

*Article*

## **Comparing Face-to-face and Online Teaching of Written and Spoken Chinese to Adult Learners: An Edinburgh-Sheffield Case Study**

**Lucy Xia Zhao\***

University of Sheffield, United Kingdom

**Brittany Blankinship**

University of Edinburgh, United Kingdom

**Zhipeng Duan**

Beijing Language and Culture University, China

**Huihui Huang**

University of Sheffield, United Kingdom

**Jiixin Sun**

University of Edinburgh, United Kingdom

**Thomas H Bak**

University of Edinburgh, United Kingdom

### **Abstract**

We report a study comparing teaching written and spoken Chinese separately to adult learners without prior knowledge of Chinese in the traditional classroom setting and in the online format. The best way of introducing Chinese characters remains one of the major challenges in teaching Chinese as a foreign language: different methods have been used in practice and more empirical evidence is needed to identify their advantages and limitations. In a crossover design, we compared groups which received either four-week tuition in Chinese characters only (without teaching the sound or pinyin spelling) or the same period of tuition in spoken Chinese (without any writing, neither characters nor pinyin). After a two-week break, the groups were swapped, such that the writing class received tuition in spoken Chinese and vice versa. The first four-week block was delivered in the traditional classroom format, while the remaining tuition took place online, due to the Covid-19-related lockdown. The idea of teaching spoken and written Chinese entirely separately, although initially unfamiliar to teachers, proved to be feasible. The transition to online teaching worked

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### **\*Corresponding Author**

Address: C03, 6-8 Shearwood Road, School of East Asian Studies, The University of Sheffield, Sheffield, S10 2TD, UK

Email: [lucy.zhao@sheffield.ac.uk](mailto:lucy.zhao@sheffield.ac.uk)

well and brought not only challenges, but also new opportunities and advantages, particularly in the teaching of characters. Students' experience of both parts of course (written and spoken) was overwhelmingly positive. However, while students who experienced classroom teaching first and then switched to online delivery perceived the online format as an unavoidable replacement, those who started the course online embraced it enthusiastically, accepting it as "the new normal" and focusing on its opportunities.

### **Keywords**

Chinese as a foreign language, written Chinese, Chinese characters, crossover design, online teaching and learning experience

## **1 Introduction**

Although only the perspective of time will allow us to assess the full impact of the Covid-19 pandemics on our society in general and on education in particular, it seems that the challenges posed by Covid-19-related lockdowns are accelerating many developments which have been under way for decades. In the UK, distance learning has been pioneered by the Open University, founded in 1969 and integrating the emerging opportunities of the internet into its teaching programmes. Over the last years, many UK universities have added online courses to their teaching programmes and even in the case of face-to-face teaching the lectures are often recorded, allowing students to access them afterwards at their convenience. The technology enabling remote teaching and supervision has been in place for many years and its use has been growing. In addition, there is a growing number of language apps, offering its users the opportunity to learn a language without the involvement of a teacher.

Accordingly, the shift caused by the Covid-19 pandemics and the subsequent lockdown consisted not so much in introduction of entirely new technologies but rather in an increased use and further refinement of already existing ones, as well as in a profound change of the "default settings" of teaching. Until the restrictions posed by the Covid-19-related lockdown in early 2020, face-to-face teaching in a classroom was generally perceived to be the "normal", "default" case for language learning. In the UK, this changed dramatically in March 2020. Although the official lockdown was only announced on 23 March, the rapidly increasing number of Covid-19 cases in the country in the preceding weeks and the growing concerns of university students and staff led to many universities closing their campuses already in the weeks before. The Universities of Edinburgh and Sheffield, among others, suspended face-to-face teaching on Friday, 13 March and began moving their teaching activities to an online format the following week. Accordingly, from Monday 16 March, the interaction between teachers and students, including all language teaching had to take place online.

At the time of the writing of this paper it is not clear how teaching will continue in the following academic year, starting in September 2020. Some universities, such as the University of Cambridge, have announced that all courses until summer 2021 will be delivered online. Others, such as The Universities of Edinburgh and Sheffield, envisage a hybrid/blended teaching model, in which online delivery might be combined, if possible, with limited face-to-face small group teaching. It is to be assumed that for the next academic year at least, online delivery will be the new default, with face-to-face courses being an exception.

While the abrupt change from traditional face-to-face classroom teaching to online delivery posed a major challenge to teachers and learners alike, it also stimulated new research, comparing the opportunities and limitations of different forms of teaching. The study presented here is a case in point. Originally, it was designed to compare teaching written and spoken Chinese in separate courses, as explained in the following section of the introduction (2.1). The plan was to have two rounds of

teaching, each of them following a crossover design (Figure 1). In the first round, from February to April 2020, Group Writing-Speaking, Round 1 (WS1) was due to receive four weeks of teaching in written Chinese, without any reference to spoken Chinese, followed, after a two-week break, by a course of spoken Chinese. Group Speaking-Writing, Round 1 (SW1) was due to follow exactly the opposite schedule. The same arrangement was to be repeated in the second round of teaching, from May to July 2020 (Groups Writing-Speaking, Round 2 (WS2) and Speaking-Writing, Round 2 (SW2)).

The suspension of the face-to-face teaching at the University of Sheffield, where the course took place, happened exactly on the last date of the first block: Friday, 13 March 2020. The two weeks of the planned break before the start of the next block were, therefore, used to adapt all teaching materials to the online format, so that the second block of Round 1 could begin, as planned, on Monday 30 March 2020. All subsequent teaching was delivered online.

This externally motivated modification introduced a second variable into the study design: face-to-face versus online delivery. Importantly, it allowed us to compare the learning experience of those who have started the course face-to-face and had to change to the online format (Groups WS1 and SW1) with those who were doing an online course from the beginning (Groups WS2 and SW2).

## 2 Literature Review

### 2.1 Teaching written versus spoken Chinese

The Chinese writing system, unique in the world in having preserved elements from different stages of script development, from pictographic, through ideographic to phonological belongs to the most iconic and fascinating aspects of Chinese language and culture. However, in terms of teaching Chinese as a foreign language (CFL), characters are often seen as a burden and challenge to learners.

Contrasting views exist as to whether there should be a time difference between the start of the language programme and the introduction of characters: delayed character introduction (DCI) versus immediate character introduction (ICI), following Ye's (2013) English translation. The DCI approach has been proposed based on the learning experience of native Chinese speakers (Dew, 2005; Jordan & Walton, 1987; Packard, 1990; Swihart, 2004; Unger, Lorish, Noda, & Wada, 1993). Dew (2005) observed that native Chinese speakers usually learn Chinese characters after having acquired speaking and listening skills for five to six years. Swihart (2004) maintained that "most students need time to learn to connect the pronunciation of Chinese characters with their shapes, and only then can they read" (p. xii).

However, the DCI approach has also been challenged, both theoretically and empirically. In the 1950s, two DCI methods were trialled based on the learning experience of Chinese children and the experience of increasing the literacy level of the adult Chinese population, respectively. Neither method achieved satisfactory results (Li & Ren, 1986). In the first method, students were taught pinyin for five to six months. Students did not start learning characters until they had mastered several hundred words in pinyin and therefore ended up with the dual tasks of learning new characters and the characters they had learned in pinyin. Thus, the bottleneck of learning characters was moved to a later point in time, but not broken (Wan, 2018). In the second method, students learned 700-800 words and basic grammar points before they learned corresponding characters intensively in the following two weeks. It was found that the students did not achieve a high accuracy in recognising the characters, and, in the meantime, they also forgot many of the words and grammar points they had learned.

The DCI approach is based on the idea that speakers of other languages should follow a similar trajectory as native Chinese speakers in the learning of characters. This assumption has been increasingly challenged with the argument that adult second language learners should be treated differently from native speakers. As Wan (2018) pointed out, Chinese children have mastered around 2500-3000 words

in speaking and listening before they start to learn characters. They have also been exposed visually to characters on a daily basis, due to their ubiquitous presence in every-day life in China.

Based on these considerations, the ICI approach, i.e., the introduction of Chinese characters from the first lesson, has been proposed as an alternative (e.g., Liu, 1983; Ma, 2018; Zhao, 2008; Wan, 2018). This approach has gained popularity and, currently, the majority of textbooks used in CFL courses introduce characters from the first stages of instruction (Allen, 2008).

A radically different approach has been taken by the so-called Heisig-Richardson Method. It is based on the popular book series by James Heisig “Remembering Japanese Kanji”, adapted to Chinese by Richardson in 1998. Focusing entirely on the written language without any reference to the pronunciation, it makes liberal use of mnemonics, presenting stories designed to facilitate remembering characters and even encouraging learners to invent their own stories. Accordingly, the method has been criticised for its arbitrariness (So, 2008) as well as for its failure to explain ideophonic characters (Jin, 2010).

The diversity of methods of introducing characters in CFL teaching contrasts with the dearth of empirical evidence comparing them. A recent study by Osborne et al (2020) compared four different methods of teaching Chinese characters in Irish schools, finding only slight differences in pupils’ performance. As the authors emphasise in their conclusions, further studies are needed to explore this issue systematically.

## **2.2 Teaching and learning written Chinese online**

The use of SCMS (Synchronous Computer Mediated Communication) in CFL teaching was pioneered by Wang and her colleagues (Wang, 2004; Wang & Chen 2007, 2009, 2012). Wang et al. argue that a crucial component in online language learning is synchronous interaction.

In 2013, Stickler and Shi attempted to identify the ways in which Chinese teachers’ intentions matched with student perceptions and expectations during online multimodal tutorials. Using a multimodal analysis of synchronous online spoken interactions and stimulated recall, they found that a mismatch between teacher intentions and student perceptions during online learning can not only lead to negative outcomes such as anxiety and communication failure, but even to totally abandoning the online language learning experience. Stickler and Shi (2015) also conducted an online, eye-tracking study with beginner to low-intermediate learners of Chinese involving a reading comprehension task and interactive speaking task. Also employing stimulated recall interviews, they found that learners at higher levels largely used characters for comprehension while those at average or poor levels relied more heavily on pinyin. The intermediate learners in this study were found to make use of both pinyin and characters in the comprehension task.

Indeed, authors such as Zhan and Chen (2014) and Sun et al. (2014) have argued in favour of technology integration in learning Chinese characters, particularly for CFL teaching. Zhan and Chen (2014) developed the so-called REEE model (radical awareness, enforcement of sound-meaning connections of characters, enforcement of sound-meaning-form connections of characters, and evaluation) whereas Sun et al. (2014) proposed a character teaching system that integrated character structure theory with 2D contour morphing technology. Both argued that integrating technology in the teaching of characters can provide motivation for continued learning and an additional element of interest and engagement in the learning process.

### 2.3 Chinese characters as a potential aid in learning Chinese: Rationale for the current study and research aims

As pointed out in preceding sections, when it comes to learning Chinese characters, there is a fundamental difference between native Chinese speakers and those learning Chinese as a foreign language. A Chinese speaking person enters the world of written Chinese with a well-established knowledge of the spoken language. Thus, new characters can be mapped onto already existing sound-meaning correspondences. For a non-native Chinese speaking person, in contrast, learning written and spoken Chinese could easily appear as learning two separate languages, competing and interfering rather than facilitating each other.

The Chinese writing system shows important differences to other writing systems in use today. Firstly, it is possible to learn the characters relatively independently from their spoken counterparts. This applies not only to pictograms and ideograms, but also to phono-semantic compounds. Even phono-semantic compounds can be learned without knowledge of their sound, with the semantic radical providing a cue to their meaning. Indeed, as demonstrated by Williams (2013), learners of Chinese as a second language do not seem to benefit from the phonological information contained in the characters.

Secondly, from a cognitive point of view, the compositional nature of Chinese characters provides a network of visual and semantic associations which does not have any parallel in the Chinese spoken language. Taking the character 明 *ming* “bright” for example, comprising the radicals for 日 *ri* “sun” and 月 *yue* “moon”. This conceptually plausible and easy to remember connection between the written form of “bright”, “sun” and “moon” does not correspond to any comparable relationship between the entirely unrelated sounds of the spoken words: “ming”, “ri” and “yue”. Moreover, the radicals derived from the characters for “sun” and “moon” appear in many other characters, making it easier for the learner to recognise them.

Some radicals can be associated with whole clusters of characters, often linked to each other semantically. For instance, the radical for 金 *jin* “gold” appears in names of different metals (e.g. 银 *yin* “silver”), and also in objects made out of metal (e.g. 铃 *ling* “bell”). Thus, confronted with a new and unknown character containing the 钅 “gold” radical, the Chinese learner will be able to guess that the word is likely to have at least some connection to metal. This applies not only to objects and nouns denoting them, but also to verbs, e.g. in the character for 喝 *he* “to drink”, which includes the radical for 口 “mouth”. In contrast, it is not possible to find similar relationships between spoken words, as neither onset, rhyme, nor tone can be associated with specific meanings or semantic categories.

Very often, the complexity of the Chinese characters is portrayed as a burden to a learner, making the acquisition of the language much more difficult than it would have been if only the spoken language (and the phonological pinyin transcription of it) were used. In this study, we take an opposite point of view. We set out to determine whether the introduction of Chinese characters could make learning Chinese easier rather than more difficult. Instead of following the DCI or ICI approaches, we are examining whether Chinese characters can be introduced before any spoken language. If learning spoken and written Chinese can be conceptualised as learning two different languages and the compositionality and structure of Chinese characters can offer for a beginner an easier point of entry into the language than its spoken version, could it be that learning the characters alone might in fact be easier than learning the spoken language alone?

In order to answer this question, we have designed a new four-week course of Chinese for beginners, introducing the characters without any reference to their pronunciation. For comparison, we designed, in parallel, a course of spoken Chinese only, without any reference to written Chinese, neither pinyin nor characters. We then compared both courses in a crossover design, so that all participants have received both writing and speaking classes but in a different order (for details see 3.1).

The primary research question was whether it is feasible to conduct an intensive adult beginners' course of Chinese focusing entirely on the teaching of Chinese characters, without teaching spoken words, compared with a beginners' course focusing entirely on the spoken language without the use of pinyin or characters. We examined the feasibility of such a course in terms of teaching materials, course delivery, and feedback from both the teachers and the students.

The second research question, introduced through the Covid-19-related lockdown, is whether teaching of written and spoken Chinese can be adapted to an online format. Also, in this case, we explore the feasibility, as described by the teachers as well as the learners. We pay particular attention to the comparison of students who have experienced both classroom and online courses to those whose courses were conducted entirely online. Given the different types of social interaction associated with the classroom and online courses (e.g. Rovai & Jordan, 2004; Smith, 2013), we also explore potential differences in the feeling of connectedness between students and teachers and between students themselves.

### 3 Method

#### 3.1 Research design

A brand-new Chinese beginners' course for adults was developed specifically for this study. It consisted of two separate parts: a four-weeks course of written Chinese without any reference to the pronunciation and a parallel course of spoken Chinese, designed around the same topics, but without any reference to the written language, either characters or pinyin.

In order to be able to compare both courses, the study was constructed following a randomised crossover design (Figure 1), a method well established in therapeutic and clinical trials, particularly suitable to compare different treatment options (for further details see Senn, 2002). Due to the crossover design, every student could participate in both parts of the study, half of them starting with the written course followed by the spoken one, the other half the other way round.

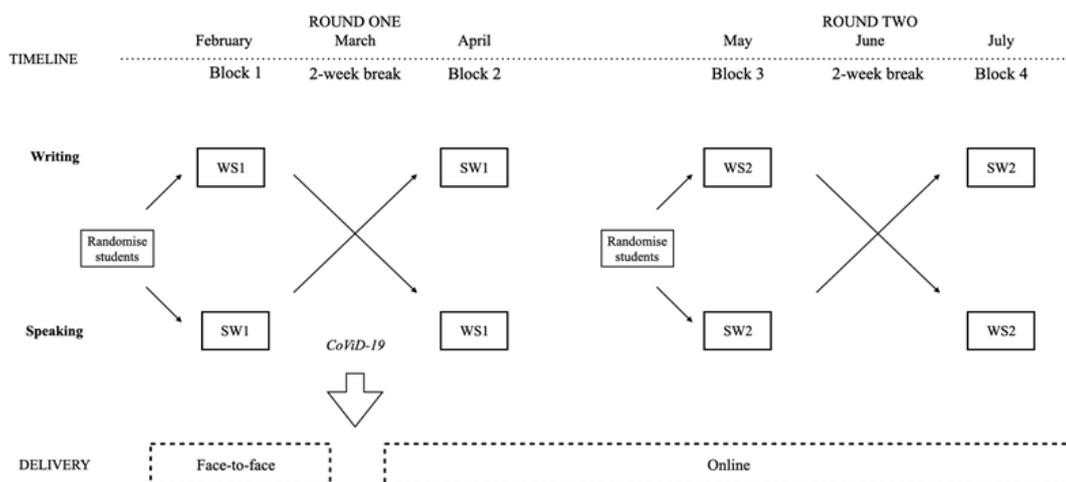


Figure 1. Research design

The students were divided randomly (using a stratified randomization procedure with the strata: age, gender, and education level, using the randomizeR package in R) into two groups: Group WS1/2 received a four-week intensive (two two-hour sessions per week) Chinese course on characters only (using simplified characters) without being taught how to pronounce the learned sentences. After a two-week break, the group received another four-week intensive course for the same content but in spoken

Mandarin Chinese only (without using pinyin). Group SW1/2 had exactly the opposite curriculum: an intensive four-week course of spoken Chinese only, followed, after a two-weeks break, by four weeks of teaching written Chinese. The two weeks interval was introduced to help us make clearer distinction between the effects of the two parts of the course. To control for the specific influence of individual teachers, the course was conducted by two teachers who swapped in the middle of each block, so that each group got two weeks with one, then the other two weeks with the other teacher.

The study was conducted in two rounds: the first teaching round (Groups WS1 and SW1, Blocks 1 and 2) took place February-April 2020, the second round (Groups WS2 and SW2, Blocks 3 and 4, with different students) May-July 2020 (Figure 1).

### 3.2 Teachers and students

The teachers, co-authors of this paper (ZD and HH), were professionally trained and experienced CFL teachers employed by the Confucius Institute at the University of Sheffield.

Adults aged 18 or older interested in learning Chinese volunteered to take the courses. We have recruited 58 students without any prior knowledge of Chinese language through the usual advertisement channels of the Confucius Institute at the University of Sheffield and through social media (Twitter, Instagram, and Facebook). The demographic data of the students is summarised in the Table 1.

Table 1

*Student Demographics across Courses*

Demographic	Group			
	SW1 Speaking- Writing (n = 20)	WS1 Writing- Speaking (n = 19)	SW2 Speaking- Writing (n = 9)	WS2 Writing- Speaking (n = 10)
<b>Age</b>	28.95 (8.40)	28.82 (8.13)	33 (11.57)	30 (7.82)
<b>Gender</b>				
<b>Female (%)</b>	60%	58%	44%	50%
<b>Male (%)</b>	40%	37%	56%	50%
<b>Prefer not the answer (%)</b>	-	5%	-	-

Note: Age reported as mean (standard deviation)

### 3.3 Teaching materials and course delivery

The following section describes the teaching materials, which were developed specifically for this course.

#### 3.3.1 Writing course

Materials for the writing courses were designed and arranged in four basic topics of daily life: Meeting and greeting people, Family members, Food and drink, and Trips. Each thematic unit was comprised of four one-hour lessons.

Before the writing course, the teacher spent 20 minutes introducing basic understanding of formation and use of Chinese characters. Features such as the positional relations between strokes, writing style, and stroke order rules were covered throughout the duration of the course. Pictures and characters based on each theme of the course were presented in PowerPoint format with a dynamic display of each character, but without the use of sound or pinyin.

HSK (Hanyu Shuiping Kaoshi “Chinese Proficiency Test”) Level One vocabulary and grammar points were used in the course. The teachers used English as the language of instruction throughout the course and avoided using spoken Chinese. In the teaching process, teachers adopted the Sinogram-based theory, taking characters as the basic unit for teaching. The students’ learning process was based on immersive practice by writing with pen and paper. In order to maintain the students’ motivation in learning Chinese characters, teachers used a variety of teaching methods, such as the Total Physical Response (TPR) (Asher, 1988), writing in the air, and playing games.

Homework was assigned on a weekly basis, including stroke decomposition diagrams of each Chinese character learnt and character transcription. The students normally spent approximately two hours on homework.

### *3.3.2 Speaking course*

The frequency, duration, topics, and materials of the spoken course were the same as the written one. Before the course, the teacher spent 20 minutes introducing basic knowledge of Chinese phonetics, including the tones, without using pinyin. Vocabulary and sentence pronunciation, intonation, and other related aspects were practiced and corrected through the whole course. Pictures related to the course themes were provided in PowerPoint format, but without the use of Chinese characters or pinyin.

The teachers used Chinese as the language of instruction throughout the speaking courses, supplemented with English if necessary, and avoided using Chinese characters completely. In the teaching process, the teachers adopted the audiolingual method, and students’ spoken Chinese learning process was based on speaking, dialogue, and structural exercises. At the same time, in order to maintain students’ motivation, the teachers used a variety of teaching methods, such as the TPR, body language, and picture demonstration. Homework included “read after the audio recording” and presentation, which usually took students approximately two hours per week.

## **3.4 Adapting the materials to online delivery**

All of the online classes were delivered on Zoom.

### *3.4.1 Adjustments to the writing course*

(a) Teacher's demonstration. During offline delivery, the demonstration of Chinese characters was carried out by teachers writing on the whiteboard in the classroom. This was replaced by writing on the virtual whiteboard for the online delivery using the touchpad of a laptop or a mouse, whichever displayed the strokes of the Chinese characters and their order more accurately.

(b) Student writing. In the classroom, square block practice books were used to make it easier for students to grasp the spatial relationship between various components of a character. The teacher walked around the students’ workspaces to observe and guide their writing. In the online delivery, this was mainly replaced through a virtual whiteboard. The teacher used the function of sharing the whiteboard to allow students to write freely. In this way, the teacher could observe the dynamic writing process of each student and correct the students collectively or individually.

### *3.4.2 Adjustments to the speaking course*

The teaching of the listening and speaking classes was not as severely affected by switching to online delivery as the writing class, but it did weaken the simultaneity and contextuality of communicative practice. The demonstration of online listening and speaking classes was fundamentally the same as

that of offline teaching. Under normal network conditions, the students could hear and see the teacher's demonstration. The teachers demonstrated the phonetic characteristics of Chinese visually and auditorily through clear pronunciation and exaggerated mouth shapes, which the students were encouraged to imitate. However, it was difficult for the teacher to lead the whole class to read together, which was a regular exercise in face-to-face teaching. Therefore, pronunciation practice was carried out individually. The one-on-one practices enabled the teachers to listen to each student's pronunciation and fully understand their phonetic acquisition. In addition, as the teaching was not face-to-face, the tension of the students' self-expression and the discomfort caused by teachers' corrections were reduced accordingly.

In order to help the students strengthen their listening and speaking skills, the teachers intentionally increased classroom interaction between themselves and the students through questions, pair work or group work, situational translation, quick quizzes, timed answers, picture descriptions, etc., in as many interactive ways as possible. The online listening and speaking sessions generally completed the teaching objectives, and students could be engaged in a basic dialogue on the four topics they had learned by the end of the course.

### *3.4.3 Maintaining students' attention and engagement in the online format*

Once the adjustments to an online delivery described above had been completed, the biggest challenge was to maintain student attention and engagement. In order to ensure the participation of every student, the teachers checked the students' writing and speaking performance by calling their names in order or randomly. The teachers also made use of the grouping function and shared the whiteboard to provide students a platform for language practice and display.

In addition, the teachers maximized the advantage of screen sharing. After each lesson, the teachers shared the "notes" produced online with the students for their follow-up review of the content covered. This helped students to understand the structures of grammar and removed the pressure of taking notes.

Despite all these efforts, some disadvantages of online teaching were difficult to avoid. Firstly, after switching to online teaching, the communication and interaction between students and teachers was mainly based on speaking and talking, and non-verbal communication was greatly restricted. It has been proposed that in people's direct communication activities, "30% of the information is transmitted through language, 70% of the information is through non-verbal means" (Eakins & Eakins, 1982). To address this, the teachers introduced an icebreaking opening before each lesson, e.g. giving everyone an opportunity to share their experience of the lockdown as an attempt to create a more relaxed atmosphere.

Secondly, the individual communication between the teacher and each student was presented in front of all students. For some shy students, this could increase the feeling of insecurity. The teachers paid more attention to encourage those students. For the extroverts in the class, individual communication with the teacher in front of their peers had little effect.

Thirdly, due to the varying quality of network connection, the teachers' tolerance of mistakes increased. If there was no ambiguity in the student's language output, the teachers did not correct small mistakes to the same degree as they would have done in face-to-face teaching, focusing instead on encouragement. However, they kept stricter standards in group discussion.

Finally, the online setting required more one-on-one interaction between teachers and students. Due to the limitations of Zoom, it was more difficult for students to answer questions together and for teachers to assess their progress. Accordingly, the teachers preferred a one-on-one communication style in order to have a better understanding of the students' progress, thereby adjusting teaching strategies and maintaining students' attention.

### 3.5 Data collection

Teachers were asked to reflect on the following questions: “How did you find teaching speaking and writing separately for Round One?” and “What were your thoughts on teaching speaking and writing online?” in order to investigate the feasibility of the courses from the teachers’ perspective.

In order to examine the feasibility of the course as well as learner experience, each student was asked to provide feedback on the classes twice, after the first and the second block of each round (Blocks 1 and 2 or 3 and 4 respectively). The feedback was gathered via questionnaires, including free-response questions and Visual Analogue Scale (VAS) statements about the courses. VAS questions are an alternative to Likert scales and allow for a more fine-grained analysis (Chyung, Swanson, Roberts, & Hankinson, 2018). Students were asked after each course to mark on a line where 0 is “not at all” and 100 “very much” how connected they felt to the teachers and their classmates (Figure 2). The fact that the VAS style questions were administered online necessitated considerations over and above traditional paper-and-pencil questionnaires. For example, the starting point of the slider has been suggested in the literature to be a potential bias (Roster, Lucianetti, & Albaum, 2015). Sellers (2013) found that if the default position of the slider was located in the middle or the high point of the scale, it resulted in overall higher scores. For this reason, we have chosen to put the slider initially at the low point of the scale, therefore requiring the respondent to move it to express their level of agreement, rather than move the slider to express their level of disagreement.

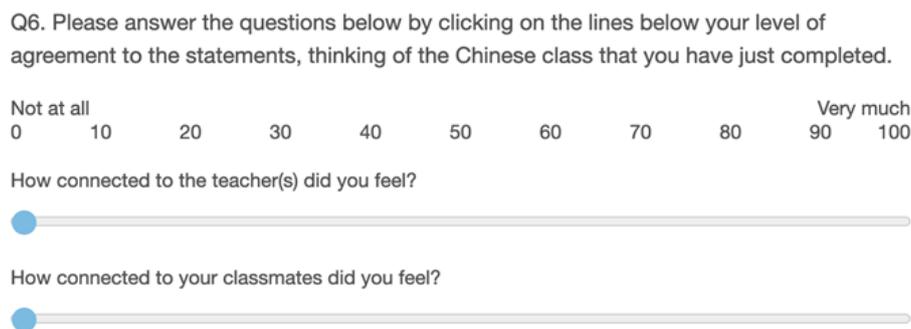


Figure 2. Example of VAS style question

### 3.6 Data analysis

Feasibility of the courses was examined using the feedback from the teachers and students. The feedback provided by students was analysed using a thematic analysis approach. Various themes were identified in the data, though here were focus on “Student Satisfaction”, which developed largely out of the following questions: “What did you think of the class that you have taken so far?”, “Any comments?”, “Did the two courses change your mind or opinions in some way?”, “What did you think about learning Chinese from a beginner’s level with writing and speaking taught separately?”, and “What did you think about the project overall?” To investigate feelings of connectedness to the teachers and classmates, VAS style questions were used in order to gather a more fine-grained response, whereby the comparison of distance between two responses is more meaningful rather than categorizing or dichotomising responses as is usually the analytic approach to Likert scales. Instead, VAS questions produce a continuous numeric value (from zero-100), which can be more easily examined with descriptive and inferential statistics, as in Table 2.

## 4 Results

### 4.1 The comparison of written vs spoken classes

#### 4.1.1 Teachers' feedback

The methods of teaching this course, with its complete separation of the written and spoken material, presented a novel challenge, as neither of the teachers had taught this way before (indeed, we are not aware of this method of teaching having been practiced systematically in the past). In the spoken class, the students learned without the use of pinyin or Chinese characters by imitating and generating spoken words after the teacher's demonstration of pronunciation and explanation of meaning and context. The teachers found it gratifying to see that the model has worked, and that the students made good progress in listening and speaking.

The teaching process of reading and writing resulted in surprising and unexpected outcomes. Firstly, the teachers feared before the start of the writing class that students might experience fatigue and boredom, but during the course, students' enthusiasm increased, which in turn made the teachers more enthusiastic. Secondly, to the teachers' surprise, the group which was taught speaking and listening first could generate and write correct sentences after having learned some Chinese characters, although the correspondence of pronunciation and writing symbols was not explicitly presented during the classes. The students were able to make the necessary connections spontaneously. Thirdly, the students could not only write the learned Chinese characters fluently, but they also learned to write new characters according to the basic writing rules at a rapid rate, establishing a "sense of characters" quickly.

The progress of listening/speaking classes was overall faster than that of reading/writing classes. Within the same length of studying, listening/speaking classes could cover more materials than reading/writing ones, possibly due to the fact that it is faster to speak a sentence than to write it.

#### 4.1.2 Learner experience

The feedback from all parts of the course, as identified in the theme "Student Satisfaction," was consistently and overwhelmingly positive. Importantly, despite initial surprise at the idea of the courses, students reported to have enjoyed the writing class far more than they had anticipated, reflected in the responses to the question in regards to 'if the courses changed the students' opinions in any way' (students' initials anonymized in order to protect privacy) as shown below. This corresponds to the teachers' observations of the students' enthusiasm as shown above.

*At first I thought it wouldn't work but once I started learning the speaking aspect it reinforced what I had learned in my writing class. I think I was happy I learned the writing part first though. (KA)*

*The reading was a lot easier than I expected. Once you learn to recognise characters or the radicals that make them up, the language doesn't seem so alien. (OO)*

*Really enjoyed the history behind the written characters, teachers made course fun but informative" (RC)*

*Chinese writing is easier than I thought. (EA)*

*Speaking Chinese is easier than writing and I think Chinese characters is a form of art because every character has a link with some form of real-life phenomena. (QM)*

## 4.2 The comparison of in-person and online delivery

### 4.2.1 Teachers' feedback

The move online posed challenges and required adjustments, but some unexpectedly positive effects have also been observed.

#### *Advantages of the online delivery:*

- (1) Teacher-student relationships were more equal. The teachers were mixed with the students on the screen, unlike in the traditional one-to-many classroom mode. This helped to create a relaxed learning atmosphere.
- (2) The functions of some platforms were helpful for teaching. Features like sharing screens, whiteboards, and breakout groups were convenient for teachers to share multimedia resources such as corpora, videos, and pictures. The teachers could see the students in a small window, which enhanced classroom interaction. The virtual whiteboard actually made the demonstration of characters and their practice clearer and easier, whereas the sharing whiteboard function enabled the teacher to observe the progress of each student which proved to be more efficient than offline observation methods. The students were able to have more writing practice online as a result. Moreover, teachers and students could produce joint lecture notes. This improved teaching efficiency and increased the students' sense of participation through interaction and cooperation. At the same time, the 'host' role of the teachers on Zoom enabled them to coordinate the progress of the course and ensure an orderly and efficient classroom environment, which saved teaching time and improved the efficiency of classroom management.
- (3) Communicating by typing could increase the sense of security in some learners. For the shy students, answering questions by typing in the chat bar reduced the fear of public speaking and helped gradually build their confidence.

#### *Limitations:*

- (1) The varying quality of network connection influenced the accuracy and speed of oral communication. The speed of speech had to be reduced deliberately. This is especially impactful for the speaking classes. Although a slower input and output is generally acceptable for learners at the initial stage, the delay inevitably led to slightly unnatural dialogues in the communicative practice.
- (2) Non-verbal communication cues diminished drastically, and the quality of language communication was weakened. Unlike the traditional classroom environment, some students in the first round did not turn on their camera due to shyness and/or privacy protection. The teachers found it challenging to evaluate if each student was keeping up with the course material. This also had a negative impact on teacher-student interactions and student-student interactions, especially for the speaking classes. It was difficult for the teachers to check the pronunciation of students from their facial expressions in real time. Communication practice and discussion periods also lacked a sense of authenticity possessed by face-to-face classes.

### 4.2.2 Learner experience

Within the theme of "Student Satisfaction", we have identified a sub-theme of "Satisfaction with the Online Delivery". In Groups SW1 and WS1, which moved online for the second set of courses, some students reported that while they would have preferred traditional in-person instruction, they found the online classes suitable given the circumstances showing that teaching Chinese speaking and writing online is indeed feasible.

*It worked well considering the circumstances. However, I much preferred the face to face teaching experience. (AM)*

Nearly all students expressed their appreciation of the effort put forth by the teachers in transitioning the classes to be online, even if they preferred traditional in-person classes. This further confirms the feasibility of online teaching of Chinese speaking and writing. HM especially pointed out that it worked ‘quite well’ for writing, echoing the teachers’ reflection on the advantages of online teaching of writing above.

*At first it was weird, but for the writing I think it still worked quite well. The teachers were able to show us the stroke order and we could show them our work on camera so I think it went as smoothly as it could have. (HM)*

*I would have preferred the in-person experience, but I think the teachers still did an amazing job delivering the online classes. (KA)*

Students in all groups also reported that the online classes were sometimes confronted with technical difficulties which matches the observations from the teachers above.

*The application used for writing is not practical for my type of laptop. (OA)*

*In the speaking section, sometimes I couldn't understand pronunciations, but I recovered via voice record. (AF)*

*Group learning through Zoom does lead to some misunderstandings due to poor connections, lagging signal, people interrupting each other, but overall these are minor. (ER)*

A key difference that some of the students noticed in the transition to online was the lack of social interaction as seen in the in-person classes.

*When I learn offline, it was very good to meet friends and memorise their name. Those activities itself were supplemental learning. However, I didn't have any chance to communicate with friends during the second phase. (RH)*

In contrast, in the Groups SW2 and WS2, which started out online, most students reported a positive social impact from the first class, even highlighting the opportunities of online classes, such as building a connection with the teachers and fellow classmates and meeting a wider range of people (UO). The joint efforts of producing notes together was perceived as a good opportunity of interaction provided by the online teaching (IO), as also reported by the teachers.

*I think the only way to feel more connected to classmates is to be with them in person, so as far as online teaching goes, I feel as connected as I can be to my classmates and teachers. I even text with some classmates outside of class, which is nice. I love the wide range of where people have come from, different walks of life etc...the fact it's online has opened up who can take part so much more, different nationalities, different age groups, and I love that. (UO)*

*Both tutors were really engaging and actually I quite like the format of online classes. It allows students to interact together by annotating slides together etc. (IO)*

The difference in feeling of connectedness to teachers and fellow classmates between Groups SW1/WS1 (first in person, then online) and Groups SW2/WS2 (online from the beginning) was measured using VAS (see Sections 3.5 and 3.6). The mean judgement of teacher connection from Groups SW1/WS1 combined in Block 2 (81.49) was similar to that of groups SW2/WS2 combined in Block 4 (86.06). In contrast, there was a difference in the connectedness to classmates during the online course, with Groups SW1/WS1 combined reporting a mean of 66.65 and Groups SW2/WS2 combined 84.19, although the small number of students does not allow a meaningful statistical evaluation of the significance of this difference (Table 2).

Table 2

*Student Feelings of Connectedness to the Teachers and Their Classmates in the Online Course*

Feeling of Connectedness	Group			
	SW1	WS1	SW2	WS2
To teacher	75.86 (14.89)	85.33 (18.73)	86.89 (8.89)	85 (16.47)
To fellow classmates	53.57 (27.86)	61.56 (28.24)	90.56 (10.9)	76 (21.61)
	Round			
	One (Groups SW1 and WS1)		Two (Groups SW2 and WS2)	
To teacher	81.49 (16.4)		86.06 (12.32)	
To fellow classmates	66.65 (23.42)		84.19 (17.49)	

*Note:* Feelings of connectedness gathered via VAS response at the end of the course and reported as mean (standard deviation).

Students also pointed out that the online classes were more enjoyable with a small group size.

*Students decreased in number which made the checking by the instructor easier. (QM)*

*There were too many of us that had to repeat and properly pronounce things, so it got quite tedious from the start. (NI)*

Guided by this feedback, we decreased the group size in Groups SW2/WS2, which started online.

## 5 Discussion and Conclusion

The primary aim of this study was to pilot and determine the feasibility of a novel way of teaching beginners Chinese, through an entirely separate instruction in the written and spoken language. While approaches favouring the teaching of spoken Chinese for a certain period of time before introducing the characters (referred to as DCI, “delayed character introduction”) are well known and have been used frequently, the opposite order is rarely used (apart from the “Heisig-Richardson-Method” discussed in Section 2.1) and has not been examined empirically.

Both teachers perceived the preparation of materials for this course as an unusual challenge, but as demonstrated by their feedback, they were surprised to see how well the courses went. Both were impressed by students’ enthusiasm generated by the written course, which increased as the course progressed. They also remarked that the students were able to generalise the learned principles applying them to new characters.

This impression is fully supported by the overwhelmingly positive learner experience reported by the students for both parts of the course. Although many students were surprised by the design of the course in separating the spoken and the written language, they were quickly convinced of the advantages of such an approach. In comparison with their expectations, the students found learning the characters easier.

Although the study was initially designed to focus on the contrast between teaching spoken and learning Chinese, the Covid-19 pandemic introduced another variable which was not part of the original experimental design: the difference between face-to-face and online teaching.

Undoubtedly, the online delivery had its challenges, disadvantages, and limitations, such as the dependence on well-functioning internet, the difficulty to sustain students' engagement and promote direct interactions between them, the reduction in non-verbal communication, etc. However, several unexpected advantages were also noted by the teachers, including a more relaxed atmosphere, increased sense of security among shy students by allowing them to write their answers in the chat box rather than speaking in front of the whole class, and mobilisation of students' participation through the joint creation of lecture notes. In the writing course, the teachers perceived the simultaneous assessment of writing by all students through the virtual whiteboard as more efficient than individual "patrols" in the classroom.

The students in the Groups SW1/WS1, who received the first block of teaching in the traditional face-to-face classroom approach and the second block in online format were able to compare both forms of course delivery. Their feedback suggests that many prefer in-person delivery and perceive an online course as an appreciated (given the circumstances), but ultimately inferior replacement. In contrast, the Groups SW2/WS2, which started the courses in an online format and could not, therefore, compare the two forms of course delivery directly, did not feel disadvantaged by the online format, not only in terms of teaching but also, interestingly, in terms of the social interaction with other members of the group. It is also worth mentioning that the online courses SW2/WS2 had practically no drop-outs, although it has to be taken into account that most drop-out cases occurred in the first few weeks of the courses and are likely to have been influenced by the growing concern about the growing spread of Covid-19 around this time. This also demonstrated that the online teaching of Chinese speaking and writing is feasible and can be as engaging as face-to-face teaching.

Finally, our observations raise the question of potentially interesting differences in the feeling of connectedness to the teachers and classmates. The feeling of connectedness to the teachers was universally high (above 75/100) across all groups, confirming the impression given in the teachers' as well as in the students' feedback. In contrast, the connectedness to the classmates seemed to be higher in the groups which started online, and higher in the speaking than in the writing classes. The small number of students precludes us from conducting a meaningful test of statistical significance of these differences, but we feel that it is a question worth addressing in future studies.

In summary, the surprisingly positive experience of the online courses demonstrates that they can offer a meaningful alternative if the circumstances do not allow in-person teaching. Those who experienced both types of teaching tend to perceive the online delivery as an inferior substitute, a reasonable and appreciated replacement but not an equally valuable alternative. In contrast, those who started the courses online did not compare them with what could have been a different in-person learning experience; they enjoyed it and made full use of the opportunities of this format. This is particularly relevant in the times of lockdown, but can also prove useful for those who might not be able to attend in-person courses for other reasons (e.g. family commitments not allowing them to leave the house, remote residence, or a disability making travel to the classes difficult, etc). Indeed, for shy students, online classes may be preferred over and above in-person classes. Undoubtedly, online courses have their problems, from technical dependence on internet quality to the increased challenge of maintaining students' engagement and attention. However, they can also bring in genuine advantages, from a more diverse, international composition of the class (and hence an opportunity to establish new social contacts), to useful technical tools allowing teachers to run their classes more efficiently, particularly in the writing classes.

The main limitation of this study is the small number of students, making it impossible to examine the statistical significance of the observed effects. Also, as we concentrated on the contrast between sounds and characters, we consciously excluded the use of pinyin from our design and considerations. However, we feel that the uncommon circumstances of our project, cut in half by the Covid-19 pandemic and the resulting lockdown, offered a unique opportunity to study differences not only between teaching of spoken and written Chinese separately but also between classroom and online delivery of both parts of the course. With all due caution, we feel that our results are encouraging in both respects. Firstly, our approach to teaching written and spoken Chinese separately proved not only feasible but also well received by teachers and students alike. Secondly, both written and spoken classes can be delivered successfully also in an online format. We hope, therefore, that our results will stimulate further research in this field.

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**Dr. Lucy Xia Zhao** (the corresponding author) is Senior Lecturer at the School of East Asian Studies and Director of the Confucius Institute at the University of Sheffield. Her Mphil and PhD were on linguistics and language acquisition from the University of Cambridge. Her current research interests are language acquisition, TCFL, language policy and intercultural communication.

**Brittany Blankinship** is a PhD student at the University of Edinburgh. Her PhD is titled, “Multilingualism in Later Life: Natural History and Effects of Language Learning”. She holds a Master’s of Science in Human Cognitive Neuropsychology and received a Bachelor’s degree in Linguistics from the University of California, Berkeley.

**Zhipeng Duan** has worked at Beijing Language and Culture University since 2016 and has been working at the Confucius Institute at the University of Sheffield since 2018. He won the First Prize at the MTC SOL Teaching Competition in 2014 and also worked as a Chinese teacher in South Korea.

**Huihui Huang** has been working at the Confucius Institute at the University of Sheffield since 2018. She holds a master degree in Teaching Chinese as a Second Language from Jinan University, China. She has been teaching Chinese for over 5 years in China, Thailand, Spain and the United Kingdom.

**Jiaxin Sun** is a Master of Science (MSc) student in Integrative Neuroscience at University of Edinburgh. She holds a Bachelor degree in Biological Science from the Northwest University, Xi'an, China.

**Dr. Thomas H Bak** is Reader in Human Cognitive Neuroscience, University of Edinburgh, and former president of the World Federation of Neurology Research Group on Aphasia, Dementia and Cognitive Disorders. His main interests are the relationship between language and brain and effects of multilingualism and language learning across the lifespan.