(b) Expected response

上

above

In example (11a) above,  was written by the learner instead of 上, a preposition, which means 'above'. A preposition is a word or group of words used before a noun, pronoun, or noun phrase to show direction, time, place, location, spatial relationships, or to introduce an object (Li and Cheng1988: 117). Writing a preposition wrongly may interfere with the meaning of a sentence. In this case, what the learner wrote is not a Chinese character, hence it has no meaning at all. Learners need to do more practice on how to write Chinese characters to eliminate some errors of omission.

Another error of the omission of 'heng' at the bottom of a character is seen in example (12) below.

12. (a) Error

(b) Expected response

姐姐

elder sister

In the example (12a) above,  was written instead of 姐姐which means ‘elder sister’. The stroke 一‘heng’ was omitted from the bottom of the right-hand components of each of the two characters. What the learner wrote has no meaning in Chinese. When writing Chinese characters, learners need to pay attention to detail and completeness of the character.

In (13) below, the stroke ‘heng’ (一), which seems to strike through three parallel strokes on the top part of the character, was omitted.

13. (a) Error

(b) Expected response

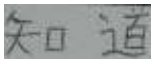
带

bring

In this example,  was written by the learner instead of 带, which means ‘to bring’. It should be written on the top part of the character. The learner may have mistakenly omitted the stroke, however, what was written is not a Chinese character. The error could imply that learners lack mastery of the order of strokes in writing Chinese characters.

The stroke ‘heng’ was omitted inside the second character as shown in (14a).

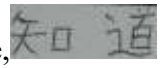
14. (a) Error



(b) Expected response

知道

know

In this example,  was written instead of 知道which means know. A keen look inside the 'box-like' part of the right-hand character (道) in (14b) shows that it has two 'heng'(一) strokes unlike (14a) which has one. This omission can be avoided if learners practice writing strokes as well as mastering their order and completeness.

The stroke 'heng' was omitted from the middle part of the right-hand component of the character on the left-hand side as seen in (15a).

15. (a) Error

(b) Expected response

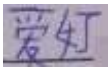
课本

textbook

In the example (15a) above,  was written by the learner instead of 课本 which means textbook. That stroke that was omitted should have been below the box-like structure. Learners just need to put more effort and time in mastering the completeness of the character written down.

In the example shown in (16) below, the omission of the stroke 'heng' is seen again.

16. (a) Error



(b) Expected response

爱好

hobby

In this case  was written by the learner instead of 爱好 (hobby). The stroke was omitted from the right-hand component of the right-hand character 好. The absence of the stroke makes the character lack meaning in Chinese.

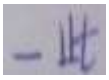
Other examples can be seen in (17), (18), (19) and (20) where the stroke ‘heng’ was omitted in the characters.

17. (a) Error

(b) Expected response

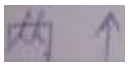
一些

some

In this example,  was written instead of 一些which means some. Two ‘heng’ strokes were omitted at the bottom of the character, as seen in the expected character. The resultant character (此) means ‘this’. Such omissions lead to loss of meaning. The Chinese word for ‘some’ was replaced with the word ‘this.’

In the example given in (18a), we also take note of learners omitting strokes while writing characters.

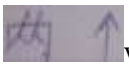
18. (a) Error



(b) Expected response

两个

two

In this example,  was written by the student instead of 两个which means two. ‘Heng’ was omitted from the top part of the character on the left-hand side. The intended meaning of the word was lost.

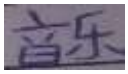
In (19) below, it should be noted that failure by a learner to master the order of strokes while writing Chinese characters may lead to unintended omissions.

19. (a) Error

(b) Expected response

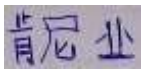
音乐

music

The Character  was written by the learner instead of 音乐 (music). ‘Heng’ was omitted in the upper part of the character on the left-hand side. It should be in the middle of the first character (音). This error shows that learners should take time to learn how to write all the strokes through regular practice and edit their work thoroughly.

In example (20) below, the learner omitted the stroke ‘heng’ in the third character of the word.

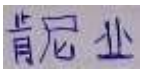
20. (a) Error



(b) Expected response

肯尼亚

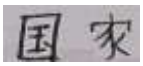
Kenya

The learner wrote  instead of肯尼亚 (Kenya). The omitted stroke (一heng) should have been written on the top part of the last character. This omission made the word a non-word. In addition, 'dian'(丶), on the left-hand side of this character, was written facing the wrong direction by the student. It looks like 'pie.' On its right-hand side, 'dian' replaced 'pie'. These two errors involving 'dian' are outside the scope of this paper, but they serve to show the direction for further research. The errors occurred in the last character (亚). The omission of the stroke 'heng,' specifically, seems to be a common mistake the learners make when writing characters.

Omissions Involving Heng (一) and 'Pie'(丿)

In (21) below, we see the omission of the stroke called 'pie'(ノ) and heng(一).

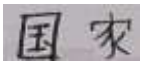
21. (a) Error



(b) Expected response

国家

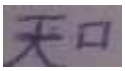
country

The leaner wrote  instead of 国家which means country. Two different strokes were omitted. The stroke 'heng' was omitted in the character 家 which means home. The other stroke that was omitted stroke is 丿'pie'. It was omitted from the bottom left-part of the character on the right-hand side. These omissions resulted in a character which had no meaning in Chinese.

Omissions Involving 'Pie'(丿)

Example (22a) below shows the omission of ‘pie’（ノ).

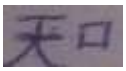
22. (a) Error



(b) Expected response

知

know

In example (22a),  replaced 知 (know). The stroke ‘pie’ was omitted from the top left-hand corner of the first component of the character. Without that stroke, the resultant character is a wrong word which has no meaning in Chinese. Such omissions could be because of the learner's inability to notice them. This calls for more practice to enable them recall all the strokes when writing out a character.

‘Pie’ was omitted by a learner as shown in (23a) below.

23. (a) Error

(b) Expected response

中国菜

Chinese dish

In this case the learner wrote the characters  instead of 中国菜 which means Chinese dish. The learner omitted ‘pie’ and ‘dian’ in the upper part of the last character 菜. In this same character, ‘shu’ was extended upwards to the position where ‘dian’ should have been written. It is difficult to notice the errors but that small mistake makes the word written by the learner meaningless in the Chinese language. Such omissions sometimes could be as a

result of the learner's inability to notice an omission while writing a Chinese character. Where possible, learners are encouraged to self-correct through editing their work.

The error of omissions of strokes in (24a) is one of the cases of lack of mastery of the order strokes which makes the learner miss out some strokes in a character.

24. (a) Error

(b) Expected response

天气

weather

The character,  was written by the learner instead of 天气which means weather. The learner omitted the stroke 'pie' which should be written on the top left part of the right-hand character. This is a small but very important detail that should not be left out. However, the learner did not notice the omission thus resulting in a word that has no meaning in Chinese.

The examples below, that is, (25a) and (26a), show cases of more omissions which could be explained as a lack of adequate mastery of the order of strokes in writing Chinese characters on the part of the learners. The strokes omitted should have been the first to be written according to the prescribed order of strokes.

25. (a) Error

(b) Expected response

和

and

In the example (25a) above,  was written by the student instead of 和which means and. The stroke 丿 'pie' was omitted from the component on the top left-hand part of the character. Without that stroke, the intended meaning is lost. In this character, 'pie' looks like 'heng' but a close look at the expected response shows that it is slanted slightly. The left-hand part of the stroke is lower than the part on the right-hand side. The character 和, a conjunction which means 'and', is a word that is used to connect words, phrases, and clauses. Failure to write it correctly may cause confusion or obscurity of the intended message.

Omissions Involving of 'Pie'(丿) and 'Dian' (丶)

The word in (26) below has two characters. A stroke was omitted in each of these characters.

26. (a) Error

(b) Expected response

听说

hear

In (26a), the learner wrote,  instead of 听说 which means 'to hear'. The stroke ノ'pie' was omitted from the top right-hand component of the left-hand character (听). Additionally, 'pie' which is next to the box-like component, in the same character, was shortened. One 'dian' and one 'pie' stroke on the top right-hand component of the right-hand character (说) were also omitted. Many strokes were omitted. It is very important for learners to learn the correct order of strokes as this will help them to intuitively know how to write all the strokes of new characters as they progress.

Example (27a) shows the omission of 'dian' from the top part of the character.

27. (a) Error

(b) Expected response

高

tall

The character for the word tall was written by the learner as  . It replaced高. Learners should pay more attention to the small details of a character before writing it. This may help in recalling all the strokes required to achieve a correctly written character.

Omissions Involving of 'Shu' (丨)

In the next two examples, (28a) and (29a), the stroke 'shu' (丨) is omitted.

28. (a) Error

(b) Expected response

在

at

In this example, (28a), the learner wrote  instead of 在 which means (at). The omitted stroke, known as 'shu' (丨), should have been at the bottom left-hand corner of the character. 在 (at) is used to show the exact position of this character. This preposition is used in Chinese sentences. Writing it incorrectly makes a sentence difficult to comprehend.

The case of omission of the stroke 'shu' (丨) is also seen in example (29a).

29. (a) Error

(b) Expected response

他

he

In the example (29a) above,  was written instead of 他which means he. Shu in this character is included in the middle part of its second component which is on the right-hand side. The character 他 is a pronoun which is a word that can replace nouns in a sentence. It is therefore an important part of a sentence which, if not written well, can cause a semantic error.

Omissions Involving 'Ti' (㇀) and a part of the stroke 'Xie gou' (㇂)

In example (31), the stroke called 'ti' (㇀) was omitted.

31. (a) Error

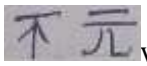
(b) Expected response

我

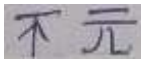
I

The learner wrote  instead of 我 (I). There were two omissions. The first one was the omission of 'ti', which should have been written at the bottom left-hand part of the character. The second one was the omission of a part of the stroke 'xiegou' (㇂) which usually looks like a hook. The part called 'gou' which forms the end of the hook was deleted. This error shows a lack of mastery of the order of writing strokes because the strokesti (㇀) and xiegou (㇂) go together in one character.

Omissions Involving Radicals

In example (30a) below, an extensive radical was omitted. The faulty character  was written by the student instead of 不远which means not far.

30. (a) Error



(b) Expected response

不远

not far

The radical called ‘zouzhi pang’(辶) has a meaning that is related to walking (Liu 2013: 69) or movement. This radical should have been written on the left-hand side of the last character(远). The whole radical consists of six strokes, namely ‘dian’, ‘heng’, ‘zhe’, ‘zhe’, ‘pie’, and ‘na’. Mastering strokes and their order in writing Chinese characters is key to eliminating omissions when writing them.

The examples in (32a) and (33a) show the omission of one important radical by the learners which makes the character meaningless.

32.(a) Error

(b) Expected response

下课

after class

In the example (32a) above,  was written by the student instead of 下课 ‘after class’. The strokes that make up the radical ‘yan zi pang’ (讠) are four, namely ‘dian’, ‘heng’, ‘zhe’ and ‘ti’. The whole radical was omitted from the last character, i.e., 课which means

class. The meaning of the radical is related to talking or, in the words of Liu (2013: 53), it is used in reference to 'language-related behaviour.' In example (33), the same radical was omitted by the learner.

33. (a) Error

(b) Expected response

汉语

Chinese

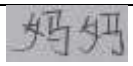
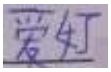
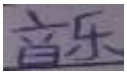
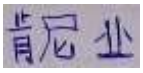
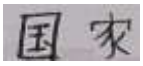
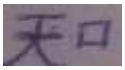
In this example,  was written by the learner instead of 汉语which means 'Chinese'. The strokes 'yan zi pang' (讠) that make up the radical were omitted once again. Without the radical, the word written by the learner has no meaning.

The examples in (31) to (33) show omissions of more than one stroke in the character. There are also cases where the learner missed out part of a stroke. This could be as a result of failure to master the completeness of Chinese strokes. The two radicals are written continuously without pausing after each stroke. Only 'dian,' in both radicals, is separated from the rest of the strokes that make up each radical. The rest of the strokes are written continuously with turns.

In summary, there were 25errors of omission of strokes in the characters. The strokes involved were 'heng'(一), 'pie'(丿), 'dian'(丶), 'shu'(丨), ti' (𠂉) and a part of 'xiegou' (乚). Two radicals, namely 'yan zi pang' (讠) and 'zouzhi pang' (辶)were omitted.

Table 4: Errors of Omission of Strokes

Serial No	Error in character writing	Meaning of New Character	Expected Character	Meaning of Expected Character	Name of stroke omitted	Stroke	Number of times omitted

1		Non-word	妈妈	mother	heng	一	1
2		Non-word	上	above	heng	一	1
3		Non-word	姐姐	eldersister	heng	一	2
4		Non-word	带	bring	heng	一	1
5		Non-word	知道	know	heng	一	1
6		Non-word	课本	textbook	heng	一	1
7		Non-word	爱好	hobby	heng	一	1
8		Non-word	一些	some	heng	一	2
9		Non-word	两个	two	heng	一	1
10		Non-word	音乐	music	heng	一	1
11		Non-word	肯尼亚	Kenya	heng	一	1
12		Non-word	国家	country	heng, pie	一, ノ	2
13		Non-word	知	know	pie	ノ	1
14		Non-word	中国菜	Chinese dish	pie, dian	ノ, 丶	2
15		Non-word	天气	weather	pie	ノ	1
16		Non-word	和	and	Pie	ノ	1
17		Non-word	听说	hear	pie, dian	ノノ, 丶	3
18		Non-word	高	tall	dian	丶	1
19		Non-word	在	At	shu	|	1
20		Non-word	他	He	shu	|	1
21		Non-word	我	I	ti. gou in xiegou	𠂉, 乚	2

Percentages of Errors Made in Character Formation

This section explains major errors observed in the study which include errors of addition of strokes and errors of omission of strokes. This is important because it points to a lack of mastery of the order of strokes and a lack of identification of strokes in a character by the learners. The errors the students made are placed on a table to show at a glance the percentage of errors of addition and omission of strokes.

Table 5: Percentage of Errors Made by the Learners in Addition of Strokes

Errors	Number	Percent
Addition of the stroke 'pie' (丿)	1	10%
Addition of the stroke 'heng' (一)	6	60%
Addition of the stroke 'dian' (丶)	2	20%
Addition of the stroke 'shu' (丨)	1	10%
Totals	10	100%

Table 3 shows that most of the errors, six out of ten of them, involved the stroke called 'heng'. That was more than 60 % of the errors of addition. 'Heng' is a horizontal stroke. There is a possibility that the learners overestimated the number of horizontal strokes in the characters affected.

Table 6: Percentage of Errors Made by the Learners in Omission of Strokes

Errors	Number	Percent
Omission of the stroke 'heng' (一)	14	50%
Omission of the stroke 'pie' (丿)	7	25%
Omission of the stroke 'dian' (丶)	3	10.7%
Omission of the stroke 'shu' (丨)	2	7.1%
Omission of the stroke 'ti' (𠂉)	1	3.6%
Omission of 'gou' in the stroke 'xiegou' (乚)	1	3.6%
Totals	28	100%

There were 28 errors of omission. Once again, the stroke known as *heng* (一) accounted for the highest number of omissions. The reason for this pattern is not entirely clear. The most plausible explanation is that omissions of the horizontal stroke are more difficult for learners to notice compared to vertical or slanted strokes.

Table 7: Percentage of Errors Made by the Learners in the Omission of Radicals

Errors	Number	Percent
Omission of the radical 'zouzhi pang' (辶)	1	33.3 %
Omission of the radical 'yan zi pang' (讠)	2	66.7%
Totals	3	100%)

Two radicals were omitted. One was omitted once while the other one was omitted once twice. As discussed in the previous section, both radicals have a number of strokes. The stokes were not discussed or considered separately because they are usually written continuously with turns and for each radical, it is not one or two strokes that were omitted.

Table 8: Percentage of Errors Made by the Learners in Each Category

Errors	Number	Percent
Addition of strokes	10	26.3%
Omission of strokes	28	73.7%
Totals	38	100%

In this study, it was found that there were more errors of omission (73.7%) than addition (26.3%). The high percentage of errors of omission could be attributed to the inadequate understanding of the order of strokes in the character. In such a situation a learner could skip some of the strokes unknowingly. There are less errors of addition of strokes because the learners tended to stop writing the character once the written character appeared to be similar to the intended character and there was no need to add more strokes. In general, such errors tend to reduce as the learner become more proficient in the Chinese language and the writing of its characters.

Conclusion

This research was a study of errors made by University of Nairobi's Confucius Institutes Bachelor of Arts students in writing Chinese characters. They made errors in character formation, namely addition and omission of strokes. There were more errors of

omission (73.7%) than those of addition (26.3%) of strokes. The strokes that were added are 'pie'(丿), 'heng' (一), 'dian' (丶) and 'shu' (丨) while those that were omitted include 'pie' (丿), 'heng' (一), 'dian' (丶), 'shu' (丨), ti' (𠂉) and a part of 'xiegou.' The radicals 'yan zi pang' (讠) and 'zouzhi pang' (辶) were also omitted.

There could be many causes of the errors identified in the preceding paragraph but we propose two of them. A possible reason for the errors could be a lack of mastery of the order of strokes in writing the characters in the Chinese language. Another possible cause of the errors could be limited practice in writing. Learners are encouraged to take writing of Chinese characters as an adventure. Through this they will appreciate the challenges encountered and learn from them by continual improvement in character writing skills. Learners should invest their time in learning how to write characters and also ensure that they self-correct through proofreading and editing the characters they have written. Writing Chinese characters can be compared to drawing; therefore, one needs to be very keen and focused because a small mistake may alter the meaning intended or make a character meaningless.

This study is a contribution to research in the area of second language learning and acquisition, which is not an extensively researched area in the Chinese language teaching and learning in Kenya. It has further provided insight into how learners of Chinese as a second language struggle to acquire Chinese characters through the types of errors seen in their writing. Additionally, the results of the analysis are important because they may guide both the learners and their teachers on their areas of weakness and strength.

Linguists and researchers are invited to work on areas that have not been covered in this paper in a bid to advance the teaching and learning of the Chinese language writing particularly. It should be noted that writing Chinese is a major step towards learning how to read the language. Though this is not part of the study, it was found that errors tended to reduce as the learners improved in the level of understanding of the Chinese language and the

writing of its characters as they gradually progressed from Year 1 to 4. This is an observation that could trigger further research in this area. One may, for example, find out if there are specific strokes that are omitted or added by Year 4 students and not any other cohort of students. Some strokes were ill formed (shorter than expected, longer than expected, facing the wrong direction, among others). This could also be investigated in order to help learners to improve writing characters because written Chinese is a major medium of communication.

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