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Title: First steps in learning Chinese characters : the analysis of Chinese writing system acquisition by Polish beginner students

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First steps in learning Chinese characters The analysis of Chinese writing system acquisition by Polish beginner students

1. Introduction

Compared to Indo-European speaking nations, the Chinese are probably one of the few nations which still use an alphabet resembling their ancient writing style, which has been used for over 5000 years in the Far East. Obviously, it has undergone numerous changes in its shape, style and writing system, however it still retains a close resemblance to the original writing system, especially in terms of pictograms, and photographic icons of the ancient characters. Also, the specificity of the Chinese writing system, namely the stroke order and the stroke shapes are still crucial for Chinese native speakers, treated by them as their orthography system (Zhou 1998; Sun 2006).

The aim of the present article is to investigate the acquisition of the writing system of Chinese by two age groups of students from Silesian voivodeship with no prior experience in learning Chinese. At first, the focus of the study, research participants, research methods and tools will be introduced. In the following part of the article, the specificity of Chinese writing system will be explained with some examples of its most important issues.

Then, the analytical chapter of the article will be provided with a pilot study of the students' motivation for learning Chinese in general and the

methods that the teacher has decided to implement during the classes. Later, the analysis of the Chinese writing system acquisition by Polish beginner students will be provided. The concluding part of the article is devoted to some final remarks concerning the study.

2. Focus of the study

The main focus of the present pilot study was a three month continuous assessment of the acquisition of Chinese characters and phonetic alphabet, called *pinyin*, in two class environments, namely in teenagers' study group and adults' study group of Silesian origin. In regard to writing, the author investigated the stroke order, character recognition, character acquisition, and how the specificity of Chinese influenced the learning process. Also, she focused on the process of association of the *pinyin* equivalents and their correspondence to the characters (*hanzi*) and the difficulties it brought to the students of both age groups during their learning process.

The pilot study was performed among Polish students from Silesian voivodeship. Although there have been numerous studies conducted worldwide concerning Chinese writing system acquisition by students of many age groups (e.g. numerous articles in the *Journal of Chinese Writing Systems*; Xing, Shu and Li 2004; Kuo, Kim, et al. 2015; Olmanson and Liu 2017, and many others) to the author's knowledge, there have not been conducted any official studies verifying Chinese writing acquisition by Polish beginner students from the Silesian voivodeship. Thus, the present pilot study points out to a new area of expertise for the further, more detailed research.

Prior to the research itself, the author conducted a short questionnaire verifying the students' motivation in choosing to learn Chinese characters. Additionally, after three months of observation of the class activities and procedures, the author examined the Chinese teacher's teaching methods and tools, providing the findings in the following chapters.

3. Research participants

As mentioned above, the study was conducted on two age groups of students of Silesian origin, namely teenagers and adults. As can be seen below (Table 1), the group of the teenagers' age varied between 16 and 19. There were 12 students aged 16–19 attending the classes observed during the study: four male students and eight female students. They were all high school students. The adult group, on the other hand, consisted of 18 students (ten female students and eight male students) at the age of 20 and more. The majority of the students (12) were university students, the other six students were workers of various companies mostly dealing with foreign trade.

Table 1. Research sample introduction

Research Sample	Age	Background	Amount of students
Teenagers	16–19	No previous Chinese experience High school students	12
Adults	20 and over	No previous Chinese experience Workers/ university students	18

Both of the research groups were of Polish origin and none of the students of both groups had any previous experience in learning Chinese.

4. Research methods and tools

The corpus of this case study was collected by means of numerous tools and instruments, such as questionnaires on the perception of Chinese writing systems (*pinyin* and *hanzi*), class observations, open discussion in class (oral group interviews and individual discussions), as well as language tests to assess the participants' progress in various areas of Chinese competence (short written tests, dictations, translation tests, etc.). As stated above, the research lasted for three months.

5. The specificity of the Chinese writing system

It is said that Chinese has not more than 400 syllables and only 26 letters in the alphabet. However, due to the fact that Chinese is a tonal language, each of these syllables may (with some exceptions) occur in four (or even five) different tones, and each phonetic representation may have an individual character representation (usually more than five, up to even 20 distinct translations), creating a vast number of words in the written form (Kostrzębska 2007: 6).

What makes Chinese unique, as opposed to any Indo-European language, is that when learning Chinese, one has to learn five various elements at the same time:

- the phonetic equivalents – *pinyin* (syllabic or multisyllabic words);
- their tonal representation;
- the meaning;
- the characters;
- and their stroke order.

As was mentioned above, Chinese consists of the written characters called *hanzi* and their alphabetical equivalents called *pinyin* with their corresponding tones called *shengdiao* (Sun 2006: 1–3). It is a syllabic language, thus as opposed to other languages, there are only few words which consist of only one letter, such as onomatopoeic sounds or interjections, such as, for instance, the sound of surprise ‘啊!’ or ‘哦!’.

Table 2. Chinese phonetic and written representation of one syllable and its meaning

Syllable	Tone	Character representation	Translation
MAO	māo	猫	A cat
	máo	毛	hair / feather / down / wool / mildew / mold / coarse or semifinished / young / raw / careless / unthinking / nervous / scared / (of currency) to devalue or depreciate / classifier for Chinese fractional monetary unit
	mǎo	泖	still water
	mào	帽	A hat / cap

For the further reference in terms of Chinese phonetics see: Chao 1930, Yip 1980, Norman 1988, Shen 1989, Qian 1996, Sun 2006, Braner 2006, San 2007.

The Chinese writing system has changed over time. The simplified writing system, which is used in most of mainland China, was introduced in 1990, making Chinese more accessible to foreigners. However, the introduction of the simplified Chinese writing system had certain consequences (Ross & Ma 2006: 12):

There are two standard systems of characters in current use: traditional characters and simplified characters. Simplified characters are the official characters used in mainland China and Singapore. Traditional characters are the official characters used in Taiwan and other parts of the Chinese speaking world. Chinese characters are non-alphabetic but are rather ideographic and orthographical.

What complicates the situation is the fact that, although Chinese characters were simplified after 1950s by the government, there are numerous native speakers, often elderly, and populations of certain places in mainland China, among whom traditional Chinese characters are still in use, which hinders the process of written communication, e.g. in Taiwan, Guangzhou, and other cities in the South of China. Fortunately, most of the Chinese characters in their traditional and simplified versions are the same, which makes it easier to move from learning the traditional characters to the simplified ones. However, there are numerous characters which have changed a great deal from the original ones. Below, a set of ten words which have undergone certain simplifying changes is presented (Table 3).

Table 3. The traditional versus the simplified characters

English translation	Pinyin	Traditional character	Number of strokes	Simplified character	Number of strokes
1	2	3	4	5	6
vehicle	Chē	車	7	车	4
horse	Mǎ	馬	10	马	3
point	Diǎn	點	17	点	9




cd. tab. 3

1	2	3	4	5	6
body	Tǐ	體	23	体	7
to	Jiàn	見	7	见	4
language	Yǔ	語	14	语	9
love	Ài	愛	13	爱	10
to try	Shì	試	13	试	8
hot	Rè	熱	15	热	10
bridge	Qiáo	橋	16	桥	10

As can be seen above, there is a significant difference in the final image of the simplified characters. In the examples given, the most transparent difference can be observed in the word ‘body’ which in its traditional version consists of 23 strokes and is represented by this character: ‘體’, and in its simplified version consists of only 7 strokes forming the character ‘体’.

At present, in most of the educational institutions teaching Chinese as a foreign language, the Chinese teaching curriculum focuses on teaching only the simplified version of Chinese characters, due to limited class hours and in order to make the already difficult Chinese language learning process easier for foreigners. Only establishments with sinology departments, where Chinese is the only major, are obliged to teach both writing systems, e.g. at the University of Warsaw.

Table 4. Chinese writing system – strokes and their writing explanations (based on Sun 2006:107–109; Yang 2006a)

Stroke's name	Visual representation	Example	Explanation of the writing system
1	2	3	4
橫 Héng		一	The horizontal stroke is written from left to right.
豎 shù		十	The vertical stroke is written from the top downwards.
撇 piě		八	The downward stroke to the left is written from top-right to bottom-left.

cd. tab. 4










1	2	3	4
捺 nà		入	The downward stroke to the right is written from top-left to bottom-right.
点 Diǎn		六	The dot is usually written from the top to the bottom-right. Sometimes it is written from the top to the bottom-left.
横钩 hénggōu, 竖钩 shùgōu, 弯钩 wāngōu		字, 小, 狗	The stroke with a hook: the hook is written by lifting the pen quickly as you approach the end of the hook.
提 tí		把	The upward stroke to the right is written from bottom-left to top-right.
横折 héngzhé		口	The horizontal stroke with a downward turn is written first from left to right and then downwards.
竖折 shùzhé		医	The horizontal stroke with a downward turn is written first from left to right and then downwards.
横折钩 héng zhégōu		喝	The horizontal stroke with a downward turn and hook is written first from left to right, then downwards, and finally a turn is made toward the top-left by quickly lifting the pen to make the hook.
竖弯钩 Shù wān gōu		也	The vertical stroke with a right turn and a hook is written first from the top downwards, then toward the right. Finally, an upward turn is added by quickly lifting the pen to make the hook.
横撇 Héng piē		水	The horizontal stroke with a turn to the bottom-left is written first from left to right and then toward the bottom-left.

Table 4 presents twelve distinct stroke shapes necessary to master in the learning process of Chinese writing system. The above mentioned aspects make the learning process significantly more complex and challenging. The specificity of Chinese is even more complex than the above mentioned examples. Stroke shape and count may influence the meaning of the character (Table 5).

Table 5. Stroke shape and count influencing the meaning of the character

Stroke shape influencing the meaning		Stroke count influencing the meaning	
土 'earth, ground'	士 'bachelor'	日 'day'	目 'eye'
天 'sky'	夫 'husband'	大 'big'	太 'too much'
见 'to see'	贝 'selfish'	工 'work'	王 'king'

Above are only few out of hundreds of examples of such words that are very similar in their visual representation, however their detailed analysis shows that even one false stroke shape or inappropriate length, etc. may lead to writing an entirely different character. For instance, the character ,土' that means 'earth, ground' and the character '士', which means 'bachelor', although very similar in general, are, however, entirely different. The difference is in the length of the base stroke (the last stroke written in both characters) in the lowest part of the character. In the first example, it is significantly longer than in the second character, not to mention that their meaning is entirely different.

As proven above, the Chinese writing system is unique and challenging in terms of learning. Below, there is an analysis of the two research groups and their Chinese writing system acquisition.

6. The study

Before the main study, the author has conducted a questionnaire verifying the students' motivation and attitude towards learning.

As can be seen in Figure 1, there is a significant difference between the motivational factors of the research groups in question: 55% of the teenagers claim that their motivation is instrumental and learning Chinese will help them find well-paid jobs, however, 45% of the group claim that they learn Chinese out of personal interest. There is a significant difference in terms of the results of the adults' motivation attitude, namely the majority of adult students claim that their motivation is

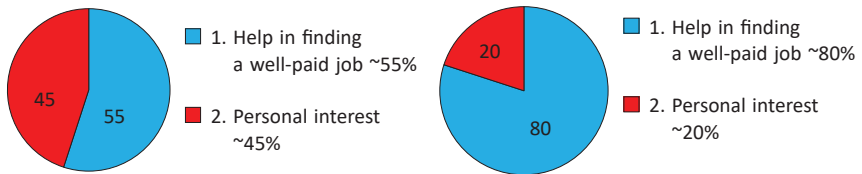


Figure 1. Motivation in learning Chinese writing system by teenagers and adults.

purely instrumental (80%) and that learning Chinese will secure their future, however only 20% claim that they learn Chinese solely out of their personal interest. It is believed that instrumental motivation helped students perform better and receive better overall results in class and during all sort of tests and examinations.

The author has also examined the teachers' teaching methods used in class. The teaching approach and the method employed during the classes were eclectic in form, in the following proportion:

- student-oriented teaching (active learning, students solve problems, answer questions, formulate questions of their own, discuss, explain, brainstorm during class): 40%;
- teacher-centered and content focused teaching: 10%;
- interactive/participative teaching and direct method (student-centered method): 20%;
- grammar-translation teaching (teacher-centered method): 30%.

Students were active in class, the relationship between the teacher and the students was positive, the instructions were clear and direct, the students received positive feedback from the teacher.

It is interesting how various people see characters. Children, for example, see them as pictures, paintings, etc. However, it seems that with age the visual introduction tends to narrow down to 'a group of strokes arranged in a certain way'. Both groups of the study created a very good system of memorising characters by means of association and collocation. Research shows that the reasons for choosing the above-mentioned strategies included the fact that *hanzi* was often perceived by the students as pictographic images or symbols with distinct meanings and pronunciations difficult to comprehend and learn separately. Thus, their visual association of particular characters with their meaning or

with other similar *hanzi* characters often facilitated the students' learning process.

Chinese characters are indeed pictograms, thus seeing them as pictures really helps in the learning process (Mc Naughton and Li Ying 1999: 10–15).

Table 6. Graphic interpretation of Chinese characters

Character	Teenagers and Students (16–19)	Adults (20 and more)
Traditional association technique		
一 'one'	one stick	one stick
二 'two'	two sticks	two sticks
三 'three'	three sticks	three sticks
人 'human'	a headless human being	a headless human being
口 'mouth'	mouth	mouth
女 'female'	a female	a female
Visual collocations technique		
四 'four'	geometrical shape	football field
六 'six'	a human being with a head	a human being with a head
书 'book'	an open book	a set of books
厨房 'kitchen'	a human in the kitchen stirring something in the pot put on a stove	–
说 'to speak'	a tv with an antenna	a tv

The study showed that, as can be seen in the Table 6, there were two main ways of associating the characters by the students, namely by means of the traditional association technique and visual collocations.

There were certain similarities in both groups' perception of the characters, however there were also noticeable differences. The traditional association technique turned out to facilitate each group's learning process identically. For all of the students, the pictograms of numbers 1, 2, 3 and the words 'human', 'mouth' and 'female' were the same and corresponded to the meanings of the characters. However, the analysis of the visual collocations technique shows more diverse results. As can

be seen, the number 'four' was not associated with the number '4', but with two diverse collocations. The teenagers saw the word in question as a geometrical shape of a large square with a shape corresponding to a 90 degree angle in its left top corner and a square in the right top corner, however, the adults saw a football field instead. None of the associations was even remotely close to the meaning of the word. In order to connect the word with the meaning, the students of both groups created stories including the association of the character's shape and the meaning, e.g.

四 – a **square** that has got **four** sides (teenagers);

四 – a **football field** that has got **four** corners (adults).

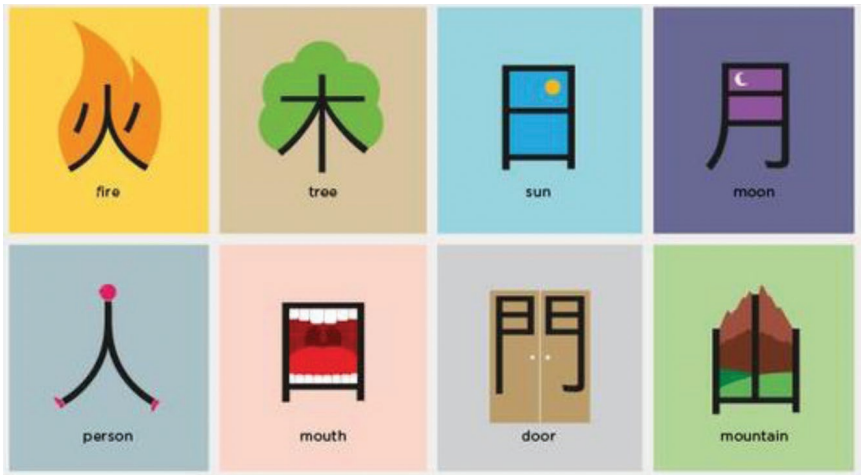
A similar situation occurred in the case of the word 'six' and 'to speak', however, both groups of students had similar associations of the meaning with the characters' shape, namely:

六 – **six people** spread their arms and legs and turned their heads right (teenagers and adults);

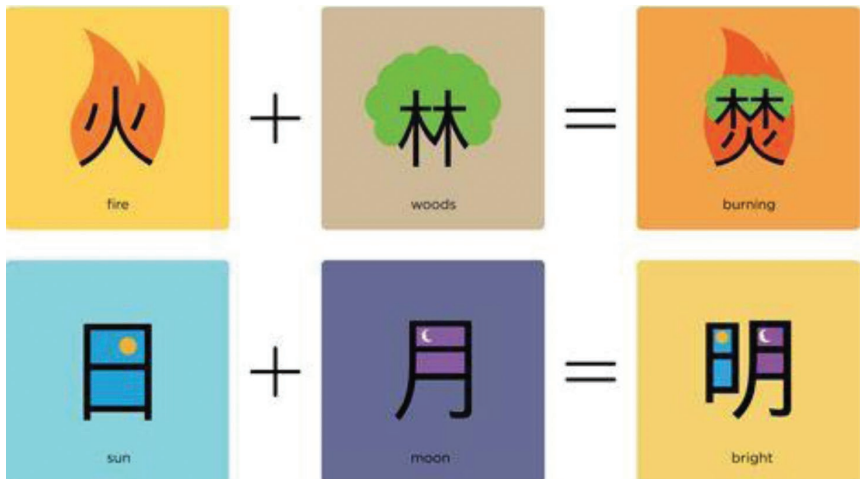
说 – there is an interesting **talk show** on the **tv** (teenagers and adults).

A significant difference could be observed in terms of more complex characters, e.g. '厨' part of the word 'kitchen'. The adults had problems to find a visual collocation, whereas the teenagers instantly provided a visual association of 'a person in the kitchen stirring something in the pot which is situated on a stove'. The teenagers were more open-minded about the association technique than the adults, thus it proved to be more effective in their case.

The second technique facilitating learning Chinese characters by the students participating in the research is referred to as the visual association technique of Chinese characters. It is similar to the technique developed by an entrepreneur ShaoLan Hsueh, the creator of Chinese language learning system called 'Chineasy', which is based on visual collocations and associations that she created after realising that her children did not have the patience to learn Chinese. She decided to ease their learning process with colourful images of the characters they came across (as can be seen in the following pic.1 and pic.2).



Pic. 1. ShaoLan Hsueh's Chinese language learning system: 'Chineasy' 1. (derived from: <https://www.chineasy.com>)



Pic. 2. ShaoLan Hsueh's Chinese language learning system: 'Chineasy' 2. (derived from: <https://www.chineasy.com>)

Although the students participating in the pilot study were not aware of Shaolan's learning system, they provided quite similar patterns of learning Chinese characters by means of colourful visual collocations

and associations enabling them to master the characters faster and more efficiently. Such character learning technique could have been observed especially in terms of younger participants of the pilot study from the first age group of students.

In addition, the collected data analysis (second and final questionnaire conducted at the end of the research) showed that the students had undergone a change in their perception of their Chinese learning process. Initially, the tones turned out to be the most difficult element for them and the characters were the least difficult. The students seemed to treat characters as something new, enjoyable and the most interesting to learn, thus initially learning characters was not treated as the most difficult issue. However, with time and bigger amount of characters learnt, they turned out to be the most difficult element to learn and memorise. The reason for this seems to be the specificity of Chinese characters that were new to the students, which led them to devote most of their time to learn distinct writing system of *hanzi* and the stroke order. Not to mention the fact that the character itself had to be connected to an appropriate *pinyin* representation and accurate meaning of a particular word. All those elements made learning Chinese characters the most demanding task after three months of education. At the same time, due to the appearance of the Latin script based alphabet of *pinyin*, the students devoted less time to the tonal and *pinyin* acquisition than to the characters' learning process.

All in all, the **cognitive strategy** of association enabled all the students to connect the newly acquired *hanzi* with the old ones by memorising and grouping them together. They then overcame their limitations regarding speaking and writing so they could cover more material in significantly less time. The indirect meta-cognitive strategy helped students evaluate their results by self-testing. The affective strategy in question influenced the students' motivation by improving their learning efficiency. The final data collected at the end of the research showed that the students in the teenage group had learned 10 distinct characters a week, resulting in acquiring knowledge of approximately 120 characters, whereas the adults had learned 20 characters a week, resulting in their acquisition of 240 characters within the research period.

7. Findings

In the previous chapters, the analysis of the specificity of the Chinese language and its writing system was introduced, explaining the difficulties which students have to undergo in the learning process. What is more, the pilot study concerning two groups of students was performed, resulting in establishing the Chinese characters association system, such as visual association technique or traditional association technique. The results were followed with a summary of the amount of acknowledged/learnt characters by both age groups.

Although there was lack of language environment outside the classroom, the change in language competence could be seen in the last stage of the characters' learning process also resulting in an emotional change of the students' perception of Chinese language acquisition, making them respect the language more, and tending to spot more details in terms of stroke order, stroke shape, etc.

After the research, it is fair to say that learning Chinese is a struggle, especially in terms of writing Chinese characters. It is a continuing process of doubting one's abilities and talents. Fortunately, due to the students' persistence in striving for educational success, and their inner motivation, they succeeded in learning a satisfactory amount of characters, which brings them one step closer to the final success resulting in fluent communication in Chinese.

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Summary: Learning Chinese, compared to other languages, especially Indo-European languages, requires an individual approach. The specificity of the Chinese writing system makes all the notorious means of learning languages useless to a certain extent. In this article, the aspect of Chinese writing system acquisition performed by Polish beginner students of Silesian origin will be examined.

At first, the specificity of the Chinese writing system will be introduced, followed by a set of examples on its diversity and its implications for the further analysis. Then, the learning methods used in acquiring the Chinese writing system will be examined. The final part of the article will be devoted to the critical analysis of the students' progress and final remarks on the students' learning strategies and their effectiveness in learning the Chinese writing system.

Keywords: Chinese characters, language acquisition, Mandarin Chinese, Chinese writing system

Pierwsze kroki w nauce znaków chińskich Analiza przyswajania chińskiego systemu pisma przez polskich początkujących studentów

Streszczenie: Nauka języka chińskiego, w porównaniu do innych języków, zwłaszcza indoeuropejskich, wymaga szczególnego podejścia lingwistycznego. Specyfika systemu zapisu tegoż języka powoduje, iż wszelkie powszechnie znane metody nauki języków obcych zdają się być w pewnym stopniu bezużyteczne. W niniejszym artykule podjęta jest próba przeanalizowania przyswajania pisma chińskiego przez początkujących uczniów pochodzenia polskiego.

Na początku zostanie omówiona specyfika pisma chińskiego poparta szeregiem przykładów wskazujących na jego różnorodność, co będzie miało znaczący wpływ na omawiane później wyniki badania. Następnie analizie zostaną poddane metody nauki pisma chińskiego, wykorzystane przez próbkę badawczą. Ostatnia część artykułu poświęcona będzie analizie porównawczej postępów w nauce dokonanych przez uczniów poddanych analizie, oraz zostaną przedstawione uwagi końcowe na temat wykorzystanych przez nich strategii uczenia się języka chińskiego oraz ich efektywności.

Słowa kluczowe: chińskie znaki, akwizycja językowa, mandaryński, chiński system zapisu