Teaching Chinese to English Background Primary School Students

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One of the controversial issues in connection with learning Chinese as a second or foreign language is the time at which it is most appropriate to introduce the language and to teach the Chinese characters to young school students. By conducting a case study, the present investigation has provided both quantitative and qualitative support to the hypotheses that primary school students are well able to learn the Chinese language so long as they are schematically made ready to accept the new language, and that Chinese characters could well be introduced to young students at an early stage of learning.

Teaching Chinese, English Background Primary School Students,
Second Language, Case Study

INTRODUCTION

One of the controversial issues in connection with learning Chinese as a second or foreign language is the time at which it is most appropriate to introduce the language and to teach the Chinese characters to young school students. National Chinese Curriculum Projects (Department of Education, 1994) suggests that “There are clear advantages in beginning as early as possible. The difficulty of the Chinese script should not be seen as a deterrent. In fact, it is often the dominant factor in learners’ enjoyment of Chinese”. However, some educators advise that students mainly learn to read pinyin and acquire substantial spoken Chinese before attempting to read and write characters (e.g., Everson, 1998).

Still other educators, such as Kirkpatrick (1995), argue that the so-called difficult Asian languages - Modern Standard Chinese, Japanese and Korean - should not be taught at the primary school level or even at lower secondary school level to non-background speakers. He argues that these languages have scripts that are radically different from English and require the learning of many characters, and that they are not cognate with English and therefore take the learners around four times as long to attain basic proficiency as learners of easier languages such as French.

These questions were, and are still raised, discussed and explored among Chinese teachers and educators: Should the Chinese language be introduced to primary school students? Should Chinese characters be introduced to primary school students, and if yes, at what stage of learning? By conducting a case study, the present investigation has provided both quantitative and qualitative support to the hypotheses that primary school students are well able to learn the Chinese language so long as they are schematically made ready to accept the new language, and that Chinese characters could well be introduced to young students at an early stage of learning.
A CASE STUDY

In order to obtain empirical evidence to answer the questions and to explore the issue of what aspects of the Chinese language should be taught to primary school students, a case study was conducted over two terms in 2001, involving four groups of Years 2 and 3 students at one school in metropolitan Adelaide, South Australia. The study hoped to see:

- if young students were able to learn to read and write Chinese characters in the early stages of schooling;
- to what extent learning to read and write characters increased difficulties;
- what views students held on the learning of the Chinese language.

The method followed during the case study was an in-class method. The general approach of the research was to become familiar with the LOTE (Languages Other Than English) Chinese classrooms of a typical school and to assess what further learning outcomes might be able to be achieved without disturbing the general pattern of classroom teaching. The aim was to demonstrate that primary school students could, without loss of time, acquire a more complex learning of the Chinese language, related to the characters. Ordinary classroom assessments were used to check the learning results. The study hoped to provide a practical example using real students in a real classroom setting.

The methods used to obtain data for the case study were observation, interview, oral recording, cognitive tests and an attitude questionnaire. The data was processed using Excel 97 for statistical purposes.

PARTICIPANTS

The case study involved 102 Years 2 and 3 students studying LOTE Chinese. In the school under survey, students are introduced to LOTE Chinese from Year 2. That is, by the time the case study started, the history of the participants’ Chinese learning varied from six months to 18 months. When the case study started, the participants had had very little experience in reading and writing characters, as junior primary school students mainly learnt to speak Chinese using pinyin.

Years 2 and 3 students were chosen for the case study for two reasons. The first reason was that the participating students had had very little experience in character learning, therefore the information obtained would have high validity. The second reason came from the consideration that, if junior primary school students could learn to read and write characters, so too could upper primary school students.

PLANNING THE ACTIVITIES FOR THE CASE STUDY

Like most other schools, the school under survey adopted a thematic format for LOTE Chinese. Usually students studied one topic each term. Activities around the topic included students having some reading practice and hands-on activities such as doing title pages, matching pictures with words, filling blanks, making small books like “My Book”, and playing Chinese games.

The planning of the activities for the case study strictly followed the pattern of the LOTE Chinese curriculum adopted at the campus. For the third and forth terms in 2000, the topics were: ‘My Sports’ and ‘My School’ respectively. After much consideration and discussion between the researcher and the class Chinese teacher, the following agreement was reached.
• The class Chinese teacher would prepare the lesson plan as well as conduct the regular teaching.

• The four participating classes would learn the same Chinese words and do the same activities. Besides normal reading and writing practice in pinyin, students also needed to learn to read and write ten characters related to each topic.

• Randomly chosen, classes P and N (two experimental classes) would learn the ten characters using pictures and the picturing method, while classes S and H (two control classes) would have more experience in learning pinyin and would not use the picturing method. Class P would use the picturing method in the third term, class N would use the picturing method in the fourth term.

• Students would use ten minutes to learn new characters or practise reading and writing the characters at the beginning of each class.

• The researcher would teach the new characters to the two experimental classes, using the picturing method. This would take five to ten minutes at the beginning of a lesson. During the rest of the lesson, both the researcher and the class Chinese teacher would observe and give help to students when necessary.

• Two tests would be given to the participating students during each case study.

• The class Chinese teacher would supervise the tests.

TESTING

Across the two terms, four tests were given to the participants to test what learning had occurred and to see if young children, at the early stage of learning, were able to learn to read and write the Chinese characters. There was also an attempt to observe if different teaching elements produced different learning results.

As was mentioned earlier in this paper, the four classes used different methods for learning the Chinese words during the case study. The two control classes (S and H) learnt the words using flash cards that had a picture and a Chinese word in pinyin on one side and the word as a character on the other side. The side which had pictures was always shown to students first. The students learnt to read and write the word in pinyin before learning it as a Chinese character. The two experimental classes (P and N) used flash cards on which one side had a picture and a Chinese word as a character and on the other side the word in pinyin. That is, characters were introduced before pinyin to the students in classes P and N. Pinyin was used to help the students remember the pronunciation of the characters.

The difference between class P and class N was that, in the third term, class P used the picturing method. The students talked about what each character looked like in order to help them memorise it. Class N used this method in the fourth term. The results of the tests were tabulated and presented in graphic form using Excel 97.

Test 1

Test 1 was an oral recording. It required the students to say out ten sport words learnt in the third term. The main question used by the researcher during the test was: How do you say ... in Chinese? Prompts were given to the students to help them retrieve the words. Students’ answers were recorded and calculated to compare the difference in speaking performance between the students. Four groups of about 12 students from each of the four Years 2 and 3 classes did the oral test. The participants were chosen at random. It had been expected that S
and H classes would retrieve more words because they had had more practice in reading and writing pinyin, which adopts alphabetic letters like English.

Table 1 presents the results of Test 1. The results however do not show a difference between the four classes. Instead, the two experimental classes who mainly learnt to read and write characters obtained slightly better results.

### Test 2

Test 2 was an open-ended test. It required the students to write out the words related to sports that they could remember in both pinyin and as Chinese characters, and also give their meanings in English. There were 102 students in the Year 2 and 3 class from both the experimental classes and the control classes participated in the test. Students’ answers were classified into character and meaning and pinyin and meaning. The results were calculated and tabulated.

**Table 1. Results of Test 1**

<table>
<thead>
<tr>
<th>Students</th>
<th>Retr. before prompt</th>
<th>Retr. after prompt</th>
<th>Total</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group P (n=12)</td>
<td>89</td>
<td>7</td>
<td>96</td>
<td>7.8</td>
</tr>
<tr>
<td>Group N (n=13)</td>
<td>91</td>
<td>0</td>
<td>91</td>
<td>7</td>
</tr>
<tr>
<td>Group S (n=12)</td>
<td>63</td>
<td>0</td>
<td>63</td>
<td>5.3</td>
</tr>
<tr>
<td>Group H (n=14)</td>
<td>79</td>
<td>0</td>
<td>79</td>
<td>5.6</td>
</tr>
</tbody>
</table>

Table 2 presents the results of the test. The results indicate that the overall retrieval in classes P and N was higher than that of classes S and H. Classes P and N retrieved more characters than classes S and H, while classes S and H retrieved more pinyin. It could be that the two control classes had more exposure to pinyin and therefore they relied more on pinyin. Classes P and N used cards which had a picture and a Chinese word as a character on one side and the word in pinyin on the other side. The students in these two classes were exposed more to the Chinese characters than to pinyin. The results indicate that they remembered more characters than pinyin.

**Table 2. Results of Test 2 and Year 2 and Year 3**

<table>
<thead>
<tr>
<th>Students</th>
<th>Character &amp; Meaning</th>
<th>Pinyin &amp; Meaning</th>
<th>Total</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class P (n=26)</td>
<td>193</td>
<td>10</td>
<td>203</td>
<td>7.8</td>
</tr>
<tr>
<td>Class N (n=22)</td>
<td>155</td>
<td>6</td>
<td>161</td>
<td>7.3</td>
</tr>
<tr>
<td>Class S (n=25)</td>
<td>80</td>
<td>95</td>
<td>175</td>
<td>7</td>
</tr>
<tr>
<td>Class H (n=29)</td>
<td>83</td>
<td>96</td>
<td>179</td>
<td>6.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall</th>
<th>Total</th>
<th>Average</th>
<th>Total</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>511</td>
<td>207</td>
<td>718</td>
<td>7.04</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 (n=61)</th>
<th>Total</th>
<th>Average</th>
<th>Total</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>311</td>
<td>5.1</td>
<td>108</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>419</td>
<td>6.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 (n=41)</th>
<th>Total</th>
<th>Average</th>
<th>Total</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>207</td>
<td>5.1</td>
<td>94</td>
<td>2.3</td>
</tr>
<tr>
<td></td>
<td>301</td>
<td>7.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Class P’s results were slightly better than class N. It could be that the picturing method produced better learning results. The results do not show much obvious difference between Year 2 and 3 students.

### Test 3

Test 3 tested six words related to the topic ‘My School’. Twenty items were required to be answered. The main purpose of the test was to observe if different teaching elements
produced different learning results. In the fourth term, class N used the picturing method, while class P only used pictures. The test was only for classes P and N. It was also aimed to observe if young students were able to learn to read and write Chinese characters.

Table 3 presents the results of Test 3. The results indicate that the students recognised and produced 80 per cent of the six words learnt. Class N did slightly better than class P.

It was noticed that the students’ mark for question 3 was lower than that for questions 1 and 2. This issue was discussed between the researcher and the class Chinese teacher. When looking at the students’ work, it was noted that some students did use most of the six Chinese words but some words were written in English, and these were not calculated. The class Chinese teacher suggested that further explanation be given before the students started to do this kind of question.

### Table 3. Results of Test 3

<table>
<thead>
<tr>
<th>Questions</th>
<th>Class P (n=24)</th>
<th>Class N (n=21)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Average</td>
</tr>
<tr>
<td>1. Write a Chinese character under each picture to express the meaning of it (6 items)</td>
<td>125.5</td>
<td>5.2</td>
</tr>
<tr>
<td>2. How do you say these in Chinese? Write the words in pinyin (8 items).</td>
<td>139.5</td>
<td>5.8</td>
</tr>
<tr>
<td>3. Write a short story in which all the 6 words in Question 1 are used. Write the words in character (6 items).</td>
<td>98</td>
<td>4.1</td>
</tr>
<tr>
<td>Total responses of the three questions</td>
<td>362.5</td>
<td>15</td>
</tr>
</tbody>
</table>

It was also noticed that the P and N students could use both characters and pinyin. There might be three reasons for the results. First, the students had learnt some pinyin before. Second, during the case study, class P and N students used pinyin to help to remember the reading of new words. Third, pinyin adopts alphabetic letters like English, which is easier for students to remember.

### Test 4

Test 4 required the students to write out the words related to school they had learnt in the fourth term (10 in all) and the words related to the previous topic, if they could remember any. All the Year 2 and 3 students did the test. The answers were classified into character and meaning (Ch. and M) and pinyin and meaning (Pinyin and M). Table 4 presents the results of Test 4. The results indicate that the overall retrieval of classes P and N is slightly higher than that of classes S and H. Classes P and N retrieved more characters than classes S and H. Class N did slightly better than class P.

### Table 4. Results of Test 4

<table>
<thead>
<tr>
<th>Students</th>
<th>Ch &amp; M</th>
<th>Aver.</th>
<th>Pinyin &amp; M</th>
<th>Aver.</th>
<th>Total</th>
<th>Total aver.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class P (n=25)</td>
<td>245</td>
<td>9.8</td>
<td>23</td>
<td>0.9</td>
<td>268</td>
<td>10.7</td>
</tr>
<tr>
<td>Class N (n=19)</td>
<td>225</td>
<td>11.8</td>
<td>5</td>
<td>0.3</td>
<td>230</td>
<td>12.1</td>
</tr>
<tr>
<td>Class S (n=24)</td>
<td>112</td>
<td>4.7</td>
<td>131</td>
<td>5.5</td>
<td>243</td>
<td>10</td>
</tr>
<tr>
<td>Class H (n=21)</td>
<td>108</td>
<td>5.1</td>
<td>90</td>
<td>4.3</td>
<td>198</td>
<td>9.4</td>
</tr>
</tbody>
</table>

### A FOLLOW-UP ATTITUDE SURVEY

A follow-up attitude survey was conducted at the end of the case study. It asked the students if they liked to learn Chinese before and now, and if they felt confident about their learning
of Chinese before and now. Owing to the limitation of the paper length, the details of the survey are not reported here. The results indicate that 37 per cent more students liked to learn Chinese than before, and 32 per cent more students felt confident about the learning of Chinese than before.

**DISCUSSION**

Overall, the mark for each test was high. For the four tests, presented in Figure 1, classes P and N produced more words and more characters than classes S and H. Class P’s results for the first two tests were slightly better, while class N’s results for the last two tests were slightly better. Several interpretations could be suggested from the test results.

- Young students are well able to learn to read and write Chinese characters.
- Learning characters did not increase the difficulties. Classes P and N mainly learnt characters, while classes S and N had more experiences in learning pinyin. Within the same teaching time, classes P and N produced more words and more characters instead of fewer. It could be concluded that the complexity of the Chinese orthography may not be a major deterrent to young students’ learning of Chinese.
- Learning strategies influence student learning outcomes. In the third term, class P used the picturing method. Their results for the first and second tests are slightly better than that of class N. For the same reason, class N’s results were a bit better for the last two tests.
- The results do not show much difference between Year 2 and 3 students. Younger students could do as well as older students within the same teaching time. Characters could therefore be introduced to young students from the early stage of learning.
- Teaching elements influence student learning results as well. During the case study, classes P and N used flash cards which had a picture and a Chinese word in character on one side, and pinyin on the other side, while classes S and H used flash cards which had a picture and pinyin on one side, and character on the other side. That is, P and N students were exposed to characters before pinyin, while S and H students were exposed to pinyin before characters. For the three written tests, S and H students produced more pinyin than characters, while P and N students produced more characters than pinyin. Possibly, students’ mental presentation was influenced by the visual presentation.
- Students’ learning interest and confidence in learning Chinese over the two terms were increased instead of decreased.

![Figure 1. The results of four word tests by four Year 2 and 3 classes](image-url)
A question regarding the difference in test results between classes P and N and classes S and H might be raised. Besides the different learning strategies used to acquire new words, were there other factors that caused the difference? It was agreed between the researcher and the class Chinese teacher that there might be a teacher factor. New characters were taught to the two experimental classes by a different teacher using a different method, and during the rest of the lesson, both the class Chinese teacher and the researcher helped the students with their work, which might have helped to increase students' interest in learning.

PEDAGOGICAL IMPLICATION

The results of the case study have provided evidence to answer at least two questions: Is there an appropriate time to teach LOTE Chinese to primary school students? Is there an appropriate time to teach Chinese characters to primary school students?

Before further discussing the two questions, it is necessary to review the research into the age factor in second language acquisition. Basically, there are two types of opinions about the optimal time for learning a second language. One is that the earlier children study a language, the better (Hatch, 1988; Goroch & Axelsson, 1964). The other opinion is that “Every age has its advantages and disadvantages with regard to the learning of foreign languages” (Jakobovits, 1970; Magiste, 1984). The results of the case study seem to give support to the opinion that quite young children can be introduced to many aspects of a difficult second language, which might add weight to the early learning position.

The present study did not investigate the advantages and disadvantages of different age ranges in acquiring Chinese as a second language. It did provide evidence to demonstrate that junior primary school students are well able to learn to read and write Chinese characters. If junior primary school students could learn to read and write characters, so could upper primary school students.

Based on the results of the case study and the related studies, this paper would like to propose the following pedagogical practices.

1. **Introduce Chinese characters to primary school students from the very beginning.** If young learners are well able to learn Chinese characters, and are interested in learning them, as the case study seems to indicate, given that the test results didn’t show obvious difference between Years 2 and 3 students, characters could well be introduced to students from the first day of Chinese learning.

2. **Focus on the basics when teaching characters.** The modern Chinese language has more than 40,000 characters in use (Fazzioli, 1987), of which 3,000 to 5,000 are most frequently used in daily life. Even 3,000 would be a fairly large number to learn. However, if it were kept in mind that the Chinese characters were built from a combination of 214 or so basic characters, known as radicals, it would take much pressure off the learner. It would not be very difficult to learn some of the 214 or so basic characters, yet it would pave a very good way for their future learning of the language. For primary school students, characters of fewer strokes and with obvious pictorial features could be introduced first, gradually followed by those of complex pattern.

   The importance of studying radicals has been stressed by many a language teacher and researcher (e.g., Jiao, 2001; Zhang, 2001; Yu, 2001; Xu, 2001, to name a few).

3. **Use the method of picturing to teach Chinese characters where possible.** As was mentioned earlier in this paper, the two experimental classes learned to read and write characters using the picturing method, while the two control classes did not. The test
results show some differences between the two experimental classes and the control classes. It could be concluded that the method of picturing is validated by the learning results.

The essence of the picturing method is ‘Looks Like’. When the students talk about what a character looks like, they are linking the new information to their existing knowledge. The truth is that many Chinese characters do look like their referents. Pupils can also make more ‘personal’ links. It should be a useful tool to use in the LOTE Chinese classroom for young children.

4. **Very importantly, deal with schema conflict.** Human behaviour is determined by knowledge of the environment. Schank and Abelson (1977) point out that many circumstances involve stereotypic sequences of actions. On different occasions, people may follow different sequences of actions. In cognitive psychology, these are called schemas. There are various types of schemas such as event schemas, action schemas, object schemas, learning schemas; so there will also be language learning schemas.

In order to put it simply, schema means the sequence of actions kept in mind and followed when doing things. People from different environments might follow different sequences of actions. Adults tended to have more fixed patterns of action sequences. On the analogy of event schemas, language learning schemas are how the learner normally gets access to the meaning of words. When children see an English word, they activate its sound and from the sound they get its meaning. Their mental images of language involve alphabetic letters and sequences of letters. When children start to learn Chinese, the characters look and sound different from the language stored in their memory. Schematically, they are stuck, unless they are taught how to accept the new language.

Young children are arguably more open to learning another language because their schemas are developing. If a new language is introduced to them from the very beginning, together with useful learning skills, they are more flexible and open to accept it. However, as is widely observed, a lot of LOTE Chinese students only learn pinyin instead of characters to avoid confusion at the beginning. Normally learners don’t have much trouble with pinyin at first because pinyin uses letters, very much like English. However, being just a tool to help reading Chinese characters, pinyin doesn’t help to prepare students to progress because schematically students are not made ready to accept another writing system.

5. **Adopt separate tracks for oral and written Chinese.** Based on her research in Chinese teaching and learning, Chu (2001) proposes a two-track system, separating the training of listening-speaking skills from those of reading and writing for the beginning Chinese language course, or early part of it. The argument for this proposal is that there is a gap between the oral and written aspects of Chinese language. It is necessary to use different methods and different materials in teaching oral and written Chinese at the beginning stage to allow students to establish a solid foundation in both aspects. The proposal was made mainly for university students. However, it is an idea worth applying to primary school students.

For instance, primary school students could learn to speak Chinese adopting the thematic format, and at the same time learn to read and write Chinese characters from the most basic ones to those of a more complex pattern, and from characters of fewer strokes to characters with more strokes. Within a few years of such practice, students should be able to accumulate enough knowledge to recognise characters themselves.
Practice in vocabulary is an essential part of Chinese learning. The Chinese language is different from the alphabetic languages in that it does not have gender, tense and number variations. The predominant grammatical concern lies in semantics and syntax, or the meaning and order of words. Therefore, the principal task of learning Chinese is vocabulary building, which relates to character learning and cultural understanding. While primary school students’ learning of Chinese may not reach an advanced level, it is important to pave the way adequately for their future learning.

CONCLUSION

This article reports the results of four word tests, and a follow-up attitude survey. The tests were mainly to see if introducing Chinese characters to junior primary school students was appropriate. The tests were also to see if different teaching elements and different learning strategies influenced learning results. The tests have provided evidence that primary school students did very well in learning to read and write the Chinese characters. For the four tests, the two experimental classes obtained the same or better results than the two control classes, and they produced more characters. Such results were obtained using the same length of class time and same overall effort.

Also, for the three written tests, classes P and N retrieved more characters, while classes S and H retrieved more pinyin. It could be that different elements of pictures produced different mental representation, and different teaching elements produced different sequences of action in approaching the learning of a language.

An issue is thus brought into prominence: If young students are well able to learn the Chinese characters at the early stage of learning, and if they are interested in learning characters, as the attitude survey indicates, given that the test results did not show obvious differences between Year 2 and Year 3 students, characters could well be introduced to young students from the first day of Chinese learning. The tasks set for the Chinese language teaching would be to help the learners to learn to use the language, to experience the culture through the language, and to make students schematically ready for future learning.

REFERENCES


