Teachers' beliefs and practices in textbook selection and use when teaching Chinese as a second language

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Abstract

Textbooks are the primary materials for teaching in the Greater China Region, including the teaching of Chinese as a second language. This qualitative study examined how two teachers of first to fifth grade students in an international school in Macao selected, used, and adapted textbooks to teach Chinese to non-native Chinese speakers. It also examined the beliefs that drove teachers' decisions and actions. Multiple forms of evidence were analyzed, including responses to interview questions posed at multiple points, responses to a questionnaire administered at the beginning of the study, school documents, and content analyses of lessons in the selected textbook series and materials teachers made to accompany textbook lessons. The two teachers in this study made a conscious decision to continue using two textbook series selected by others and used the year before. The selection and use of these textbooks were underpinned by a set of interrelated beliefs, including their views on effective instruction (e.g., clearly presented topic, appealing and motivating materials, effective learning activities, focus on Chinese culture); their students' needs and motivations; their own teaching capabilities and attitudes; their epistemological beliefs about learning and knowledge; and the importance of local, national, and international standards and assessments. The two teachers devoted considerable effort to adapting the textbooks by developing their own materials that added, reduced, deleted, restructured, replaced, and re-ordered textbook learning activities. These adaptations were driven by specific teacher beliefs (e.g., the need for more meaning focused activities). Recommendations for future research and implications for teaching are offered.

Keywords Textbook selection · Textbook adaptation · Teacher beliefs · Second language instruction · Language teacher education · Teacher knowledge

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Introduction

Textbooks are instructional materials that include paper-based teacher guides, student textbooks and workbooks, and related digital resources used to support teaching and learning (Mede & Yalçin, 2019; Oates, 2014; Smart & Jagannathan, 2018). High-quality and appropriately designed textbooks can stimulate effective instructional practices, improve learning, support teacher preparation, and promote the goal of equality of educational opportunity (Smart & Jagannathan, 2018). In many countries, textbooks are the primary basis for instruction (Oates, 2014; Smart & Jagannathan, 2018).

When teaching Chinese language, textbooks serve as primary instructional materials for both native speakers as well as students learning Chinese as a second or foreign language (CSL/CFL) (Hsiang, 2021; Hsiang et al., 2018, 2020, 2021; Hua et al., 2021; Ying et al., 2018). The goals for Chinese language textbooks are to build students' language knowledge and skills, enhance communicative competence, teach learning strategies, and cultivate cultural customs/values (Education & Youth Development Bureau, 2016a, 2016b; Geng, 2017, 2018; Hua et al., 2021; Yue, 2017). As students with different purposes and backgrounds (age, grade level, ethnicity, or nationality) are increasingly engaged in learning CSL/CFL (Bao, 2019; Geng, 2017; Gong et al., 2020), concerns have risen about whether currently published CSL and CFL textbook series adequately meet teachers' and students' needs (Geng, 2017; Gong, 2018; Hsiang, 2021; Li et al., 2021; Ying et al., 2018). If textbooks do not provide a good match to what students need to learn or teachers are expected to teach, then their effectiveness is likely to be limited.

This concern is due, in part, to the limited choice of Chinese language textbooks published for young CSL/CFL learners (Geng, 2017; Yue, 2017). This situation was illustrated by Hsiang (2021) who found that in Macao, Chinese language textbook series developed for teaching Chinese as the first language were used in schools where Chinese is taught as a second language. Students who have local passports and are native Chinese speakers (Mandarin or dialects) enroll in English/international schools to study CSL, creating a mismatch between textbook and school goals. This creates a challenge for teachers in these schools because it impacts students' motivation and parental support for youngsters learning Chinese as a second language. These findings make it clear that research on CSL/CFL textbook selection and use are needed for different contexts.

The need to study textbook selection and use also stems from findings that teaching is not a unitary process which follows curriculum and the various instructional theories experts use to create textbooks (Burns, 1992). Instructional practices are influenced by institutions, society, culture, and politics (Graham, 2018; Hsiang, 2021; Hsiang et al., 2018; Hsiang & Graham, 2016; Yue, 2017). Teaching is context-sensitive and is a personal thinking process of reasoning, beliefs, and action (Basturkmen et al., 2004; Borg, 2003; Hashweh, 2013; Shulman, 1987). The selection and use of textbooks "involves a cycle through the activities of comprehension, transformation, instruction, evaluation, and

reflection" (Shulman, 1987, p. 14). In order to explore what shapes decision-making of textbook selection and use, studies are needed that examine the beliefs guiding teachers' actions, especially with CSL/CFL (Burns, 1992; Shulman, 1987; Yue, 2017). To conceptualize teachers' beliefs, we draw on a framework developed by Fives and Buehl (2012). They argue teachers hold specific beliefs about themselves, the context in which they work, the content they teach, their teaching practices and approaches to teaching, and their students. Specific teachers' beliefs exist along a continuum of stability (stable to subject to change) and operate in an integrated fashion to act as filters that influence teachers' perceptions and interpretations, frames teachers use to define or frame problems and tasks, and guides that direct teachers' actions. Accordingly, what teachers believe influences how they evaluate textbooks, frame their potential use, and apply them.

The current study examined how teachers select and use textbooks to teach Chinese to non-native speakers in a Chinese speaking region (i.e., Macao), and what teacher beliefs underpin these decisions and practices. In order to capture the dynamic links between teachers' beliefs and practices in a specific context, the CSL teachers in one Macao international school were invited to participate in the study.

To set the stage for this study, we first provide background information on the challenges of teaching CSL/CFL in the primary grades by describing the complexity of Chinese orthography and language. Previous studies of CSL/CSF textbooks are next reviewed to situate how the current study extends the literature. We then consider how teachers' beliefs influence instructional practices such as textbook selection and use.

Literature review

The challenge of teaching CSL/CFL in primary schools

Chinese is composed of words (词), which are comprised of one or more characters (字), themselves consisting of one or more components (部件). Each component includes one or more strokes (笔画). Among the 560 components, 201 components are also recognized as radicals which are used as one kind of index for simplified character dictionary consultation (Huang, 2003, p.91; Institute of Linguistics 2016). For example, the character "花"/flower or a surname [huā] is made of three components (艹＋人＋匕). 艹/grass is the semantic radical of the character "花"/flower. The character "花"can combine with different characters to produce different words which have their own meaning (e.g., 花园/garden [huāyuán] and 百花齐放/all flowers bloom together [bǎi huāu qí fàng]). The complicated Chinese writing system makes the teaching of word/character recognition even more challenging (Chan et al., 2021; Hsiang, 2021). It was reported that CSL/CFL students resisted handwriting and limited word recognition reduced students' speaking, reading, and writing performance (Hsiang, 2021; Hsiang et al., 2020b).

It is difficult for young CSL/CFL learners to remember the handwriting regulations (stroke forms, stroke sequences, and Chinese character structures) (Hsiang et al., 2020b). When teaching Chinese word recognition to young non-native

speakers, teachers usually have to illustrate the meaning(s) of each word/character with support of pictures, translation, or Hanyu Pinyin (Romanization of Mandarin Chinese), and demonstrate how to write the character correctly and quickly based on the stroke forms and sequence to help children to recognize the graphic form, semantics, and pronunciation of characters. Chinese character etymology would be introduced to present how a character was written throughout history to promote the understanding of its meaning and Chinese culture (e.g., In the Qin Dynasty, 艹/grass was written as 屮 which looks like sprouting grass to represent plants). When the character is made of more than one component, teachers need to illustrate the construct of the components to ensure the character can be written correctly and beautifully (e.g., 和/and [hé] is a character made of two components through the left–right structure; 香/fragrant/sweet-smelling/sleep well [xiāng] is a character made of two components through the up-down structure). Different radicals would be highlighted for improving character recognition (e.g., 花/flower, 莓/berry, and 茶/tea share the same radical, 艹/grass, which means the characters are all kinds of plants) (Chan et al., 2021; Huang, 2003).

Many Chinese characters are polyphonic/polysemic graphs (i.e., a character with different pronunciations, and each pronunciation represents a specific meaning). For example, the character "和" can be pronounced as [hé], [hè], or [huo] which represents harmonious/and, to join in agreement, or warm, respectively. Although Pinyin is usually taught to help students to capture the consonant, vowel, and tone of characters (Huang, 2003), CSL students' spelling performance of Pinyin is influenced by their mother language (Hsiang et al., 2020b).

Moreover, having few chances to speak Mandarin Chinese and experience Chinese culture, the influences on Chinese sentence structures from mother languages, and Mandarin Chinese not likely to be used for college entrance exam preparation makes teaching Chinese to young non-native speakers difficult (Hsiang et al., 2020b; Yue, 2017).

Studies of CSL/CFL textbooks

The total number of textbook studies of international Chinese education has increased significantly in recent years (Geng, 2017). Most papers examining textbooks have involved non-empirical methods including literature reviews and personal reflections or observations. The limited number of empirical studies examining CSL/CFL textbooks published in CSSCI, SSCI, and ESCI journals over the last ten years, have mainly addressed four issues.

First, some prior studies of CSL/CFL textbooks focused on one or more aspects of what is taught, how it is taught, and how information is presented. For example, Wang and Luo (2021) examined the teaching of idioms in CSL language textbooks and dictionaries. They found that such sources did not introduce the characteristics of Chinese idioms comprehensively, displayed incomplete or inaccurate idiom meanings, and failed to introduce the multiple grammatical functions of an idiom. In a broader analysis, Li (2016) analyzed a textbook to evaluate its inclusion of excerpts and adapted text texts from a classical Chinese novel, 红楼梦/A Dream of Red Mansions. He concluded it was valuable to include such excerpts and adapted

texts because it helped CSL/CFL learners acquire a deeper and more sophisticated understanding of Chinese language as they discussed and interpreted these inclusions. Even so, Li noted more attention needed to be directed at vocabulary development, story line/character introduction, and the meaning of text. Soh (2019), in contrast, examined how difficult the material presented in CSL textbooks in Singapore was using readability formulas. Three languages features (the number of single Chinese characters, the number of words/combinations of Chinese characters, and the average sentence length) accounted for up to 95% of the total variance in text difficulty. Collectively, these studies demonstrated the importance of examining CSF/CFL textbooks in terms of content covered and teaching procedures applied. Consequently, the current study included a content analysis of lessons in CSL textbooks.

A second theme in prior investigations of CSL/CFL textbooks has involved how Chinese culture is introduced in such materials. Multiple studies have demonstrated that textbooks published in China offered fewer opportunities to engage learners in critical and comparative reflections on Chinese cultural values than CSL textbooks from Korea or the U.S. (Hua et al., 2021; Liu, 2018; Xiong & Peng, 2021). Based on their analyses, Hua et al. (2021) recommended that cultural representations of non-Mainland Han Chinese and Chinese ethnic minority populations are notably lacking or underrepresented in China-produced CFL textbooks. Part of our content analyses in this study examined how cultural values are promoted in the textbooks used in CSL classes.

A third issue studied by researchers involved students' expectations regarding topics discussed in textbooks. To illustrate, Ying et al. (2018) surveyed Indonesian college students enrolled in CSL classes for International Relations majors. These students indicated a CFL textbook would contain appropriate and applicable use of formal and informal language related to their major. In a study by Yu et al. (2012), the topics in textbooks valued by students from the U.S. and Africa varied, but students indicated that some textbook series did not include topics they found interesting. Such studies revealed it is important to consider students' background, motivation, and expectations during textbook development, selection, and use. The teachers in this study addressed the suitability of topics in the textbooks they used.

A fourth issue addressed by researchers centered on textbook adaptations. Gui and Ji (2018) conducted an instructional experiment to examine the effects of textbook adaptations based on the "production-orientated approach (POA)" with non-ethnic Chinese Indonesians college students who studied in China. POA is a proposed practice for English language education in mainland China (Gong et al., 2020). Gui and Ji found students' motivation and performance increased when clear learning objectives were set by integrating students' needs with the textbook unit teaching objectives, communicative contexts were established, vocabulary was reorganized to correspond with topics, and mind mapping procedures were integrated to show how text was structured. The current study examined how CSL teachers made adaptations in textbooks.

To date, there are no empirical studies within or outside of China directly investigating how textbooks are selected and used when teaching Chinese as a second/foreign language (TCSL/TCFL) to young learners. The current investigation extends prior research by specifically examining how teachers used textbooks to

teach Chinese to non-native speakers, and how they adapted them for this particular population. As previous scholars noted (Nhem, 2020; Shawer, 2010), teachers use textbooks in at least three different ways. Teachers who are curriculum-transmitters confine their instruction to the content of the textbook series developed by external experts. Teachers who are curriculum-developers view what they teach as a mutual-adaptation process. Although the curriculum is defined by experts through text-books, these teachers adjust curriculum materials to match their classroom context. Textbooks are viewed as resources for teachers to use to create their own curriculum (Shawer, 2010), and/or students are allowed to construct curriculum through their actions with teachers' support. Teachers who are curriculum-developers or curriculum-makers are likely to use one or more of the following textbook adaptation strategies: adding (extending/expanding), subtracting (deleting/omitting), reducing (abridging), modifying (restructuring/rewriting), replacing, and re-ordering (McDonough et al., 2013; Mede & Yalçin, 2019). There is some evidence that such textbook adaptations occur in some college non-native-level CSL classrooms (Gui & Ji, 2018), it is necessary to examine if this occurs in elementary grade classes, as was done in the current investigation.

CSL/CFL teachers' beliefs and their instructional practices

Teacher beliefs include personal theories and philosophies about learning and teaching, and they can emerge from multiple perspectives, including philosophical, psychological, and sociocultural theories (Ashton, 2014; Burn, 1992). Theoretically, and as noted earlier (Fives & Buehl, 2012), beliefs can influence how teachers conceptualize teaching and the actions needed to address students' needs (Bandura, 1977; Basturkmen et al., 2004). They also can act as a filter for how teachers evaluate their instructional actions and where they focus their attention (Nespor, 1987). As a result, teacher beliefs influence how teachers' select and use textbooks, as beliefs can impact virtually any decision or action teachers take (Graham, in press; Shulman, 1987).

According to the Writers-within-Community model (WWC; Graham, in press), teaching is simultaneously and interactively shaped by the contexts (classrooms) in which it takes place as well as the cognitive resources (including beliefs) teachers' possess. In turn, the context in which teachers operate can influence the beliefs that teachers hold and use to make decisions and initiate instructional actions (e.g., Wang & Du, 2016). The WWC model postulates that teachers' beliefs are complex and multifaceted, and include beliefs about preparation to teach, teaching competence, attitudes toward teaching, identity as a teacher, reasons for teaching success/failures, motivations for teaching, value of teaching, students' capabilities, how students learn, how knowledge is acquired, the nature and permanence of knowledge, and effective instruction (see also Graham et al., 2022). For example, teachers may like to teach (attitudes toward teaching) and believe that textbooks are central to learning (how knowledge is acquired), but view implicit learning activities included in textbooks as ineffectual (effective instruction) and assume that students learn best with structured material (how students learn). Thus, teachers hold multiple beliefs

that can potentially influence their selection and use of instructional materials such as textbooks.

Even though there are inconsistencies between what teachers believe and do, previous studies conducted with students learning English as a second language or a foreign language demonstrated that teachers' actions generally flow from teachers' beliefs, (Basturkmen et al., 2004; Burns, 1992; Roothooft, 2014). This contention is supported by studies conducted with CSL/CFL college teachers in and outside of China. For instance, Peng and Pyper (2021) reported teachers' beliefs about students' progress, textbook use, and effectiveness of instructional procedures influenced what instructional practices they implemented. In Peng and Xiong (2021), the process of resetting learning objectives and implementing a communicative pedagogy was facilitated by using critical reflections as a tool for examining their prior experiences teaching language, including examining negative experiences of learning impractical grammatical rules and successful experiences of learning first and foreign language in natural settings. Further, Bao (2019) indicated CSL teachers' stated beliefs about corrective feedback predicted the amount of time spent providing such feedback. While theory and research provide support for the importance of teachers' beliefs in the decisions they make and the actions they take, we need to examine this linkage in a broader array of settings if we are to understand these connections (Ashton, 2014; Bao, 2019; Fives & Buehl, 2012; Peng & Xiong, 2021; Shulman, 1991). This study examined such connections in a very specific context: native Chinese teachers' selection and use of textbooks to teach Chinese to nonnative speakers.

Traditional Chinese language education emphasizes the accumulation of knowledge and values the mastery of vocabulary and grammar through studying repeatedly, diligently, and persistently (Li, 2002; Yue, 2017). The Chinese learning model views learning as a lifelong process of "striving to improve moral character" (Li, 2002). Lots of ancient Chinese stories/poem are used to encourage young learners to study "hard" for a bright future, such as "With persistence, an iron pestle can be ground down to a needle (只要功夫深, 铁杵磨成针)" and "Without the continuous bitter cold, there can be no fragrant plum blossom (未经一番寒彻骨, 怎得梅花扑鼻香)". The ethics of "filial piety (孝道)/devotion to family" and "the five cardinal relationships (五伦)/relationship-defined obligations (人伦)" teach Chinese children to "respect/obey" their leader/ruler (son of heaven), parents, teachers, and elders (Feng, 2009; National Geographic Society, 2020).

As native CFL teachers are educated in Chinese society, their experience and expectations in teaching and learning may not be the same as their foreign students (Hu & Tian, 2012). For example, Yue (2017) reported native CFL teachers in the U.S. faced challenges in classroom management: the Chinese lecture-oriented approach did not provide a good match for education in America. These teachers gradually learned they needed to design active and enjoyable activities to meet the epistemological beliefs about learning that dominate education in the U.S, which values the application of knowledge and development of communicative competence. These findings illustrate why we need to examine native Chinese teachers of CFL/CSL beliefs about ways of knowing and how these beliefs influence their instructional decisions and actions.

It must be noted that the epistemological beliefs Chinese teachers hold are not uniform. In a study by Hsiang et al. (2020), Chinese language teachers in Taiwan slightly agreed that knowledge about writing was held by experts and authorities, whereas Chinese language teachers in a study by Chan and Elliot (2004) slightly disagreed this was the case. In both studies, there was considerable variability in teachers' response. This variability is undoubtedly evident for native CFL/CSL teachers too. The present case study examined the epistemological beliefs about textbook use of two teachers working in the same context.

Despite the importance of textbooks (Oates, 2014; Smart & Jagannathan, 2018), we are aware of only one study examining CFL teachers' beliefs and textbook use. CFL teachers in Yue (2017) reported they had to design their own curriculum and teaching materials because of a lack of CFL curriculum standards; available textbooks were outdated, dry, and irrelevant, and existing textbooks applied an unacceptable approach to teaching students about Chinese culture. Consequently, teachers' beliefs about instruction and appropriate ways of introducing culture influenced their decision about textbooks. The current study expanded research in this area by examining if CSL teachers' beliefs influenced textbook selection and use.

The current study

The current study took place in Macao, a Special Administrative Region of China. Both Chinese and Portuguese are the official languages, while Cantonese and English are widely spoken (Macao Government Tourism Office, 2020). Native Chinese students in Macao can enroll in CSL programs where English is the language of instruction in all subjects except Chinese. They can also enroll in international schools. Each English/international school can choose their instructional language for teaching Chinese as a second language (Cantonese/Mandarin; Hsiang, 2021; Hsiang et al., 2020). Schools in Macao select their own textbooks for instruction. This liberal textbook adoption policy empowers teachers to take responsibility for their curriculum and instructional decisions, and it assumes teachers are prepared to make such selections (Hsiang et al., 2021).

The curriculum standards for teaching CSL in grades 1 to 6 were issued in 2016. Native Chinese students who study CSL in Macao are encouraged to recognize and write traditional Chinese characters, whereas simplified Chinese characters are taught to both native and second language learners in mainland China (Education & Youth Development Bureau, 2016b). Non-native Chinese speakers in Macao learn to recognize and write simplified Chinese characters in CSL classes, but they live in an environment where traditional Chinese characters are written on signs, menus, and advertisements. Being exposed to multiple languages makes teaching CSL in Macao challenging. Moreover, most non-native speakers cannot meet the CSL curriculum standards (Hsiang et al., 2020).

The present study investigated CSL (non-native-level) primary school teachers' beliefs and their practices in textbook selection and use with case study methodology. This case study took place with two primary grade teachers in an international school in Macao. These teachers represent one-third of the teachers in the three

international schools in Macao who taught non-native Chinese learners in grades 1–6.

Our analyses drew on data from interviews, a questionnaire, and content analyses of textbooks and teacher-made materials (Borg, 2003). Teacher-made materials represented adaptations teachers made to textbook lessons. Such an approach was consistent with recommendations to apply empirical, mixed-method, and interactive data collection/interpretation processes to study CSL teachers (Geng, 2017; Gong et al., 2020; Li, 2020).

This study focused on three questions:

(1) How did teachers select and use textbooks?
(2) What were teachers' beliefs about textbook selection and use?
(3) How did teachers adapt selected textbooks?

Methods

Instructional setting

This case study occurred with two primary grade teachers (grades 1 to 5) who taught non-native Chinese learners in a private international school (referred to as the School) located in Macao, China. English was the main instructional language in the School. All students were required to study Mandarin Chinese as a second language, which was split into two streams. The advanced stream was suited for "native-level instruction", the other stream supported learning by non-native Chinese speakers. The School administered the Cambridge IGCSE and A-Level Examinations under the Cambridge Assessment. A two-year curriculum is offered to students in Form 5 and Form 6, allowing them to earn an International Baccalaureate Diploma which includes "Chinese AB initio" for non-native Chinese learners. Teachers of both streams developed their curriculum based on textbooks, students' needs and interests, school regulations, and the IB curriculum framework, but only the native speaker level primary program could follow the curriculum standards (second language) issued by the Macao Education and Youth Development Bureau (2016b).

CSL class size of the two teachers (non-native speaker level) ranged from 3 to 10. The classes met every day (6–7 classes weekly, 30–45 min per class). In the two teachers' classes, Mandarin Chinese was usually students' third or even fourth language. Simplified Chinese characters were taught and written. CSL students used Hanyu Pinyin to pronounce Chinese characters.

Two textbooks series were used in the teachers' non-native speaker level CSL classrooms. The *Chinese Paradise* series (textbook and workbook 1 and 2) (Liu et al., 2020) was used with first grade students and *Chinese Made Easy for Kids* series (textbook, workbook, and worksheets 1–4) (Ma, 2020) for grades 2–5 students.

On a daily basis non-native speaker level CSL students used targeted words to make sentences, read aloud, express ideas orally, and learn through games. Chinese

character/word recognition and handwriting, text reading, and learning in groups were assigned at least several times a week. Extracurricular book reading was assigned monthly. Story writing was assigned at least every two months. Narrative writing, opinion writing, and expository writing were each assigned at least several times a year. Only primary grade students were invited to recite classical Chinese poems, but just several times a year. Teachers never asked students to write diaries or poems.

Participating teachers

Both non-native speaker level CSL teachers in the primary program in the School participated in this study. One was female (Ms. Li) and the other male (Mr. Chen). These are not their real names. Both teachers were native Chinese speakers who had completed their undergraduate education majoring in Chinese Language and Literature in mainland China. Ms. Li had 22 years of teaching experience, and Mr. Chen had six years of experience in teaching Chinese in primary schools in mainland China. Ms. Li has a certification to teach primary students. Mr. Chen was certified to teach primary and secondary students. Both teachers had taught CFL in primary schools outside of China for two years. Collectively, their experience teaching CSL and CFL in primary education ranged from 4 to 5 years. They frequently shared their teaching experience with each other and regularly drew support from each another.

The relationships between the participants and researcher

The interviews were conducted by the first author. As the participants had actively contributed to CSL teacher training organized by the interviewer, a careful, respectful, empathetic, and honest relationship had developed between the interviewees and interviewer. This enabled the interviewer to have sensitivity and to authentically capture the viewpoints of participants which enhanced the validity and credibility of this study (Corbin & Strauss, 2008).

Data collection

This study received ethical approval before data collection began. A grounded theory approach was employed for gathering and analyzing data to develop empirical knowledge (Corbin & Strauss, 2008). The two teachers received a semi-structured interview outline, a questionnaire, and a participant consent form in which the research purposes and procedures, the methods of data collection, and the ethics underlying the study were presented.

Interviews

Three group interviews with the two teachers were conducted at the School: an initial interview, and two subsequent interviews, with one before and one after textbook and teacher-made material content analysis (129, 107, and 30 min, respectively).

Several individual interviews were conducted through social media. Questions covered: teachers' background experience in teacher training and teaching CSL/CFL; teachers' perceptions of their preparation, current teaching, and student learning; teachers' practices in textbook selection and use (including the textbook adaptation strategies adopted); and teachers' reflections on decisions about textbook selection and use and challenges encountered. Teachers were provided with questions in advance, and they wrote responses to these questions prior to the interview. They used their written responses to help them respond to questions when interviewed. Interviews were recorded and typed.

Questionnaires

Teachers also completed a questionnaire designed to collect data on background and general CSL practices. This helped us avoid unnecessarily repeating the same questions during interviews, but also provided one source for triangulation for some findings. Items were adopted from an instrument previously used to survey primary grade teachers' writing practices (Hsiang et al., 2020), but were modified to focus more broadly on TSCL/TCFL.

Background information This included demographic information (gender, highest educational level, certification for teaching in primary programs, and number of years spent teaching Chinese language arts to native and non-native speakers in primary schools), teachers' beliefs about the adequacy of their pre-service, in-service, and personal preparation to teach CSL/CFL and textbook selection and use (none, minimal, adequate, and extensive), information about students (Chinese proficiency in word recognition, reading, communication, and writing and Chinese cultural understanding), and general information about teaching CSL (grade taught and class size).

Teaching CSL practices This included frequency of classes, length of class, necessity of homework correction, writing system taught (simplified/traditional Chinese characters), number of Chinese characters taught, factors shaping the CSL curriculum, types of materials used, types of activities assigned (e.g., Pinyin/word recognition and handwriting, text reading, extracurricular reading, story writing, informative writing, opinion writing, and speaking, and so forth, using a seven point Likert-type scale from never to daily), and the words which were most often spoken to encourage students in learning CSL.

Other types of data

Three other types of data were also collected. One, regulations for teaching CSL were extracted from the School websites. Second, lessons from the two textbook series (6 student textbooks and 6 workbooks) adopted for teaching CSL underwent content analyses (i.e., Lessons One and Nine were selected from the first grade book one and Lesson Four was selected from the first grade book two, as well as Lessons One, Nine, and Thirteen were selected from each grade 2 to 5 textbook). Consequently, 15 of 88 lessons were examined in the two series (Liu et al., 2020; Ma, 2020). Third, content analyses of four lessons of teacher-made materials

(PowerPoint slides, activities, and worksheets) were conducted. These materials allowed us to examine how textbook lessons were adapted. Teacher material were developed for lessons in first grade (Lesson 4 in first grade book 2), second grade (Lesson 13), fourth grade (Lesson 9 in third grade book), and fifth grade (Lesson 1). The fifteen textbook lessons and four lessons of teacher-made materials were randomly selected from all lessons.

Data coding and analysis

In order to illustrate participants' actions in textbook selection and use, content analysis was adopted to examine what learning activities were assigned in the selected fifteen textbook lessons/workbooks and the four lessons of teacher-made materials. An inductive approach was applied for coding (Hsiang et al., 2021). All of the activities identified were listed, and then categories were created to capture the basic intent/learning objective(s) of these activities. We calculated the number of unique categories for each learning activity in a lesson. If a category was offered more than once in a learning activity it was scored as a single instance. When a learning activity was presented in both teacher–made PowerPoint slides and corresponding worksheets, it was identified as a single activity. One coder scored each of the 15 lessons from student textbooks/workbooks, the second coder scored one third of these (randomly selected). Reliability for learning activities in student textbooks/workbooks was 95%. One coder scored all of the teacher-made materials, the second coder scored half of these. Reliability was 96%. Each disagreement was discussed and resolved.

The interview transcripts, the School websites, the results of material analysis, and teachers' replies to the questionnaire were analyzed following the interactive process of generating, developing, and verifying concepts (Corbin & Strauss, 2008). Strategies for continually asking questions and making comparisons were adopted. During the process of beginning coding, microanalysis was used to break apart data and to define concepts to stand for ideas presented in raw data. When a concept was coded under a code it varied the dimensions/properties of that code. During the process of axial coding, concepts/categories were related to each other. During the process of integration, categories were linked around a core category to obtain a comprehensive explanation. Memo/visual diagrams written for different purposes in different analytic sessions supported the research progression (Corbin & Strauss, 2008). When new codes emerged during later analytic sessions, previous transcripts were reviewed and coded again (Cronin, 2019). The results were sent to the two teachers to obtain feedback as well as to follow ethical practice and contribute to credibility of the findings (Cronin, 2019).

Results

Textbook selection

During the interview, Mr. Chen and Ms. Li indicated that whenever there is a need to change textbook series, the following procedures are applied. An application to make a change is submitted. Appropriate textbook series are collected for examination. The strengths and weaknesses of the series are discussed, and a vote is held to determine which series to use.

While Ms. Li and Mr. Chen indicated that the textbooks they currently used to teach CSL (*Chinese Paradise* [grade 1] and *Chinese Made Easy for Kids* [grades 2 to 5]) were not initially selected by themselves, they had decided to continue using these textbooks for the following reasons: they were at the appropriate level of difficulty for their students, the topics in the textbooks could easily be expanded for the purpose of instruction, the curriculum presented in the textbooks aligned well across grades, and they were unable to locate better textbook series for their classes.

The interview responses of the two teachers revealed that their decision to select and continue to use the same two series was influenced by a set of interrelated beliefs. Collectively, Mr. Chen and Ms. Li identified *standards for a good textbook series* that influenced their textbook selection decisions. They indicated that an ideal CSL textbook series (for young non-native speakers) should exhibit the following 10 criteria: (1) a topic is clearly presented in each lesson; (2) each lesson focuses on no more than two sentence structures; (3) sentence patterns and dialogues introduced should be commonly applicable; (4) the content in the textbooks should meet the needs of students with different abilities and match the students' level of maturity; (5) each topic includes activities for practicing listening, speaking, reading, and writing skills (hereafter as the four skills); (6) textbook design and layout focuses students' attention and highlights target topics; (7) the content presented stimulates students' motivation, widens their vision, and encourages interaction; (8) extra readings and lines of enquires are included; (9) the content allows students to meet local curriculum standards; and (10) abundant supplementary resources are provided.

Ms. Li and Mr. Chin did not view the textbooks they selected as the sole source of instructional materials for teaching CSL. They both indicated they devoted considerable time to preparing CSL lessons, but they indicated this preparation was connected to the quality of the textbooks selected. The quality of lesson preparation depended on the resources publishers provided in textbooks that supported quality teaching and learning.

> Now it depends on how much time and effort a teacher would like to devote on lesson preparation. Without support from the publishers and when a teacher only has five minutes to prepare a lesson, the quality of preparation suffers. (Ms. Li)

Beliefs influencing textbook selection and use

Mr. Chen and Ms. Li based their decision to continue using the two textbook series by applying the 10 selection criteria specified above. Selection and use of these textbooks series, including instructional adaptations evident in the teacher-made materials (see Textbook Adaptations), were influenced by the following set of beliefs.

Curriculum objectives and textbooks

Ms. Li and Mr. Chen indicated in interviews that the objectives of a CSL curriculum were interpersonal communication, practical usage (i.e., to remember sentence patterns, recognize words, and know how to use them), and preparation for the International Baccalaureate exam. The word-centered approach was used in both textbooks and teacher-made materials analyzed. Chinese Culture was introduced by the selected textbook series or by teachers through presenting pictures/videos or Chinese words for students to recognize or discuss. Ms. Li mentioned twice that a good CSL curriculum should prepare children for their future 20 years of social life, while Mr. Chen stated that "Education is life. Students should enjoy the happiness of learning in this moment." The Chinese culture introduced in the textbook series represented the argument of Ms. Li: "The textbooks introduce food, cities, holidays, and great inventions of mainland China. The editors assumed that foreigners were learning Chinese language for their future development in mainland China instead of considering Macao young learners' needs." Both teachers adapted textbook instruction by adding local pictures or locations to fit students' daily life (see Table 2, word recognition and learning in a real-life context [word/picture]).

A concern raised and related to textbook use was that the two teachers had not received training on the International Baccalaureate curriculum used by their school. Both teachers noted they had only been teaching in the School for two to three years. Mr. Chen and Ms. Li stated they would not fully understand the objectives of the International Baccalaureate curriculum until they finished such preparation and had experience teaching the International Baccalaureate Diploma Program. This was even more challenging for Ms. Li because she only had certification teaching primary students. "We use the textbook series, but we don't know the end of students' CSL learning in high school. This is the difficulty we face when we only teach the primary program…It takes time for us to increase our knowledge and experience. We also need the support of School's human resources.

Beliefs about preparation for teaching CSL and textbooks

In interviews and on the questionnaire, Ms. Li and Mr. Chen indicated they had minimal pre-service, in-service, and personal preparation for teaching CSL/CFL or in textbook selection and use. The teachers finished their postgraduate teacher education programs while they were teaching. They had only received a week of pre-service preparation for teaching Chinese Indonesian students in Indonesia. Although they had received in-service training on how to use textbooks to teach Chinese native speaking students in mainland China, they never received training for how to

select or use CSL/CFL textbooks. They acquired knowledge of teaching CSL and textbook selection/use by consulting books and websites on their own. Mr. Chen and Ms. Li also reported there was no CSL curriculum committee in their school, no teachers led studies on teaching CSL, and no one visited their school to introduce CSL textbooks.

Mr. Chen reported CSL/CFL teacher training should include preparation on how to select/compare textbook series, how to use textbooks to teach, and the rationale for textbook development. Both teachers expected that the School should support teacher research and build a cooperative and academic atmosphere as a basis for teachers' professional development.

Epistemological beliefs about approaches to teaching CSL and textbooks

Based on the interviews, it was clear an explicit instruction orientation was adopted by Mr. Chen and Ms. Li for teaching the four skills. Teachers prepared 117 to 168 PowerPoint slides for each lesson (including slides for implementing a classroom management strategy). Ms. Li noted: "A qualified teacher should have specific objectives and control of the class. Every activity in class should proceed based on designed objectives. When an incident happens, although some adaptations apply, you still need to go back to the objectives designed previously. Otherwise, time is wasted." She shared a specific example: "When two students had a conversation in Portuguese in my class, I first asked the students to teach me how to speak the Portuguese word, and then asked them to translate the word into English. I further introduced the corresponding Chinese word, and told the students to focus on the activity designed. Mr. Chen also stated: "Students' language level cannot allow them to have free learning."

Epistemological beliefs about knowing/development and textbooks

Ms. Li and Mr. Chen each held conflicting views about the authority of textbook series. During interviews, they indicated trusting the selected textbooks, publishers, and editors, because "The contents (Chinese words and sentence patterns) in the textbook series must be developed to prepare (CSL/CFL) students for the IB [International Baccalaureate] exams or for other Chinese proficiency tests (Ms. Li)." Both teachers developed their CSL curriculum based on the contents of the selected textbook series. They never calculated how many characters or words were taught to students at each grade in the textbooks. However, both teachers indicated some exercises/activities presented in the selected textbook series for the four skills practice were not appropriate for foreign students because too many mechanical exercises were included. Mr. Chen expressed: "The styles of lessons/topics organization and exercise arrangement are very different." While Mr. Chen and Ms. Li placed trust in the knowledge of textbook developers, they also recognized that the authors of the textbook series were not infallible.

Ms. Li and Mr. Chen both believed that knowledge and skills could be gained from experience. They applied to teach the same grades for at least two years to comprehensively understand students' needs and the selected textbooks they used.

Teachers also arranged games or real-life context activities for CSL students to strengthen the four skills.

Mr. Chen and Ms. Li argued that effort, willpower, persistence, and interest were the essentials to being successful in learning CSL. However, persistence was the most important. "When learning a language one definitely has to stand an uninteresting process. Many people lack persistence," said Mr. Chen. Ms. Li also expressed some of the difficulties students encountered: "When students weren't interested in learning Mandarin, it was impossible to talk about persistence; even if students were interested, half of the students wouldn't keep practicing until mastering the skill."

On the questionnaire, the two teachers indicted the most common statement they used to encourage students was: "You can do it!" Teachers encouraged students to respond or try when learning without worrying if the answer was correct or not, be more effortful, and believe they were able to use Mandarin.

Students' abilities and textbooks

On the questionnaire, Ms. Li and Mr. Chen reported that their students' word recognition and handwriting performance was average, but their sentence/paragraph writing was below average. Both teachers indicated students' speaking was better than their reading and culture learning, although Ms. Li gave a more positive evaluation to her students in grades 1 to 4. Both teachers' comments during the interview corresponded to their answers on the questionnaires. Students were good at reading aloud textbook texts, but once a word was changed they experienced difficulties. Students' listening, extracurricular book reading and writing abilities were rated as low:

> Primary school CSL students' character reading amount cannot reach the requirement of the Macao CSL curriculum standards (i.e., three hundred thousand characters). Most of the students don't read Chinese books unless the reading is assigned by their teachers. (Mr. Chen).

In the interview, Mr. Chen and Ms. Li noticed that differences existed between students within and across classes. For example, in a third grade class, the best student's level was much higher than other students, while one student's word recognition level was much lower than other students. Both teachers indicated they adapted textbook exercises based on students' capabilities. For example, while there were many Pinyin exercises presented in the selected textbooks, they did not frequently ask students to read aloud multi-syllabic Pinyin with tones because it was too difficult for them. The two teachers indicated Pinyin is only a tool for leaning Mandarin, and Ms. Li never assigned Pinyin handwriting to grades 1–2 students.

Students' motivation, parental support, teachers' expectations, and textbooks

Ms. Li and Mr. Chen emphasized that students' motivation and willingness influenced what they were able to teach and what learning objectives were met when using textbooks. Additionally, they viewed parental support as important. They noted that when a student was unable or not motivated to learn Chinese language

and parents did not care if their child learned this language, teachers were unable to do much because the School told them not to bother parents about this. Additionally, Mandarin was only used in the classroom by the CSL students because they never spoke Mandarin at home. This influenced teachers' instruction and use of textbooks, as their enthusiasm suffered without students' positive feedback.

> Most of the students have no self-motivation to study Mandarin. Among our students, only one or two really like it. What we can do is to try our best to make students like our classes. As long as they say they like my classes, I am touched! (Ms. Li)
> Even though students fail in the tests or forget what they have leaned, it is OK. You just have to smile and reteach again. As long as students say they like Chinese classes, it is worth the effort. The bar (my expectations) has to be lowered to the bottom line. I have to find the flowers from the dust! (Ms. Li)

In the interview, the two teachers indicated parents may be one of the keys for enhancing the efforts of children and teachers. Ms. Li shared her experience:

> I taught a sister and her brother. Their parents are both foreigners. The parents kept asking me to assign more tasks to push their children. I accepted their request, even though I told them their children may not be willing to do so. Sometimes I assigned an extra task to their children such as asking them to read a story for me after class, or suggested them to do a more challenging task (we assigned suitable difficulty level for each student). When their children asked why they have to do it, I told them because you can do it (believe in yourself).

The teachers further indicated students' low motivation also made classroom management and the use of textbooks a challenge.

> For some CSL students, Chinese language class is not a class; they rest in class. Students think it is the time for them to chat. Managing the class takes great effort. Usually, during a 45-minute class, I spend 10 to 15 minutes on classroom management (Mr. Chen).

Teacher efficacy and textbooks

In interviews, Mr. Chen and Ms. Li reported they viewed whether they were capable CSL teachers from three different perspectives. These comparisons yielded different self-assessments.

One comparison involved examining students' attitudes toward CSL before and after instruction. Because students indicated they did not like CSL classes at the start of instruction, but they now they liked them, teachers judged themselves as capable teachers.

A second comparison focused on self-reviewing the adequacy of their instructional practices, including the use of textbooks. Ms. Li and Mr. Chen reported they were not very satisfied with the instructional practices they applied in their CSL

classes. They believed there was room for improvement in their instruction, lowering estimates of their efficacy.

A third comparison involved comparing their own CSL classes with other CSL classes. Teachers indicated that instruction and textbook use in each class had its own characteristics and limitations. Both teachers were unsure which criteria should be used to evaluate whether they were capable teachers, providing a degree of uncertainty in their efficacy to teach CSL.

Attitude towards teaching CSL and textbooks

During interviews, Ms. Li and Mr. Chen indicted they sometimes liked teaching CSL. When students provided positive feedback (e.g., I like the class), they were positive about this teaching experience. In contrast, when students or parents provided negative feedback (e.g., I will not take the Chinese AB exam, so I don't need to learn Chinese), both teachers indicated this made it difficult for them to feel positive about teaching CSL, including the use of textbooks.

Mr. Chen and Ms. Li further indicated that some students wished they could select a different language as a second language. For example, Macao born Portuguese students preferred to study Portuguese instead of Mandarin. However, these students had no choice in which language they learned as a second language.

Both teachers realized that students' ethnicity and motivation influenced teaching and learning. However, they agreed it was important to stick to their duties as a teacher, and make learning Mandarin as enjoyable as possible. This is reflected in a conversation between Ms. Li and Mr. Chen during an interview:

> Mr. Chen: Teaching cannot just be wishful thinking on the teacher's part (without considering students' feedback).
> Ms. Li: I agree!
> Mr. Chen: During the instructional processes, you would realize that there were happiness as well as pain and loss.
> Ms. Li: A lot of loss!
> Mr. Chen: And then you learn to stick to a teacher's duties. This is the attitude which a professional CSL teacher should have.
> Ms. Li: I deeply agree! We felt proud and joyful when we taught Chinese culture and Mandarin to Chinese-Indonesian students in Indonesia, because the elders expected their children and us to do our best. But here, children have no intrinsic motivation. As long as I can make my students like my class, I am very happy!

When discussing CSL learning and the use of textbooks, Mr. Chen and Ms. Li also commented on differences between teaching Chinese to native Chinese speaking students and teaching Chinese to students learning it as a second language. They also commented on differences in teaching ethnic and non-ethnic Chinese students.

> For Chinese children living in mainland China, Chinese language is life itself. Your knowledge, culture, and subject studies are all influenced by your Chi-

nese language ability… (I remember) my students liked to recite (classical literature works) with emotion. When they could quote what they had recited in their speaking and writing, they felt a sense of accomplishment. Children enjoyed accumulating (classical literature works; Ms. Li).

"I feel that commonalities exist between local Chinese students and Chinese Indonesian students. Chinese Indonesian students were also used to learning Chinese by reciting and dictation. When I told them there was no Chinese language homework, they said: 'No! I want Chinese language homework.' However, for the foreign students we teach now, when I request them to copy a word three times, they say: "It's so boring! I'm too tired! (Ms. Li)."

During the interview, Ms. Li and Mr. Chen further noted that for CSL (non-ethnic Chinese) students, learning Mandarin was for communication instead of literary appreciation. They also noted that for young CSL learners who were not sure why they had to study Mandarin, the teaching of knowledge and skills had to be integrated with interactive games or authentic activities to promote meaningful language use and to draw/maintain students' motivation. In their School, where they believed Chinese language learning was not valued as highly as English
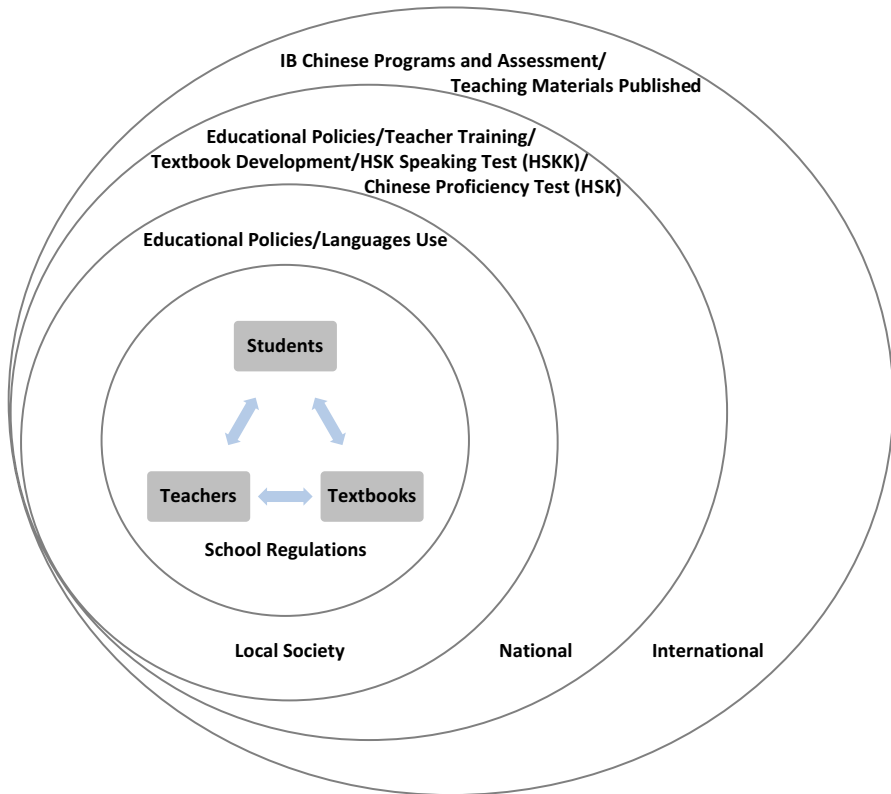

Fig. 1 Teachers' beliefs about CSL textbook selection and use

language learning, teachers needed to learn how to work with teachers/students/ parents who had different cultural backgrounds as well as gradually strive for chances for professional development. In some instances, the need to meet these goals led to adjustments in the use of textbooks. Some instructional strategies in textbooks which were commonly used in teaching native Chinese speakers were reduced (e.g., reading aloud multi-syllabic Pinyin and handwriting characters' radicals), deleted (e.g., reciting and tracing), or never enacted (e.g., writing down a character's Pinyin spelling).

A model of teacher textbook selection and use

Figure 1 presents a model of teachers' beliefs underpinning their textbook selection and use. Through the use of concentric circles, this figure provides a model based on the data collected in this study. The circle in the middle illustrates that decisions teachers make in selecting and using textbook in their classes were based on teachers' beliefs and experiences which interact with the characteristics of their students, textbooks selected or available for selection, and school regulations that are in place. These was illustrated by Ms. Li who indicated that: "Teaching is a process by which there are multiple interactions existing among students, textbook series, and teachers themselves." It was expanded by Mr. Chen, who noted: "Teachers' instructional practices are also influenced by the school attitude/inclination."

This interaction between teachers, students, textbooks, and school regulations were in turn influenced by more macro factors; illustrated in Fig. 1 by the three concentric circles specifying the effects of local (e.g., local educational policies and language use), national (e.g., national educational policies, teacher preparation, textbook development, and national assessments), and international policies (e.g., International Baccalaureate program and exams). As Mr. Chen and LI noted in terms of local policies:

> When you select textbooks, it is necessary to consider local educational policies, such as curriculum standards" (the requirements of basic academic attainments; Mr. Chen).
> When a young student's home language is not Mandarin (such as English or Portuguese which are spoken in Macao), it is not easy to make the student recognize the necessity of learning Mandarin (Ms. Li).

Further, the two teachers noted in interviews that national policies (such as CSL/ CFL teacher training courses, Chinese proficiency tests, and official textbook development and promotion policies) and private publishers' engagement influence not only teachers' professional development and their sense of efficacy, but their skills in selecting and using textbooks. This is further influenced by international considerations, as was the case in this study through the International Baccalaureate Chinese programs and proficiency exams applied in the international school where they taught.

Textbook adaptations

Reasons for textbook adaptations

While Ms. Li and Mr. Chen noted a number of strengths in the selected textbook series (e.g., subject matter knowledge logically arranged, each lesson presented an explicit topic, new vocabulary and sentence structures were repeated in subsequent lessons for reinforcement; and the texts gradually increased in complexity), they were clear that these series had a variety of flaws. To illustrate, they indicated that some learning activities/exercises assigned in each lesson were not suitable for teaching CSL. For instance, some of the activities/exercises that focused on the mechanical aspects of handwriting and word/sentence structure usage were not engaging to students, did not promote meaningful language use, and provided inadequate opportunities for interaction during learning.

> There are too many exercises in the textbooks and workbooks. Foreign children usually cannot finish the exercises, and they have no patience with the exercises (Mr. Chen).
> Those exercises are traditional. Most of them are handwriting or copying (Mr. Chen).
> These exercises include word and character usage, listening, pronunciation, conversations, and sentence reading. They are (mechanical) exercises but not (communicative) activities. Even some of the games are (mechanical) exercises (Ms. Li).
> It is very difficult for them (CFL students) to recognize radicals of Chinese characters. They don't understand why they have to memorize the radicals, and they cannot memorize them…even after repeated practice through reviewing the characters which share the same radical, students still cannot see the connection between the radical and the characters. Students could remember it in class, but they forgot it later (Ms. Li).

Table 1 Ten most frequent learning activities in textbooks and workbooks

	Grade	1	2	3	4	5	Total	%
1	Word recognition (with Pinyin)	17	32	47	50	37	183	15.26
2	Sentence reading (grammar)	7	10	24	24	19	84	7.01
3	Sentence reading (with Pinyin)	7	8	21	20	16	72	6.01
4	Character recognition (with Pinyin)	4	12	14	23	16	69	5.75
5	Listening	16	12	10	9	10	57	4.75
6	Character handwriting (structure)	3	7	12	15	17	54	4.50
7	Word recognition (part of speech)	2	8	12	16	7	45	3.75
8	Character handwriting (stroke forms & sequence)	8	9	11	11	6	45	3.75
9	Drawing to answer questions	2	12	7	11	10	42	3.50
10	Conversation based on a picture/sentence	7	6	12	8	6	39	3.25

The content analyses of textbooks/workbooks were consistent with teachers' concerns voiced during interviews about the lack of activities focused on meaningful language use. Our inductive analysis of learning activities in textbooks and workbooks resulted in 33 categories, accounting for 91% of the 1199 learning activities examined (9% of activities were coded as other; see Table 1 for the 10 most common activities)). Learning activities for language communication accounted for 20% of all activities and included in order: listening activities (4.75%), drawing to answer question (3.5%), conversation based on a picture/sentence (3.25%), writing characters/words to answer questions (2.84%), discussion based on topic (1.67%), discussion based on picture/sentence sequence (1.08%), reporting based on a topic (0.92%), naming a word based on single picture (0.92%), and translating word/radicals to written English (0.75%). Some of these activities did not have a strong communicative purpose as noted by the two teachers (e.g., discussion based on picture/sentence sequence, reporting on a topic, naming a word based on single picture, and translating word/radicals to written English).

Most of the learning activities focused on reading (55%), handwriting (15%) or games (i.e., origami, passing the message, and paper cutting; 1%). The 16 reading activities in order were: oral word recognition of multi-character words (with Pinyin support; 15.26%), grammar-focused sentence reading (7.01%), sentence reading (with Pinyin support; 6.01%), single character recognition (with Pinyin support; 5.75%), word recognition (part of speech; 3.75%), character recognition (with translation; 2.75%), text reading (with Pinyin; 2.59%), word recognition with pictures (2.42%), word recognition (no support; 2.25%), word recognition (with translation; 1.92%), character recognition (with pictures; 1.33%), reading aloud Pinyin spelling (syllables; 1.00%), character recognition (no support; 0.92%), character recognition (radicals; 0.83%), reading aloud multi-syllabic Pinyin and specifying meaning (0.75%), and dialogic reading (with Pinyin; 0.75%). The seven handwriting activities were in order: visual model of character formation for handwriting (the structures of components; 4.50%), handwriting tracing activity providing a visual model of a character showing stroke forms and sequence (3.75%), copying characters (2.59%), tracing characters (sequence; 1.83%), handwriting the radical of each character (1%), character writing from memory in context (0.75%), and character handwriting (with Pinyin; 0.75%). Many of these activities involved traditional and rote learning activities (a table with all activities and definitions is available from the first author).

During interviews, Mr. Chen and Ms. Li indicated that concerns about specific aspects of the two series resulted in them spending "a lot" of time on preparing lessons and making adaptations. They cited six reasons for why this was necessary. One, this included the lack of communicative activities and supplementary materials (i.e., creative teaching methods, online resources, and standard and vivid audio demonstration) in textbook lessons. Two, teachers had to adapt textbook exercises based on students' capabilities. Three, while specific content included in textbooks (e.g., dialogues and exercises) provided a good match for students' level of fluency, this content did not always match students' level of maturity. Four, children were not self-motivated to study Chinese language because it was compulsory. For example,

Table 2 Ten most frequent learning activities in teacher-made materials

	Lesson	P1-2 L4	P2 L13	P3 L9	P5 L1	Total	%
1	Word recognition	63	68	52	33	216	16.02
2	Sentence reading (grammar)	23	36	38	25	122	9.05
3	Word recognition (with Pinyin)	22	33	26	40	121	8.98
4	Word recognition (with translation)	38	11	10	15	74	5.49
5	Conversation based on a picture/sentence	16	8	19	17	60	4.45
6	Word recognition (part of speech)	26	16	10	5	57	4.23
7	Character recognition (with Pinyin)	41	6	0	4	51	3.78
8	Naming a word based on the given English meaning	42	2	2	4	50	3.71
9	Character recognition	10	28	6	2	46	3.41
10	Games	20	15	5	1	41	3.04

P1-2 L4 = First grade, Book 2, Lesson 4; P2 L13 = Second grade Lesson 13

Table 3 Ten most frequent learning activities in corresponding textbooks and workbooks

	Lesson	P1-2 L4	P2 L13	P3 L9	P5 L1	Total	%
1	Word recognition (with Pinyin)	9	17	17	10	53	16.61
2	Sentence reading (grammar)	3	6	8	6	23	7.21
3	Sentence reading (with Pinyin)	4	6	7	5	22	6.90
4	Character recognition (with Pinyin)	2	6	4	5	17	5.33
5	Listening	5	4	3	4	16	5.02
6	Word recognition	4	2	2	3	11	3.45
7	Conversation based on a picture/sentence	3	4	2	2	11	3.45
8	Character handwriting (structure)	1	3	3	4	11	3.45
9	Word recognition (part of speech)	2	2	4	1	9	2.82
10	Text reading (with Pinyin)	2	1	3	3	9	2.82

P1-2 L4 = First grade, Book 2, Lesson 4; P2 L13 = Second grade Lesson 13

they were not intrinsically motivated to learn mechanical skills. This resulted in Ms. Li and Mr. Chen using different approaches to teaching such skills. To Illustrate, Mr. Chen hid part of a character and asked students to guess what the character was. Five, the students were not interested in practicing handwriting. Consequently, the teachers had to consider whether or how much handwriting practice should be assigned. Six, time constraints forced the two teachers to make adjustments in what exercises from textbooks were taught. To illustrate, Ms. Li deleted an origami game (making a paper star, see Liu et al., 2020, Book 2, p. 21) because according to her experience each student would need independent help in folding the paper correctly, and she did not have the time to do this.

Types of textbook adaptation strategies teachers applied

During interviews, Mr. Chen and Ms. Li reported they selected supplementary materials to use with CSL students based on assigned topics and students' need to extend/expand on original activities in the textbooks. These materials were collected from online resources and through colleagues' suggestions. Our content analyses of teacher-made material for four lessons identified 1,348 learning activities (Table 2 presents the 10 most common learning activities). Thirty learning activities accounted for 93% of all activities in teacher-made material, with 27 additional activities accounting for the remaining 7%. This was four times the number of learning activities (n = 319) in the corresponding textbooks and workbooks (see Table 3 for the 10 most common learning activities), with 30 activities accounting for 90% of all activities and 23 additional activities accounting for the remaining 10%. When comparing teacher-made material and the corresponding textbook and workbook materials, teachers applied six adaptation strategies: adding, reducing, deleting, restructuring, replacing, and re-ordering. Teachers reported that no rewriting strategies were applied because the sentence structures presented in the textbooks were all simple and correct. Tables with all teacher-made materials learning activities and corresponding textbook/workbook learning activities are available from the first author.

Adding Content analyses of teacher-made and textbook materials revealed that when Ms. Li and Mr. Chen produced their own teaching materials they placed greater emphasis on many of the activities that occurred textbooks at a lesser rate. Fifteen learning activities occurred more frequently (total number of times) in teacher-made materials than textbooks/workbooks, and each accounted for a higher percentage of use when all activities were considered. This included an increase in six meaning focused activities (conversation based on a picture/sentence, learning in a real-life context [using pictures/words], sentence speaking based on given words, naming a word based on the given English meaning, games, and singling). Games and singing provided students with a common real-life situation in which to use skills learned. Nine additional learning activities which occurred more frequently in teacher-made material were split between reading and writing. This included six reading activities (oral word recognition of multi-character word [with Pinyin support], sentence reading [grammar], word recognition [with translation], word recognition [part of speech], word recognition [with pictures], and character recognition [no support]), and three learning activities focused on some aspect of writing (composing words, dictation [one word/sentence], and rearranging word order to write sentences).

Seventeen additional learning activities occurred more frequently (total number of times) in teacher-made materials than textbooks/workbooks, but none of these learning activities accounted for a higher percentage of use when all activities were considered. Seven of these increased learning activities involved reading: word recognition (with Pinyin), character recognition (with Pinyin), sentence reading (with Pinyin), text reading (with Pinyin), radical recognition (with translation), character recognition (radicals), and character recognition (with pictures). Another six focused on meaning: listening, writing to answer questions (characters/words), discussions

based on a picture/sentence, reading comprehension, translating word/radical to written English, and learning in a real-life context (larger units of text). The final four concentrated on learning handwriting: visual model of character formation for handwriting, handwriting tracing activity providing a visual model of a character showing stroke forms and sequence, copying characters, and character writing from memory. The increased use of these 32 learning activities in teacher-made materials versus textbook/workbook materials supports the contention that teachers used the materials they constructed to augment and adapt what was presented in textbooks/workbooks.

In addition to these quantitative differences, learning activities were altered in more subtle ways through additions. This occurred for 13 learning activities: word recognition (part of speech), reading aloud (dialogue/sentence/text), naming a word based on the given picture, learning in a real-life context (word/picture), sentence reading (with translation), teacher demonstration (homework writing), speaking to answer questions based on pictures, translating Chinese words verbally (English), sentence writing based on given words, writing radicals (based on translation), Pinyin syllable handwriting, sentence reading (with pictures), and classroom management strategies (attention signal).

Examples of these more subtle additions how Ms. Li introduced quantifiers to her second grade students when teaching words for fruits (e.g.,一"颗" 西瓜/one watermelon;一"串" 葡萄/one bunch of grapes). These quantifiers were omitted in the corresponding textbook and workbook. When teaching a group of nouns for fast food, Ms. Li showed a picture of "onion rings" to stimulate students to say the Chinese word "洋葱圈" which was not taught in the corresponding textbook or workbook. Real-life context knowledge and activities were expanded to increase learning experience, motivation and effectiveness. When the lesson "Where Have You Been?" was taught to fifth grade students by Mr. Chen, pictures and Chinese words which represented Macao were added in PowerPoint slides for students to recognize. When the lesson "My Room" was taught, Ms. Li took first grade students to visit a home furnishings store with worksheets and tasks to offer a problem-solving context and chances for communication. The word "手机/mobile phone" was added in class when the textbook dialogue presented "What is your home telephone number? My home telephone number is… (See Ma, 2020, Book 2, p. 1)." The two teachers also encouraged students to speak aloud compound sentences. A classroom management strategy was presented in the first PowerPoint slide of a lesson to draw students' attention (students were requested to clap hands with Mr. Chen before the class starts). Ms. Li stated that classroom management phrases (e.g., please sit down, please stay in line, and please raise your hand before speaking) were also spoken in Mandarin daily.

Reducing Fourteen types of learning activities were less frequent in Ms Li's and Mr. Chen's teacher-made materials than their corresponding textbooks/workbooks. Eleven of these activities were reduced in total number as well as percentage of all activities. This was led by a reduction in activities focused on meaning (six activities: discussions based on a topic, drawing to answer questions, writing to answer questions[sentences], reading aloud multi-syllabic Pinyin and telling their meanings, reporting based on a topic, and ancient Chinese inventions/clothes/zodiac

recognition), followed by handwriting (two activities: tracing characters and character handwriting [radicals]) and reading (three activities: character recognition [with translation], reading aloud Pinyin spelling [syllables], and Pinyin recognition [initials/finals]). In addition, three learning activities evidenced a reduction in percentage only, but not total number. This involved dialogue reading (with Pinyin), rearranging word order to speak sentences, and character handwriting (with Pinyin). Teachers reported that some activities were reduced because students were unable or unwilling to do them or because of lack of time.

Deleting In addition to reducing the use of some learning activities in teacher-made materials versus textbooks/workbooks, teachers deleted completely from their teacher made material seven activities included in the published material. This included deleting three handwriting learning activities (tracing Pinyin, tracing radicals, and character handwriting [with pictures]), two reading activities (character recognition [etymology] and text reading [with translation]), one meaning activity (storytelling based on pictures), and one non-language activity (reciting times tables). Further, the two teachers indicated they deleted some learning activities from textbooks/workbooks as they used them when teaching because these activities were too difficult for students. For example, Book 3 (Chinese Made Easy for Kids series, see Ma, 2020) asks students to recite times tables in Chinese (e.g., 一八得八…八八六十四). "Although students felt it was interesting to read aloud a times table in Chinese in the beginning, they thought it wasn't necessary to recite them. I had to abandon the activity." said Mr. Chen. Ms. Li deleted the teaching of character recognition (etymology) because it was taught previously.

Restructuring Mr. Chen and Ms. Li both changed the structuring of some activities presented in the textbook series by using a review-practice with modeling-consolidating procedure as they taught these lessons. In each lesson (on teacher-made PowerPoint slides), students first reviewed what they had learned in the previous lesson through activities. Then, the new knowledge/skills were presented and practiced with modeling, followed by rehearsal and practice through activities or games.

Replacing In some instances, the two teachers replaced a learning activity included in the textbook with another activity of their own choosing. For example, instead of asking fifth grade students to pass a country name in Chinese to other students in a group, Mr. Chen designed several activities (i.e., naming a word based on the given picture, saying the Chinese word in English, and saying the English word in Chinese) to offer students different opportunities to recognize, pronounce, and listen to different country names.

Reordering Mr. Chen indicated he rearranged the order of two lessons in the textbook to better align the topics presented (e.g., vegetables and fruits).

Discussions

Using interviews, questionnaire data, content analyses of textbooks and teacher-made materials, and school regulations for teaching CSL, we examined how two teachers in an international school in Macao selected and used textbooks for TCSL,

how they adapted such instruction through teacher-made materials, and how their beliefs influenced these processes. This is the first study to thoroughly examine the selection, use, and adaptation of textbooks when teaching CSL to primary grade non-native Chinese speakers.

Textbooks: selection, use, and beliefs

Textbooks are a primary resource that teachers use to promote language learning (McDonough et al., 2013; Smart & Jagannathan, 2018). As with other studies examining the use of textbooks for teaching CSL to native- and non-native speakers (Hsiang, 2021; Hua et al., 2021; Ying et al., 2018), textbooks played a central instructional role in the CSL classroom of the two teachers in this case study (although textbooks were not the only materials used).

For our two teachers, Ms. Li and Mr. Chen, they selected the same two textbook series that were previously used in the School the year before. This was a conscious decision, as they noted the two textbooks series they choose had a number of positive attributes (e.g., appropriate difficulty level, good curricular alignment across grades, suitable topics for each lesson), and they were unable to locate better textbook series for CSL and their students. Nevertheless, both teachers found it necessary to make many adaptations in the use of these textbooks, as reflected in the teacher-made material they created (McDonough et al., 2013).

Their decision to select and continue to use these two series was underpinned by a set of interrelated beliefs. This included stated beliefs about the standards of a good textbook (e.g., each lesson includes a clearly presented topic); the content of the textbook met the needs of their students: the textbook should be appealing, motivating, and effective; the textbook met local curriculum standards; and abundant supplementary instructional resources were provided. They further indicated that their selection and use of textbooks depended on the attention a textbook series gave to Chinese culture, students' capabilities and motivations for learning CSL, parental support for the CSL program, the national and international programs and texts students would be administered, their own preparation, efficacy, and attitudes about teaching CSL, as well as their epistemological beliefs about how students come to master Chinese language, how best to teach CSL, and the role of expert knowledge in teaching CSL.

Based on the findings from this study, we constructed a model specifying factors that influence how teachers select and use textbooks. At one level, textbook selection and use is influenced by teachers' beliefs about their students' needs, the quality of the textbook series under consideration, and school and local regulations. These beliefs, in turn, are influenced by teachers' beliefs about their preparation, national educational policies (including national assessments), and how textbooks are developed. In the case of Ms. Li and Mr. Chen, beliefs about the importance of international factors also played a role in textbook selection and use because teachers were teaching CSL in an international school using the International Baccalaureate Diploma program and tests.

This proposed model is consistent with and provides support for the WWC model (Graham, in press). According to the WWC model, teaching and teachers' decisions and actions are simultaneously and interactively shaped by the contexts (classrooms) in which they take place as well as the cognitive resources (including beliefs) teachers' possess. This model also proposed that teachers' decisions and actions in the classroom are influenced by factors operating more broadly, including institutional cultural, societal, political, and historical catalysts. The interviews with Ms. Li and Mr. Chen provided support for the contention that teachers' beliefs about micro- and macro-contextual factors influenced the decisions they made and actions they undertook.

Additional research is needed to replicate our findings as well as expand our investigations into other contexts where Chinese language is taught to native- and non-native speakers. This includes examining textbook selection and use in CSL and CFL classrooms in other schools in the Greater China Region and beyond. By building a more robust data base on how such selection and use occurs, it should be possible to build even more nuanced and accurate models of how teachers make decisions and initiate instructional actions. Future research further needs to directly test the type of model put forward here as well as in future investigations. By necessity, this will involve quantitative studies where the process of textbook selection and use involves many teachers across different contexts.

Textbooks: adaptations and beliefs

While Ms. Li and Mr. Chen were positive about the textbooks series they selected, they viewed them as imperfect. For example, they indicated some of the learning activities in the textbook series were not suitable for TCSL; some lesson topics needed expanding, reduction, or even reordering; there was not enough emphasis on meaningful use of language; and students and teacher interaction during some learning activities was not sufficient. Some of these same concerns have been raised by others examining the adequacy of textbooks, (e.g., Gui & Ji, 2018; Hsiang et al., 2021; Li, 2016; Wang & Luo, 2021; Ying et al., 2018; Yu et al., 2012), although not all of these studies focused specifically on teaching CSL to non-native Chinese speakers in the elementary grades. The concerns of the two participating teachers further suggest that curriculum developers need to take into consideration additional issues when developing textbooks for CSL, including young learners' level of fluency, level of maturity, cultural background, and learning motivation when designing textbook, learning activities.

As a result of such concerns, Mr. Chen and Ms. Li spent a considerable amount of time developing their own instructional materials to accompany textbook lessons. Our analyses of their interview transcripts and the content analyses of textbook lessons and accompanying teacher-made materials revealed that these two teachers can be classified as curriculum-developers and -makers (Nhem, 2020; Shawer, 2010). Consistent with the concept of a curriculum-developer, the two participating teachers made adjustments in textbooks so they could meet the needs of their students. Consistent with the concept of a curriculum-maker, they used their textbooks as

a springboard to create their own teaching materials that supplemented but went beyond the textbooks they were using. This was reflected in the many adjustments the teachers made in the textbook lessons (at least 17 different adjustments) as well as greater emphasis they placed on 32 specific learning activities in their teacher-made materials.

When making adaptations to textbooks materials as reflected through teacher-made lessons, Ms. Li and Mr. Chen applied four specific strategies. This included strategies involving addition, reduction, deletion, and restructuring. For example, teacher-made materials placed more emphasis than the textbook lesson on character recognition, but less emphasis on reading aloud Pinyin spelling. These same general strategies (not the specific adaptations) were applied in CSL and CFL studies conducted in and outside mainland China in primary grades to college (Gui & Ji, 2018; McDonough et al., 2013; Mede & Yalçin, 2019; Yue, 2017).

One issue raised by Mr. Chen and Ms. Li that we would like to highlight is that CSL textbooks are often developed for specific locales such as mainland China. For example, the series *Chinese Paradise* introduced Chinese language and culture through the lens of mainland China. Although international city names (i.e., Hong Kong, Vancouver, New York, London, Paris, and Seoul) were introduced in this series, CSL teachers in other Chinese societies, such as Macao (a Special Administrative Region of China), will need to add local social/cultural information (e.g., food, cities, and locations in Macao, Indonesia, or Singapore) and real-life learning activities to this textbook series if they want to emphasize the local context and culture.

As with textbook selection and use, the adaptations that the participating teachers made were influenced by their beliefs at multiple levels. They indicated they made adaptations because the textbooks they were using did not adequately match their beliefs about learning activities that were meaning-focused, appropriate to students' capabilities and maturity, intrinsically motivating, and efficient and effective. The adaptations they made were further influenced by their beliefs about their preparation, efficacy and attitude towards teaching CSL, epistemological views about CSL learning and teaching, and beliefs about students' capabilities and motivation. Finally, the adaptations they made were influenced by their beliefs about the importance of responding to parental concerns, local educational policies, and national and international considerations (i.e., national exams and the International Baccalaureate assessments).

Additional research is needed to replicate our findings regarding the types of adaptations CSL teachers made as well as the reasons why they made them. The focus of such research needs to expand to include other contexts where teachers are likely to adapt textbooks for CSL and CFL with a variety of different types of learners. It is also important that future research examines the effectiveness of the types of adaptations teachers make to textbooks for CSL and CFL.

Concluding comments: limitations and implications

When interpreting the findings from this study, it is important to keep in mind that this investigation involved only two teachers who were highly motivated; it was conducted in a very specific context; only a proportion of the textbook lessons and teacher-made material were analyzed; it focused only on teaching CSL to non-native Chinese speakers in grades 1 to 5; and it was a case study. Nevertheless, these two teachers represented a sizeable percentage of the grade 1 to 6 teachers in Macao (33%) teaching Chinese as a second/foreign language to non-native Chinese speakers, and we collected a variety of different types of data (interviews, archival materials, questionnaire responses, and content analyses of materials) to draw a vivid portrait of how the participating teachers selected, used, and adapted textbooks for CSL and how their beliefs influenced their decisions and actions.

The findings from this study demonstrated that textbook selection, use, and adaptations are complex and multifaceted processes, as are the beliefs that influence teachers' decisions and actions regarding textbooks (supporting Fives & Buehl's, 2012 review of teacher beliefs). We offer three specific recommendations for using textbooks to teach CSL and CFL (as well as other subject matter) that can be drawn from this investigation. One, textbook developers would be wise to solicit direction and feedback from teaches like Ms. Li and Mr. Chen when designing their materials. These teachers made a host of adaptations to improve the textbooks series they used. The relevance of these adaptations should be considered when designing new textbook series. Both of these teachers also held sophisticated beliefs about what makes a good textbook, and such insight should prove useful to textbook developers.

Two, based on the information collected in this study, it is important that teachers are provided the opportunity to choose which textbooks they use. The two teachers in this study clearly demonstrated they were capable of deciding what materials to use and how to improve them. There is no doubt that many other teachers are equally capable. To help ensure teachers can make good choices when selecting textbooks and other instructional materials, the pre-service and in-service preparation they receive should provide them with opportunities to develop and hone these skills.

Three, given the large number of adaptations that Mr. Chen and Ms. Li made, other teachers should assume that they will need to do the same. Pre-designed instructional materials can be advantageous because they provide guidance and activities for teaching specific subject matter, but they cannot fully anticipate the capabilities and needs of the teachers and students who use them (McDonough et al., 2013; Shulman, 1987). As a result, if teachers are to maximize the effectiveness of textbooks, they will need to adapt them to their particular situations. This becomes especially important when the textbooks teachers use are not developed for CSL and CFL, as was the case for TSCL to native Chinese speakers in Macao (Hsiang, 2021).

Lastly, the journey to becoming a professional primary school CSL/CFL teacher is long and challenging. Teachers need to recognize that cultural and epistemological belief differences may exist between students and teachers (Gong et al., 2021), understand why children study CSL/CFL, know what and how to teach CSL to

young non-native Chinese speakers at this moment as well as what and how to prepare students for the future international Chinese proficiency tests. Teachers not only need in-service training offered by their governments and universities, but also support from their schools (such as the arrangement of teaching schedules and the organization of teacher training and research).

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