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An Error Analysis of Chinese Characters Writing by Local Hungarian Learners of Chinese as Foreign Language

Abstract

The shape of a Chinese character is a kind of square that is called a square word. The handwriting of Chinese characters is an important and difficult point. The situation is believed to be very different from that of the alphabetic script of Hungarian. This paper mainly studies and analyses Chinese writing errors by local Hungarian learners.

This paper collects the exam papers of primary stage learners as original research materials, analyses the objective reasons for their errors, puts forth teaching suggestions corresponding to the features of the mistakes, and makes suggestions for reducing the writing errors of Chinese characters by local Hungarian learners.

Keywords: Chinese handwriting errors, Hungarian learners error theory, teaching strategies for Chinese characters, Chinese character error analysis

牟泽红

匈牙利汉语学习者汉字书写偏误分析

摘要

汉字因其独特的形状而被称为"方块字"。在学习汉语的过程中，熟练且正确掌握汉字书写对汉语学习者而言，是一个颇具挑战性的任务。相较于匈牙利的字母文字系统，汉字书写系统的规则有着明显的不同。本文主要研究并分析匈牙利学习者在汉字书写方面的偏误情况。本

研究收集了初级学习者的考试卷作为原始研究材料，统计并分析了他们的偏误及其原因，并提出了针对这些偏误特点的教学建议，旨在降低匈牙利学习者在汉字书写方面的偏误率。

关键词：汉字书写偏误，匈牙利学习者偏误，汉字教学策略，书写偏误类型

Background, Status, and Theory

1. Character Writing Error Research Background

Chinese characters have a unique square shape and a handwriting style that differs from that of the alphabetic script used in Hungarian. Learning to write Chinese characters can be challenging, especially for learners whose native language is based on the Roman alphabet. The impact of Chinese characters on foreign learners is significant, as evidenced by higher response times and error rates among European and American students compared to Japanese and Korean students. The influence of native Hungarian handwriting habits poses considerable obstacles for Hungarian learners of Chinese as a foreign language. Unlike alphabetic scripts, Chinese characters are logographic and composed of radicals in two-dimensional squares. This lack of a direct grapheme-phoneme correspondence rule makes it difficult for learners to determine the pronunciation of characters based solely on their written representation. This obstacle is particularly pronounced for international students or heritage Chinese learners whose learning strategies rely heavily on phonetics.[1]

2. Research Status of Chinese Character Writing Errors

In their studies, various researchers have examined the characteristics and teaching methods of Chinese characters. Zhang[2] summarised the composition system and structural features of Chinese characters, highlighting the variations in writing the same radical and the propensity for errors in simi-

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[1] Feng 2006: 15.
[2] Zhang 1990: 112–113.

lar characters. Fei[3] categorised modern Chinese characters into three levels: strokes, parts, and completed words, emphasising the distinction between completed and intact characters. Li[4] analysed the features of Chinese characters and proposed methods to enhance character recognition, including focusing on radicals, incorporating theoretical knowledge, and analysing character structures. Yi[5] explored stroke order and its norms, emphasising the importance of correct stroke order in writing Chinese characters. Xiao[6] discussed errors that foreign students make at the component level and stressed the significance of component teaching. Yuan[7] investigated the phenomenon of mirror-writing errors, which occur at the stroke, part, and whole character levels. Zhao[8] emphasised the importance of following the compositional rules of Chinese characters for accurate comprehension and learning. Hao[9] described Chinese characters as a two-dimensional structure composed of functional parts and strokes, emphasising their systematic nature. Guo[10] analysed errors in Chinese characters made by foreign students from a stroke perspective, categorising them into stroke-shaped, direction, internal, and stroke count errors. These studies contribute to our understanding of Chinese character characteristics and the development of effective teaching methods.

3. Theoretical Foundation

A comprehensive examination of errors in Chinese character writing necessitates a profound understanding of the unique structural features inherent in Chinese characters. These characters are characterised by a two-dimensional and square construction. The intricate nature of this structural complexity has been systematically classified by Fei,[11] who categorises modern Chinese characters into strokes, parts, and completed words, providing a robust framework for analysis. This research, focused on the Chinese writing errors of Hungarian students, distinguishes between two types of errors: those with implica-

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[3] Fei 1996: 21.
[4] Li 1998: 131–132.
[5] Yi 1999: 49–56.
[6] Xiao 2002: 363–374.
[7] Yuan 2003: 134–136.
[8] Zhao 2006: 20–22.
[9] Hao 2007: 29–39.
[10] Guo 2008: 63–69.
[11] Fei 1996: 21.

tions for reading comprehension and those without. The application of error analysis is crucial not only for identifying prevalent patterns but also for dissecting subtle distinctions that emerge during the process of learning Chinese characters. In our exploration of Chinese character writing errors among Hungarian learners, we actively apply the theoretical foundation laid out in the study to provide a nuanced understanding and practical insights. Fei's categorisation, which classifies Chinese characters into strokes, parts, and completed words, serves as the foundation for our analysis. Fei's categorisation proves instrumental in identifying and analysing errors among Hungarian students. When examining errors affecting reading comprehension, such as missing component and redundancy error, component replacement error, component mirror image error, confused strokes, loose structure, and strokes missing and redundancy errors, Fei's framework helps dissect errors at the component and structural levels.

Furthermore, when addressing errors that do not impact identification, such as Chinese characters stroke error, the error of the relation between strokes, and homonyms, Fei's categorisation aids in understanding the intricacies of stroke-related errors and the relationships between characters. Given that these errors, while not strictly adhering to conventional Chinese character rules, signify an intermediate stage in the learning trajectory of Hungarian students, it is essential to delve into the theoretical underpinnings that contextualise these deviations. In this regard, the utilisation of the interlanguage theory, as proposed by Selinker[12], becomes instrumental in elucidating the cognitive processes and linguistic strategies underlying these errors in Chinese character writing by Hungarian learners.

This theoretical foundation serves as a robust framework for comprehending the nuanced dynamics of error occurrence, assisting educators in developing targeted teaching strategies. Moreover, the insights gleaned from this study contribute not only to a deeper understanding of the learning progression of Hungarian learners but also to the broader discourse on the interplay between linguistic theory and practical language acquisition. Moving beyond Fei's framework, the application of Selinker's interlanguage theory becomes crucial in explaining the rationale behind these errors. Selinker's theory helps us comprehend the errors as part of the learners' evolving linguistic competence. For instance, when Hungarian learners apply the hand-

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[12]   Selinker 1972: 219–231.

writing method of their native language, struggle with the changes of approximate strokes, or make stroke order errors, Selinker's interlanguage theory helps elucidate these deviations as natural steps in the learners' progression.

In summary, the theoretical foundation provided by Fei and Selinker significantly enriches our analysis of Chinese character writing errors among Hungarian learners. Fei's classification offers a structured approach to understanding errors at different levels, while Selinker's interlanguage theory provides a dynamic lens to view these errors as integral parts of the language learning process.

Research Purpose and Significance

Teaching Chinese characters as a foreign language has long been a challenging task, as it requires not only oral proficiency but also recognition and writing skills. Hungarian students studying Chinese face difficulties due to their non-Chinese character culture environment. Research suggests that students in non-Chinese character cultural backgrounds are more prone to errors in recognising, reading, and writing Chinese characters compared to those in Chinese cultural backgrounds. This paper aims to contribute to the field of teaching Chinese as a foreign language (TCFL) by analysing and addressing the challenges faced by Hungarian learners. The research draws upon various theories to support its findings and offers teaching suggestions and learning methods to help Hungarian learners improve their Chinese character writing skills. Emphasising the possible errors and providing guidance on different character types and components can help reduce interlanguage errors in Chinese character writing.

Research Object, Method, and Category

This paper collected 118 examination papers from the second-year of Chinese Department of Eötvös Loránd University as the original materials. In order to reflect on students' handwriting errors scientifically and facilitate statistical classification, this paper follows the following principles when recording errors to ensure that the entire record is reasonable:

1. Different people's identical errors of the same Chinese character at the same stage are recorded.
2. At the same stage, the same person's same error for the same Chinese character is recorded once, thereby recording the same Chinese character's different errors separately.
3. If there are several different errors in one Chinese character, each of the errors should be recorded.
4. In the case of a few concurrent categories, the error of character is not arbitrarily classified into a certain category but separately recorded.

The author believes that such a classification record can objectively, comprehensively, and accurately reflect the various situations that Hungarian students have in writing Chinese characters.
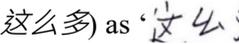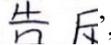
Errors Types

There are differing opinions on whether students learning Chinese as a foreign language should be taught to write Chinese characters. Some scholars propose omitting the teaching of handwriting Chinese characters.

While this viewpoint has some validity and increasing the focus on the teaching of computer pinyin input is a useful suggestion, many still believe that handwriting Chinese characters should be taught even in the computer era. Just as computers cannot replace the human brain, typing cannot replace handwriting. Handwriting is a manifestation of emotion, and an individual's handwriting reflects their state of mind and personality to some extent. It is a level of expression that electronic fonts cannot replicate. Additionally, due to individual differences, the same Chinese character can be written in completely different ways by different people. Therefore, it is necessary to study the handwriting errors of foreign learners of Chinese.

In this study, the Chinese handwriting errors of Hungarian Chinese learners are categorised into two types: errors that affect reading and errors that do not. The first type of errors impacts recognition when learners miswrite strokes or components of a character, leading to difficulties in identification for teachers. Some characters may even be unrecognisable by native Chinese speakers and fall into the category of errors that affect reading. These recognition-affecting errors can be further divided into five categories: missing components and redundancy errors, component replacement errors, com-

ponent mirror image errors, confused strokes and loose structure, and strokes missing and redundancy errors.

For example, writing the charactersfor 'so much, so many' (*zhè me duō* 这么多) as '这 幺 多', replaces the stroke ' ノ ' with the stroke '∠'. Moreover, writing the character for 'house' (*fang* 房) as '房' misses the dot on the head, andwriting the characters for 'to tell, to speak' (*gàosù* 告诉) as '告 斥', in this lexical item, a writing error occurred as a result of the learner omitting the radical ' 讠' in the character '*sù* 诉'. While native Chinese teacher can guess the target word that the student wants to write if there are phrases or context to help in the part of missing components, but they cannot ignore such errors, which arestill errors that affect language learning.

This kind of error does not affect teachers' reading or students' understanding. However, it does not conform to the writing standards of Chinese characters. Some errors even go against the writing standard. These types of errors are divided into seven categories, namely: applying the handwriting method of the script of one's native language, learner cannot grasp the changes of approximate strokes, stroke order error, strokes missing and redundancy errors, the error of the relation between strokes, the stroke cross relation error, the stroke length relation error, stroke position relation error, and homophone substitution error.

For example, in one instance the component of the character for 'mad' (*fēng* 疯) was written as ' 疯 '. The upper left corner of the word meaning 'knowledge, to know' (*zhī* 知) was written as '知', and the character for 'several' (*jǐ* 几) in the upper right corner of the word for 'ship' (*chuán* 船) was written as '舟台'. These were errors committed by students who did not have a good grasp of the writing rules of Chinese strokes. The homonym is a case of mistaken identity. It was supposed to be one word, but it was instead written in homophone, which is called a 'wrongly written character' (*biézì* 别字). For example, students wrote the characters for 'people' (*rén men* 人们) as '人门', for 'Tang dynasty' (*tángdài* 唐代) as '糖代', and 'landscape' (*jǐngsè* 景色) as '京色'.

Errors Summary

As shown in Table 1, the proportion of errors affecting recognition is 62%, and 38% of Chinese characters are not affected among the sample.
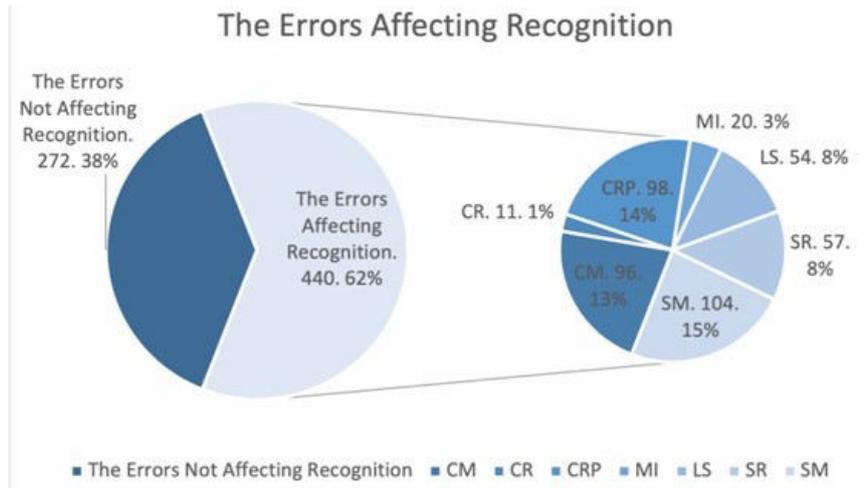

Table 1. The Errors Affection Recognition[13]

As Table 1 shows, within the section of affecting recognition and reading, 31% of the errors were caused by component errors, and 23% of the errors are caused by stroke redundancy and missing errors. This indicates that handwriting errors in components of Hungarian learners of Chinese account for the majority, showing that learners do not fully understand the meaning and correct handwriting of the radicals.[14] The remaining 23% is due to stroke redundancy and missing errors, which are other manifestations of a lack of a foundation in handwriting.

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[13] Confused strokes, loose structure (LS), Component missing error (CM), Component redundancy error (CR), Component replacement error (CRP), Component mirror image error (MI), Stroke missing error (SM), Stroke redundancy error (SR).

[14] It will easier for students to deconstruct characters into pieces that are less numerous than the number of Chinese characters as a whole.
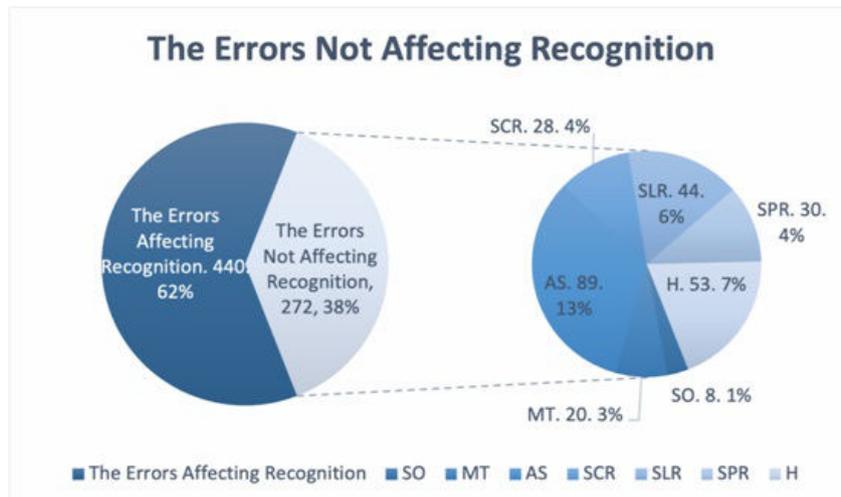
The Errors Not Affecting Recognition

Table 2. Then Errors Not Affecting Recognition[15]

According to Table 1 and Table 2, the proportion of errors caused by strokes accounted for 50% of the total errors. The strokes of Chinese characters are diverse. Therefore, it is difficult for Hungarian learners to notice these subtle differences when writing Chinese characters in the early stage of learning Chinese characters. In the homophone errors, character A was mistakenly used instead of character B in the process of writing by learners. This indicates that learners have stored the pronunciation of character A in their memory but lack the knowledge of its form and meaning. Meanwhile, learners have stored the form and pronunciation of B character in their memory but lack the knowledge of its meaning. The error's proportion is relatively low, constituting a mere 7% of the overall instances within this category of errors, as delineated in Table 2.

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[15]   Stroke order error (SO), Apply the method of writing mother tongue (MT), Stroke redundancy error (SR), Stroke missing error (SM), Cannot grasp the changes of approximate strokes (AS), The stroke cross relation error (SCR), Stroke length relation error (SLR), Stroke position relation error (SPR), Homophone (H).

The Reason for the Error

1. Analysis of Chinese Character-Side Factors

When Hungarian learners commence their journey into the realm of learning Chinese, their initial inclination is to rely on the Hungarian alphabet system for writing Chinese characters. The notable divergence between the two systems becomes apparent, primarily in their structural compositions. The Hungarian script comprises 35 linearly arranged letters, which can be amalgamated following specific writing rules to construct texts.

Phonetic characters, graphical representations or letters conveying pronunciation, play a pivotal role in this context. Different pronunciations correspond to distinct meanings, and phonetic characters find prevalence in regions beyond the Chinese character cultural sphere. Conversely, ideographs leverage specific character structures and shapes to convey meaning, with Chinese characters standing as the quintessential representatives within the Chinese character cultural sphere. The intricacy of Chinese characters, the presence of multi-stroke characters, and the necessity for adhering to a strict stroke order present formidable challenges for foreign students. In the absence of an efficient and simplified learning approach, students might lose their enthusiasm for mastering Chinese characters, leading to a substantial decline in confidence.

2. Analysis of Teaching Material-Side Factors

Writing Chinese characters is a skill that requires constant and repeated practice. In the initial stage of Chinese character teaching, writing Chinese characters is the most effective method of memorising them. The content, frequency, and intensity of training primarily depend on the textbooks used. Currently, the teaching materials for Hungarian learners primarily focus on reading and writing, and Chinese characters are taught in conjunction with the words appearing in the texts. In the Chinese Department of Eötvös Loránd University, the main textbook used by learners is the *New Practical Chinese Reader Textbook 1*, designed for Chinese beginners. It includes text, notes, exercises, applications, reading and retelling sections, grammar explanations, and Chinese characters. The textbook aims to teach texts with the guidance of grammar; enhance students' listening, speaking, reading, and writing skills; and enable them to communicate in Chinese. However, there

is no dedicated writing course, and teachers only briefly explain Chinese character structures during regular classes without delving into in-depth study.

3. Analysis of Teacher-Side Factors

Teachers play a pivotal role in shaping the learning experience of students studying Chinese as a foreign language. One critical aspect influencing the effectiveness of instruction is the quality of teachers themselves. As Boyer said,

> As a scholarly enterprise, teaching begins with what the teacher knows. Those who teach must, above all, be well informed, and steeped in the knowledge of their fields. Teaching can be well regarded only as professors are widely read and intellectually engaged.[16]

Therefore, it becomes imperative for teachers to continually work on improving their personal qualities, aligning them with the dynamic nature of Chinese character instruction.

To comprehend the nature and characteristics of Chinese characters is fundamental for teachers. This understanding becomes the bedrock for adapting teaching approaches at different stages to ensure targeted instruction. As Wanemphasised,

> As a symbolic system for recording Chinese, Chinese characters are as complex as other writing systems… The situation is very complicated, and many people are intimidated by it. However, avoidance is of no help. Only by facing it, conducting objective analysis earnestly, and continually correcting one's own understanding can we gradually solve the difficulties in teaching.[17]

Chinese language teachers should have a comprehensive understanding of the intricacies of Chinese characters and adjust their teaching methods accordingly. This adaptability is crucial in accommodating the diverse learning needs of students as they progress in their language acquisition journey.

Furthermore, the writing standardisation employed by teachers emerges as a substantial factor impacting the development of writing skills among beginners. According to Yan,

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[16] Boyer 1990: 23.
[17] Wan 2000: 62–69.

The uniqueness of Chinese characters themselves and the process of recognizing them by people determine that our classroom teaching must artfully utilize important means of engaging students visually, such as writing on the blackboard, in order to focus students' attention on the forms of characters written by the teacher.[18]

For beginners, learning Chinese characters involves studying the standard regular script *(kǎishū 楷书)*, and the teacher's blackboard writing serves as the most immediate teaching material. The manner in which teachers present characters on the blackboard significantly influences students' comprehension of stroke order, structure, components, and character configuration.

The role of teachers' writing as a tangible example and teaching reference cannot be overstated. If teachers fail to emphasise proper Chinese character writing in their demonstrations, it becomes challenging to effectively correct writing errors. As stated by Hao,

Excessive correction can undermine learners' confidence, while indiscriminate tolerance may lead to the stubborn persistence of errors…
In other words, teachers should choose appropriate moments to correct errors affecting expression in a gentle manner.[19]

This lack of timely correction not only perpetuates mistakes but also leads to the emergence of new errors, ultimately impeding the progress of Chinese character teaching.

In conclusion, an intricate interplay of teachers' competencies, understanding of Chinese characters, and writing standardisation significantly shapes the learning outcomes for foreign learners of Chinese. The multifaceted nature of these challenges underscores the need for ongoing professional development and a nuanced approach to pedagogy.

4. Analysis of Learner-Side Factors

The effectiveness of Chinese character learning for learners is intricately linked to the appropriateness of their learning strategies. Empowering learners with effective strategies enhances their learning efficiency and facilitates the achievement of Chinese language learning goals. Tailored strategies are

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[18]   Yan 1986: 145.
[19]   Hao 2003: 76.

essential at different learning stages. In the initial stages, beginners, particularly foreign students, often grapple with Chinese character acquisition by relying solely on rote memorisation of class-taught characters. Unfortunately, lacking self-awareness, they tend to overlook consistent character practice, leading to subpar writing accuracy and overall proficiency.

Intermediate and advanced learners, when relying on mechanical memorisation without delving into character rules, find themselves facing stagnant writing skills. Clearly, learning strategies play a pivotal role in students' language acquisition. To enhance Chinese character writing skills, learners must commence with effective learning strategies.

Simultaneously, the prevalence of electronic devices has steered students toward typing rather than handwriting. The widespread use of technologies, such as computers and cell phones, has diminished awareness of traditional learning methods. Prolonged typing has gradually eroded the ability to handwrite Chinese characters, significantly denting learners' confidence.

In China, children predominantly learn electronic device usage based on pinyin, rather than the logographic system of written Chinese. Tan[20] hypothesised that this shift might negatively impact Chinese children's reading abilities. A study assessing character reading ability and pinyin use among primary school children revealed a higher incidence of severe reading difficulties than previously reported. Furthermore, a significant negative correlation between children's reading scores and their use of the pinyin input method was observed. The study concluded that

> Pinyin typing appears to be harmful in itself; it interferes with Chinese reading acquisition, which is characterized by fine-grained analysis of visuographic properties of characters. Handwriting, however, enhances children's reading ability.[21]

Building on contemporary perspectives, research by Zhou[22] on children's methods of learning Chinese characters is also applicable to learners of Chinese as a foreign language to some extent. The research underscores the positive impact of multi-sensory learning on students' recognition and memory of Chinese characters. In learning Chinese as a foreign language, stu-

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[20] Tan et al. 2013: 1119–1123.
[21] Tan et al. 2013: 1122.
[22] Zhou 2021: 1099.

dents can enhance their perception and understanding of characters by incorporating visual, auditory, tactile, and other sensory experiences. Focusing on cultivating students' understanding of the structure and form of Chinese characters will aid in improving their learning outcomes.

Incorporating multisensory experiences augments character recognition and retention, offering an innovative approach for foreign learners to overcome initial challenges. This approach not only complements traditional strategies but also addresses the impact of electronic reliance on tactile learning experiences. The significance of handwriting for foreign learners of Chinese cannot be overstated. Handwriting, encompassing visual, proprioceptive, and tactile information, remains irreplaceable.

Errors in learning and writing Chinese characters often go unnoticed by both teachers and students. Addressing these persistent mistakes is crucial for improving learners' Chinese character writing skills. A comprehensive approach is imperative to systematically tackle the challenges associated with writing Chinese characters, promoting accuracy and aesthetic appeal.

Chinese Character Writing: Suggestions for Improvement

Attaching importance to Chinese handwriting teaching and strengthening training in class are influenced by many factors in actual teaching. Generally, teachers focus more on listening, reading, and speaking, neglecting Chinese character handwriting. Therefore, when teaching beginners, teachers should demonstrate the handwriting process, sequence, direction, and spatial arrangement of strokes and reinforce practice to enhance students' awareness of correct writing, especially for error-prone characters.

To assess students' handwriting in each class, teachers should consider feedback from homework, papers, and writing samples. When correcting assignments, teachers should address pronunciation, reading, and Chinese character handwriting errors. Prompt correction and student revisions in notebooks are necessary. Some errors result from subconscious influences, such as Hungarian handwriting habits. Errors have multiple causes. Teachers assist learners in identifying and rectifying mistakes, encouraging repeated practice of correct versions for consolidation.

Conclusion

This study involved native Hungarian speakers who were in their third semester of Chinese studies at Eötvös Loránd University. In the initial stage, learners are unfamiliar with Chinese characters and lack a comprehensive understanding of them, resulting in diverse errors. However, through extensive data analysis, certain patterns can be observed. The error types made by Hungarian students in the primary stage of Chinese writing can be summarised as follows.

The previous section conducted a list analysis, which revealed that handwriting errors made by Hungarian learners in the primary stage primarily involve stroke errors and component errors. The majority of errors are related to strokes, especially an increased or decreased number of strokes, while component errors are also predominantly of this type.

Specifically, regarding stroke and component errors, Hungarian learners exhibit a concentration of stroke errors. Among the strokes, 'hook' strokes are more prone to distortion errors. The 'dot' stroke ' 丶 ' often has errors involving an increase, omission, or deformation. Errors in the 'horizontal' stroke ' 一 ' also occur frequently, with increased, omitted, curved, and deformed forms being common. As for component errors, the components ' 宀 ', ' 亻 ', ' 冫 ', and ' 氵 ' are more frequently associated with errors. In summary, Hungarian students in the primary stage tend to produce relatively concentrated error types, particularly in terms of strokes and components.

These findings suggest that Chinese as a foreign language classrooms should allocate more time to teach basic strokes and radicals. While stroke order does not appear to be crucial for correct character writing at the end of the first semester of university studies, teaching stroke order may reduce the cognitive load involved in writing Chinese characters. This becomes increasingly important as students progress through their courses and are expected to remember more characters. The fewer variations in stroke order for a given radical that need to be memorised, the easier it becomes for stroke order to become automatic. This, in turn, allows learners to focus more attention on radicals and characters as a whole. Such a simple change in teaching methods can facilitate the deconstruction of characters into fewer components, making it easier for students to remember how to write new characters and recognise them when reading.

This study contributes to the field of teaching Chinese as a foreign language (TCFL) by shedding light on how Hungarian learners of Chinese acquire Chinese characters based on the types of errors made in their writing.

For future research, it would be beneficial to replicate this study with a larger sample of learners, enabling the results to benefit Chinese language teachers nationwide. Additionally, including questions to participants about their thought processes regarding characters and the methods they use to remember them would provide valuable insights. Furthermore, conducting similar studies with learners at higher levels of fluency, preferably during each semester of Chinese study, would be interesting to investigate if more characters are remembered correctly and written accurately as fluency improves.

Studies should also be conducted with left-handed learners of Chinese, dyslexic learners of Chinese, and learners who possess both attributes. Exploring how these individuals learn to write Chinese characters and whether they develop their own writing rules that aid their learning, assessing the reliability of these rules, and determining if specific instructional approaches can assist them in learning Chinese would be worthwhile areas of investigation.

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