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Article

Constructing an Emergency Chinese Curriculum during the Pandemic: A New Zealand Experience

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Abstract
This paper provides details of an emergency Chinese curriculum enacted as a response to the multilevel challenges for a campus-based Chinese language course due to the outbreak of the Covid-19 pandemic. Framed against this background, the study presents and reflects on the factors influencing curriculum decisions during emergency remote teaching. The data reported in this study are based on two ad hoc surveys with students and reflections undertaken between one course director and five teachers in a large-scale beginning Chinese language course in a New Zealand university. Based on students' and teachers' lived experience and perspectives, the study captures the complexities of how the pandemic crisis has reshaped the course in the Western higher education context. The study first discusses the influences from the contextual factors including social, technological, financial and organisational, and then demonstrates how the course experienced unprecedented changes to its curriculum delivery, pedagogy and assessment. Factors influencing students' and teachers' participation in the emergency remote course are also discussed. The paper ends by suggesting using the emergency teaching experience as an opportunity for advancing theory and practice in future Chinese teaching and research after the pandemic.

Keywords
Covid-19, emergency curriculum, online teaching, Chinese language course, higher education

1 Introduction

The case study presented here is situated in the New Zealand higher education context. New Zealand confirmed its first case of Covid-19 on 28 February 2020. Two days later, the new academic year began as scheduled amid fear and increasing racism towards Chinese. With the fast spread of the coronavirus,

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the University of Auckland made a decision, after only three weeks of face-to-face teaching, to suspend all the teaching for one week (23 – 27 March) to give teaching staff time to pivot all courses online. Two days after the teaching free week began, the New Zealand government announced that the country would enter an emergency state, and a full lockdown was enforced on the night of 25 March 2020. Teaching staff barely had time to rush to their offices to retrieve teaching materials before the campus closed. Students scrambled to return home before local travel became restricted. With great anxiety and uncertainty, teaching resumed on 30 March, but this time fully digitally and remotely. In a matter of days, the oldest and largest university Chinese language course in New Zealand went online.

The global outbreak of the coronavirus pandemic has pushed many universities in the world to transform their classroom-based courses into online versions in an astonishingly short period of time. The global crisis has not only fundamentally changed the course delivery mode but also the ways in which language teaching and assessment can occur. It has also posed profound challenges to our current conventional curriculum that has been developed based on campus-based in-person education (Tam & El-Azar, 2020). It is anticipated that online teaching will become the new normal for many educational institutions in the post-pandemic future. The worldwide crisis could become a catalyst for language teachers and universities to navigate more innovative and realistic solutions to cope with a foreseeable digital future, or a long-term opportunity to reform their entire curriculum systems (OECD, 2020).

It is vital to point out that moving a course online does not automatically mean turning a classroom-based course into an online course. Practically, what we are going through is a series of involuntary curriculum reforms, or even revolutions, as a digital coping strategy for the pandemic crisis. In this paper, we define the currently enacted curriculum as "emergency curriculum" to differentiate it from our conventional curriculum before Covid-19, and a potentially full-front online curriculum after the crisis.

The goal for the emergency curriculum was to keep our course functional and feasible for remote online delivery without giving students and teachers too much stress during difficult times. Adapting a regular campus-based curriculum to an emergency online curriculum enabled the teachers to respond swiftly to the challenges imposed on the planning and implementation of the course with a structure of reference, and to ensure that students would be supported to reach the learning objectives under fair conditions. Front-line teachers and course coordinators were in urgent need of an emergency curriculum that could help them make informed decisions for their courses in the crisis context.

Against this background, the study presented here seeks to understand something of the impact of the profound changes on our professional work and life. We use a small case study to analyse the complexity of our current teaching practices. The study provides insights into students' and teachers' lived experience in their first remote online Chinese course, and their perspectives towards future Chinese course design and delivery after the coronavirus is contained. Specifically, the study explores two research questions: (1) What are the major impacts and changes to our curriculum planning and implementation? (2) What can be drawn from teachers' and students' experience to inform our future curriculum reforms?

2 Literature review

The study we present is socially constructed and theory driven. The global crisis has disrupted the centuries-old higher education curricula in many aspects. To understand the unprecedented challenges to university Chinese curricula the study is framed from the perspective of Morrison's (2002) complexity theory in curriculum inquiry. This theoretical perspective aims to capture the multidimensional changes and impacts to curriculum planning and implementation. Complexity theory is a theory of adaptation and development in the interest of survival in a changing environment (Morrison, 2002; 2003).

The changing environment in this study is the pandemic crisis and its aftermath for society, education, the economy and the individual. Complexity theory also reminds us that curriculum design and change are the products of the interaction of disciplinary, organisational and social factors. They are a shared

responsibility amongst academics and supporting staff (Oliver & Hyun, 2011), and require a collective decision from all participant groups rather than from a centrally managed plan. Imposing a teacher-selected or technology-driven curriculum without considering the macro socio-economic environment or resources, or full consultation with students, may lead to disengagement in learning and worsen social inequality.

The teaching of Chinese as a second/foreign/additional language has been a significant site for second language education to embrace digital innovation in technology-mediated language teaching and learning in the twenty-first century (White & Zheng, 2018). Review studies show that the fastest growing number of studies on Chinese language teaching in top English journals has taken place in the journal *Computer-Assisted Language Learning* (Gong, Lyu & Gao, 2018). In private and commercial teaching and tutoring, Chinese language courses have been delivered in a range of online formats for years. YouTube, TikTok, Instagram and other popular social platforms have become a new habitus for motivated learners to learn outside the classroom, and also for educational influencers teaching Chinese or sharing their Chinese learning experiences (Terantino, 2011).

In formal Chinese teaching contexts in schools and universities, research on the roles and pedagogical functions of educational technologies has increased rapidly in the past two decades. For example, research by Zhang (2014) and Kubler (2018) has provided foundational work and guiding principles to develop online courses and distance learning modes for Chinese programmes. Some Chinese language programmes have developed a mature telecollaborative platform (Luo & Yang, 2018). Others are exploring novel ideas to integrate virtual reality to enhance students' immersion experience and speaking skills (Lan, & Liao, 2018; Xie, Chen, & Ryder, 2019).

With this fast technology advancement, research discussion has moved on from a few years ago, when multimedia, ICT and Web 2.0 were foci of attention, to applications, virtual reality and AI today. Supported by these new technologies, revolutionary pedagogical approaches have recently and quickly become popular in Chinese teaching, such as flipped classroom (Wang, An, & Wright, 2018), game-based learning (Hong, et al., 2019), mobile learning (Eubanks, Yeh, & Tseng, 2018) and the like. A more authentic application-based teaching and learning platform, WeChat, has also attracted research attention (Jin, 2018; Qi & Wang, 2018). In the future of 5G, there will be more exciting devices appearing, and there is no doubt China has the capacity to lead the world in integrating technology into language teaching.

Despite this burgeoning of technology, many studies have not been able to answer our current problems when we move our mainstream curriculum online. There exists a huge practical and methodological gap. First, studies carried out in small classes with motivated digital learners are not representative of the diverse student population. Many students are pushed online involuntarily, and are ill-prepared. The urgent pedagogical challenge we face now is how to engage these reluctant students and make sure they do not fall behind. Second, existing online courses and resources are typically not aligned with school or university timetables, and lack the local authenticity and intensiveness to be transformed into mainstream online learning recourses. Furthermore, studies based on advanced technologies may not be relevant to many poorly resourced contexts. Excellent online teaching practices powered by well-resourced infrastructure as well as advanced software do not respond to the reality of the digital divide (Light, 2001) - the unequal access to and knowledge of information technology.

Especially for large-scale language courses that involve hundreds of first-year university students, the practical concern is that students' technology resources and knowledge of online learning will greatly affect their learning outcomes. According to a recent report by Research New Zealand (2015), about 70% of New Zealanders have smartphones and 72% have a laptop/notebook. However, participating in an online course would require more than one computer or one smartphone. Due to the digital divide, for many educational institutions, online teaching has to remain an alternative or supporting approach to mainstream classroom-based teaching.

The present study calls for a socially just curriculum agenda in examining macro-level factors (Shay & Peseta, 2016). The global pandemic crisis will exacerbate neoliberal higher education and will intensify deep social-economic problems. The campus closure has widened the social disparities due to the digital divide. Moving courses online would prevent a group of students from participating on a par with others and further widen the digital divide (Goode, 2010). While Chinese teaching professionals are anxiously looking for new broadcasting platforms or game-based applications that have fancy visualisation effects, they need to bear in mind that not all students are in a favourably technological condition or a supporting family environment. During remote teaching, both teachers and students face significant challenges, such as variable and unstable access to the internet or lack of a camera and printer. Such cases may be rare in China but are major issues in some other countries where IT facilities remain basic. Therefore, this study argues that the emergency curriculum should be a collective decision from all participant groups. Imposing a teacher-selected or technology-driven curriculum without considering the macro socio-economic environment or resources, or full consultation with students may lead to disengagement in learning or worsen the social inequality.

3 Research design

This study adopts a case study methodology. It investigates a "contemporary phenomenon in a real-world context with an intention to retain a holistic perspective" (Yin, 2015, p.55). The study focuses on the experiences of one Chinese language course in a Western university compelled to reconstruct its curriculum to cope with multilevel challenges during the Covid-19 pandemic. The research design is retrospective. The data used in this paper were originally collected for understanding students' perspectives and feedback as the course was being transformed during the Covid-19 pandemic. We drew on this survey data for this paper because we felt that the experience in converting our large Chinese language course online might be a valuable reference point for colleagues who are planning for a digital strategy for their Chinese courses. Therefore, this is a highly time-sensitive project.

3.1 Context and participants

This research focuses on a single case study of one Chinese language course at the University of Auckland. The course *CHINESE 100/100G: Beginning Modern Chinese* is the first course of the Chinese programme and is also the largest Chinese language course among all universities in New Zealand. This course is open to all students, including those who take Chinese as part of a degree and those who want to take Chinese language for a taste as a general education course. The course is delivered with a mixture of plenary lectures on Monday for everyone (one hour per week), and small-class practice from Tuesday to Friday (one hour per day). Normally, the course has around 200 enrolments. Due to the pandemic, the course eventually achieved 163 enrolments. About half the students in the course are first-year students on the university campus. The cohort is divided into eight streams. Each stream has around 20 - 30 students. More details about the student participants will be presented with survey results in Findings.

This course is principally delivered by five Graduate Teaching Assistants (GTAs). When the coronavirus hit China a month before our new academic year began, two of our contracted and experienced GTAs were stranded in China after they visited their family for the Chinese New Year. Within a few weeks, it was necessary to quickly hire new GTAs to take on the teaching obligations of those who could not be here. In the current teaching team, all GTAs are new to this role and none of the teachers have experience in teaching Chinese online.

The principal researcher in this study is the course director of the Chinese language course. It is important that this study came from a non-expert in online teaching and from the non-private language teaching sector. The principal researcher chose to document the unfolding experience of moving

online because, to her knowledge, we represent many educational institutions that have thus far relied on classroom-based and face-to-face teaching. The impacts on our programmes are more profound than programmes already running according to distance or blended models.

3.2 Data collection in crisis contexts

In this study, we used an unconventional strategy for data collection. Data collection in crisis contexts can be highly unstructured and unpredictable (Lin, et al., 2017). For this reason, this study adopted a programmatic approach to collect data in the naturalistic setting. The methods for data collection in this study were determined in consultation with course participants. During the pandemic, important and valuable data can be found in public announcements, electronic communications, and policy enactments. It can also happen during emergency meeting, social media and personal emails exchanges. However, deliberate data collection in crisis contexts can better be done by conducting online surveys and online focus groups with students.

In this study, two in-course surveys were distributed to all 163 students through Google Forms. The first survey (S1) was distributed to students one week before campus closure to understand their preparedness for online study. In total, 82.8% of students responded. As the first course to survey students' perspectives, the survey results were shared internally at a staff meeting. The second survey (S2) was circulated to students after the first major assessment was completed to understand students' feedback on the course adaptation. This time, 28.2% of students responded by Week 6.

The principal researcher also used her first two online office hour times to hold focus-group meetings with students. The first meeting had 16 students. The second had 11 students. Students asked for help and shared their experiences. In Week 4, eight class representatives attended a virtual Student Staff Consultative Meeting. Their feedback was also documented.

Before the semester break, a Zoom 'retreat' was held as a focus-group meeting with the five GTAs. They took turns sharing their first-time online teaching experiences and identified problems and solutions. The retreat meeting was recorded, and their reflected notes were shared with each other after the retreat was finished. Verbal consent was achieved with teacher participants.

It should be noted that, although in this emergency situation, no formal ethics approval was in place for data collection, the data collected from both students and GTAs was regarded primarily as evaluative rather than for research purposes, with the primary goal being to inform the emerging teaching and learning process. However, participants were made aware that the evaluative data may be used to contribute to emerging academic debates that were addressing the immediate crisis. Please note that, due to the retrospective nature of this study, not all survey and reflective data are used in this paper. Also, all data presented are anonymised.

4 Findings and discussion

4.1 The global and social environment

The global coronavirus crisis is the ultimate and overarching external environment for the emergency curriculum. For all the decisions to be made, we need to bear in mind that we were in a pandemic crisis and everyone's life was heavily impacted. Many of us, including teachers and students, might be facing economic precarity, family responsibility to care for children or sick adults, and social and physical isolation. This needed to be kept in mind when designing an online activity or setting up a new assessment.

The inconvenience and stress in life due to the pandemic make teaching and learning from home

more challenging. New Zealand was one of the earliest countries to enter a full lockdown. All shops and businesses were closed. Police patrolled the streets. Since the first day of the semester (2 March), the principal researcher began to receive emails from students informing her that their families and friends had had contact with confirmed Covid-19 cases, which put them immediately into quarantine for 14 days. Teachers were deeply concerned about their safety, because face-to-face and close contacts with students is a requirement in this course to make first-time learners feel that Chinese is not a "distant" language.

In later weeks, some students had to return to their home countries and struggled to study in different time zones. Some other students disappeared from the course for weeks and returned to inform the principal researcher that they were struggling in the challenging circumstances. All research on Covid-19 teaching should fully consider the impact of the pandemic and its aftermath on the economy, society and education. Ignoring the global and social environment will result in more emotional stress for both students and teachers.

4.2 Infrastructure and technology environment

Infrastructure support is the basis for online education (Mayer & Barefield, 2010). The pandemic made us aware that our technological resources were far from enough to effectively support us in teaching and working from home. Worse than this, while teachers across the world were relying on the already variable internet to keep teaching, some people in Western countries were attempting to burn down the 5G tower because they believed in a widespread conspiracy that modern technology was the cause of Covid-19 (Peter, 2020). Without improving the overall technological environment and educating people for a correct attitude towards technology, education in the West could struggle or even fall behind as a whole in the digital age. Overseas Chinese teaching programmes will suffer as well.

Hardware: Compared with China, the digital divide could be one of the major challenges for massive online teaching in overseas universities. The first survey on students' preparedness to study online showed that 12.6% of students did not have their own computer/laptop, 6.7% did not have a smartphone, and 12.6% did not have broadband or WiFi at home. The University later offered a computer loan programme and WiFi tickets. However, online learning requires more than a computer. For example, students might not have a camera installed on their computer, and therefore could not show their faces during oral tests, and those who did not have a printer could not download the test paper to demonstrate their handwriting skills. The unstable internet kept dropping teachers and students from online platforms. The sound transmission delay made students frustrated in understanding their teachers' instructions and pronunciation. Our teachers had to turn off their video camera to ensure their WiFi was strong enough to carry their sounds to students without interruptions.

Software: Technologies used in China for massive remote teaching such as Tencent Meeting and DingTalk do not exist in overseas app stores. The videoconferencing software adopted by Chinese teaching professionals outside Mainland China during the emergency teaching include Zoom, Google Meet, Microsoft Teams, GlobalMeet, Sisco Webex, Jitsi Meet, Skype Meet Now, BigBlueButton, LINE and Facebook Live. The most widely used ones are Zoom, Google Meet and Microsoft Teams. Our university purchased professional licences for staff and students to use Zoom. Including major Zoom functions, the following are the eight most essential features we used for teaching Chinese online:

1. Interactive whiteboard and annotation
2. Share screen (switch from showing face to showing a user's computer display)
3. Breakout rooms for group activities and tests
4. Chat functions (group and individual) for immediate feedback
5. Interactive pen and tablet (writing characters by hand, e.g. Apple Pencil, Wacom)
6. Screen recording for asynchronous teaching and offline review

7. Multi-device compatibility (connecting with smartphones)

8. Report of participation (tracking students' engagement)

Internet safety and privacy: Internet safety is one of the major concerns (Lorenz, 2020). Zoombombers disrupted many classes in the first few weeks of online teaching, including one of ours. In one tutorial, two strangers hacked into our Zoom classes and attempted to chat with our students. In a class of 30 students, it took a while for our teacher to notice the intrusion and remove them from the class. The teaching team soon implemented safety procedures to prevent such cases from happening. When a new technology, digital software or social platform is introduced to students, teachers need to make sure it is safe to use, and students' personal data are not exposed.

4.3 Financial environment

Many Western universities are facing serious liquidity risks as a consequence of the pandemic. Language programmes will be impacted as well. Many universities are discussing coronavirus-outbreak contingencies and strategies to cope with the post-pandemic circumstances, including hire freezes, salary-reduction, furloughs and layoffs (Kelderman, 2020). The number of international students, especially Chinese students, will be significantly reduced due to travel restrictions. Some universities have considered asking staff to take a 20% pay-cut or reduce their work hours each pay period (Gerritsen, 2020).

The financial environment is not promising for teaching innovation and research. Initiatives to improve online teaching may not be supported with research funds. Educational experts may be disappointed to see universities decide not to take up new technologies or expand infrastructure to improve their technological environment. Study abroad programmes, teacher exchange programmes, immersion programmes and research collaborations and projects that involve international travel may not be able to resume in the near future. Mandarin Language Assistant programmes with Chinese universities will be suspended. Furthermore, faculties' discretionary funding for hiring GTAs to teach small classes will be extremely tight. Social activities for Chinese learning such as Mandarin Corner and Chinese festival celebrations may not get funding. More importantly, the overall enrolments could also drop.

4.4 Organisational environment

Universities' responses to emergency teaching are key to guiding course directors in understanding the organisation's principles towards course conversation and assessment. The first few days of online teaching were chaotic, mainly due to a lack of centralised guidelines. The University soon published remote learning resources and announced its principles in three words: Simplicity, Flexibility and Empathy (The University of Auckland, 2020):

1. Simplicity: This is not a time to attempt to fully recreate your teaching in an online mode, nor is it a time to strive for 'best practice' in online delivery. Instead, focus on pragmatic, quick, and simple approaches to online delivery of material. In this context, this means focusing on the simplest possible way to deliver your course: written material over recordings and recordings over live online sessions.

2. Flexibility: The priority is to address your learning outcomes. You are not expected to replicate your face-to-face teaching in an online form. Where possible, distil the main aspects and present them in abbreviated form.

3. Empathy: This is an extraordinary situation and none of the staff or students of the university signed up for it. We should all prioritise treating each other and our students with empathy and understanding. Let your students know what is happening in the course and what avenues of support are available to them.

These three principles were very helpful in guiding us in every single decision we made during the course transformation. This paper strongly recommends teachers to follow or to seek guidelines from their universities because the same message will be sent to all levels of staff within the organisation. Keeping information consistent and transparent are key to reducing anxiety and confusion during the emergency remote teaching.

4.5 Impacts and changes to the curriculum

4.5.1 Delivery

We decided to adopt a hybrid delivery mode that combined both asynchronous and synchronous learning as means to increase the flexibility of the curriculum delivery while maintaining the rigour of this course.

The plenary lecture was adapted to asynchronous learning. Livestreaming with 163 students for a language course could be highly ineffective. It was necessary to rethink the purpose of the lectures. They had two major purposes: "transmitting new knowledge" and "creating a dynamic community of practice" (Hou, 2015). The first function can be easily transferred online by recording. This meant that lectures were recorded with Zoom and saved "to my computer" instead of "to Zoom cloud" because Zoom cloud storage would automatically delete all recordings after 60 days. Students would need to review these recordings as preparation for their final examination (subsequently changed to an end-of-semester test). The recording files (45MB for one-hour recording) were uploaded to the university's media publisher, where recordings can be stored for one year. Students can get access to the course recordings with a private link posted in the Learning Management System *Canvas*. Lectures were recorded one week prior and released online three days before the normal lecture time. Students would have a few days to view the lecture recording before they attended their small-class tutorial for practice. Students needed to study the lecture material first because tutorials are designed for practising with what they learn from the lecture. No explanation of grammar was covered.

Office hour was moved online and took place at the principal researcher's normal lecture time. Students who wanted to clarify their understanding of the recorded lectures or ask anything about the arrangement of the course could attend. Zoom was used to host the office hours. They became a mixture of one-to-many and one-on-one communications. Students preferred to have individual support and some privacy when discussing their learning difficulties. At office hours, the video camera was always kept on to make students feel that the lecturer was there with them. Tutorial teachers also hosted their own office hours. They used this time to give students timely and direct feedback on their homework via Zoom on an individual basis. Students coming to the office hour were mainly getting support with their character handwriting practice.

Small-class practice was shifted to synchronous online learning. It is essential for language courses to maintain adequate interactive practices (Shi & Stickler, 2018). Although the course was moved online, students were still attending an online tutorial for one hour every day from Tuesday to Friday. The course has eight streams running from 9am to 5pm. If students were not able to attend their enrolled stream due to personal reasons, they could attend another one. Students needed a virtual space to learn together at the same time. Because this course has a significant number of first-year students, this digital tutorial can be a desirable social space for them to make friends.

Students found that this hybrid and blended mode delivery had three major advantages: (1) reduces commuting time; (2) offering recordings for review; (3) enables a flexible learning schedule. According to the survey results, 76.1% of students felt the online delivery helped them reduce their time to commute between home and university, and 74.0% found the lecture recordings very helpful for them to review the main content before the tests and exams. The quality of the self-recorded lecture had better acoustic effect than the ones recorded in the lecture halls. Furthermore, 80.4% found the hybrid mode empowered

them to be responsible for their own learning schedule. A comment from a student says:

> It is so niiice! I really enjoy it! Everything is more flexible and less controlled and forceable. I have a strong feeling that students may perform better in this way of learning than others. Performing [in] physical class puts a lot of pressure and stress for a majority of students. Life should not be about control, stress and pressure. Life is a game and we are all here to enjoy it. So, let's be aware of the many other possibilities to make students more comfortable and in more ease and joy. This world needs joy not stress and this Coronavirus situation is a great contribution to consciousness and changes. Not only for the world but for our bodies and this Earth. xiexie nimen.

The increased flexibility of the course delivery has been of particular importance for students when they have been deeply anxious about their academic performance being affected by the new model of learning. The survey results show that 48.9% would prefer to continue the "hybrid mode" after the pandemic. However, 33.3% of students chose "I can't wait to go back to the classroom," whereas 17.8% of students opted "I don't think I'd want to go back to the classroom anymore." We anticipate many students would prefer a more flexible model of course delivery even after the coronavirus has been contained.

4.5.2 Pedagogy

Our classroom teaching is student-centred, communicative and task-based. It emphasises experiential learning and building strong rapport with students through hands-on activities and teamwork in class. During the emergency remote teaching, the curriculum process relied on individual teachers to explore how to maintain student-centred approaches. As teachers in this course shared at our retreat meeting, they have all made significant changes to make sure their online teaching is as engaging as in the classroom. Pedagogical innovations for the emergency curriculum are urgently needed, especially for engaging reluctant learners.

Student engagement is key to motivation, achievement, and a sense of belonging for students in an online course. However, the main shortcomings of distance learning are the lack of communication with teachers and fellow students. Active engagement has been developed through three ways of interactions: (1) teacher to students (one-to-many); (2) teacher to one individual student (one-on-one); and (3) student to student (one-on-one and one-to-many). We have aimed to provide opportunities for different formats of interactions among course participants to maximise their learning. We have also considered how to incorporate student choice in activities and interactions. The emergency curriculum is a shared responsibility among teachers and students, and, we believe, can lead to better learning engagement and course implementation in difficult times.

Equity-minded instruction is a new component we added to the emergency curriculum. We realised that, no matter how well-intended curriculum adaptations are, they cannot reflect or address the diverse needs of students, especially during a crisis situation. The environment requires our teaching to be "low-tech, time-saving and data economical (White, 2006). Due to the limitations of the technology resources and unstable network, we intentionally reduced the use of digital learning tools in our online tutorials.

Although our young teachers are familiar with game-based teaching approaches such as Kahoot and Quizlet, we tried not to overuse them. This was an informed decision based on the survey of students' preparedness to study online. Using these apps during Zoom tutorial may require another device; otherwise, students would have to switch back and forth between their applications, which might cause more technical concerns. We do not want to reinforce the notion that students with better and more digital resources would be rewarded with more learning opportunities in the course. Therefore, our strategy has been to fully unitise one learning platform (Zoom) for synchronous interaction and the Learning Management System (Canvas) for asynchronous learning.

Co-learning community was considered as important to keep the course running smoothly with active participation from both the students and the teachers. The community has been co-constructed by first-time online learners and "novice" teachers. As none of the teacher participants have had experience in teaching Chinese language courses online, we are also needing to learn and grow with the students. We find that it is important that teachers respect and affirm diversity, are aware of misunderstandings that could happen in the online learning environment, and admit our inexperience in organising online activities.

Teachers have found it helpful to create virtual learning places that are as stress-free as possible, where participants feel connected to one another and are able to assist their peers in learning and processing course information. At the beginning of the course, we also asked everyone, both teachers and students, to be patient and help each other with technology problems. By decentralising the authority, students in the course developed higher motivation to participate in curriculum decisions.

4.5.3 Assessment

Assessment is the area where teaching staff were the least prepared. For this elementary level Chinese course, all assessment and course work were designed in a traditional paper-based format. The primary goal for carrying out this mode of assessment is because our curriculum is character-based. Memorisation and handwriting skills are emphasised and deliberately practised with individual tutoring and support.

With the course shifted entirely online, it was impossible to continue this paper-based test in ways that would minimise the risk of cheating. Assessment adaptations were the most challenging work throughout the course conversion across almost all disciplines and required informed decisions as early as possible.

It was necessary to **provide a transparent assessment plan** with all detailed arrangements and information for every graded and ungraded component of the course. For new types of assessment students were not familiar with, we needed to provide a description or a sample of the questions. The first action we took was to record a video message (as opposed to sending a long text announcement) to inform students of the changes to the assessment. The video explained the rationale for reweighting the assessment and the new requirements for each graded test. We found it helpful to record with Zoom with screen share. Students could actually see where to locate the information related to the assessment. After the video message was shared with students on the home page on Canvas, an office hour was held to answer students' enquiries.

It was also important to **reweigh and redesign tests** to make them fit for the emergency online teaching. Four changes were made:

1. Participation was removed from the assessment. For a language course that emphasises competence, students are expected to contribute to the class in a substantive way. However, due to the pandemic situation and lockdown, grading their participation would create unnecessary stress and extra work for teachers.

2. The oral test grade weighting was increased from 15% to 25% to better recognise the efforts students would make to participate in two synchronous online oral tests. This assessment requires students to interact with their peers to demonstrate their conversational skills in small groups.

3. The final exam was reduced from 40% to 20% and adapted to become an "end of semester test". The new test paper replaced all memorisation-based questions with formative task-based language assessment in line with Ke's (2006) study of a Chinese programme in the U.S. Two versions of the test paper were prepared for students: one for those who might opt for typing and one for those who would prefer handwriting. An extra five points would be given to those who completed handwriting papers to encourage students to continue practising by hand at home.

4. The short test, originally an invigilated in-class test, was redesigned to become an online quiz that is auto-graded, and multiple-choice, and used for self-assessment purposes. Effort was made to replace questions that simply recall memory with those that would require higher level cognitive skills. This part of the work required us to think more creatively and be open-minded.

We **removed timed online assessment**. To reduce the level of anxiety and avoid the equity issue caused by unreliable home bandwidth, we disabled the time limit for tests to be taken online. Downloading, printing, scanning and uploading test papers can take a lot of steps, time and effort. To avoid causing more tensions, we would allow a 4-day window of opportunity for short tests, 7 days for a mid-semester test and 12 days for an end-semester test. According to the survey, 89.1% found the most helpful action we took during the emergency teaching has been to allow students to have extended time to complete their high-stakes assessment. The University also reminded teaching staff that "students must have at least a 24-hour window of opportunity in which to start and complete the timed component" (The University of Auckland, 2020). Following this, our grading policy was also adapted from rigorous to lenient. It could also ensure that students who return to homes with unstable internet or a disruptive study environment would not be put at a disadvantage. One student commented:

> The only disadvantage is personally my equipment and internet connection. I have no functioning camera and the internet cuts out a lot due to the location of my house which can be a real downfall for my tests and quizzes.

Similarly, 63.7% of students have been concerned with technical issues during online learning. Three-quarters (74.8%) of students worried that their technical skills and knowledge would affect their grades. We need to remember that online assessment also reflects the privileges students have. Clearly, the equity issues caused by the digital divide permeate all levels of the emergency curriculum.

Academic dishonesty has been an ongoing challenge for online and distance education (Olt, 2002). This was a highly controversial topic among teaching staff during the course conversion. Some lecturers insisted on implementing timed and centralised examinations and installing proctor software to guard against cheating. For a beginning level language course, cheating is just a click away through Google Translate. However, this course rejected the idea of implementing centralised proctored exams. We thought that this idea would not only cause more stress for students but also exacerbate the digital divide. Instead, we put more efforts into redesigning and reinventing our test questions and the format of delivery.

In addition to increasing the cognitive level of the test questions and the components of formative assessment, we also offered reflective opportunities in low-stakes tests. A colleague used anti-OCR (Optical Character Recognition) to convert our PDF test papers into un-editable and un-googleable images to further reduce the cheating possibility. We also included a statement relating to academic integrity on all graded assessment papers. It would seem that the majority of students have complied with the principle of academic integrity. Only a handful of the student have either used more advanced technologies to translate our image-based test paper or asked for help from first language speakers. Furthermore, it is fairly easy to catch cheaters because learners of Chinese do not have the capacity to tell the Chinese register in different spoken and written contexts.

4.5.4 Teaching Chinese characters online

In distance learning research, researchers have been aware of the differences in learning logographic languages and alphabetical languages (White, 2014). In paper-based education, Chinese learning has been regarded as notoriously difficult due to its logographic system of writing (Kan, Owen & Bax, 2018). Teaching Chinese characters online adds another level of difficulties and requires extra technology and digital tools to facilitate.

Teaching Chinese characters online requires new technologies and tools. Our teacher participants

unanimously agreed that this part of teaching and learning required interactive pens (e.g. Apple Pencil) and tablets (e.g. iPad, Wacom). When attending interactive sessions, students had to do handwriting activities by using their "mouse". Students requested their teachers to offer extra Zoom time so that they could demonstrate their character writing process stroke by stroke, and preferably with a camera filming their writing process. We need more effective teaching approaches and technologies to continue implementing the character-based curriculum. We also realise this could lead to a revolutionary curriculum reform for the future of Chinese language education – to adjust the importance of handwriting skills in the Chinese curriculum – in the digital age.

The transition from handwriting to typing enables many pedagogical possibilities and assessment innovation (Rosell-Aguilar & Kan, 2015; Shei & Hsieh, 2012). During the emergency teaching, our students' attitudes towards online character learning has seemed to bifurcate. Half of the students (49.0%) happily discovered the convenience of writing Chinese by typing out the pinyin on a keyword. They felt that online teaching has opened "a whole new world" for learning Chinese and significantly reduced the time they spent on practising characters. Teachers have been able to communicate with students through Zoom Chat directly and give more challenging written tasks or quizzes to students to complete within a limited time. They were also excited to know that the final examination would give them a choice to type and to handwrite. The cognitive burden for remembering the Chinese characters stroke by stroke will no longer trouble them. One student was amazed to see how much Chinese he could "write" in ten minutes. The sense of achievement and enjoyment, as students excitedly expressed, have changed their attitudes towards Chinese learning.

In contrast, 26.1% of students expressed concern about the transition from handwriting to typing. One student felt that typing would seriously compromise his handwriting skills and worried that he "cannot retain anything" after the course is finished. Previous research supports the student's concern that learning the characters by handwriting facilitated their subsequent recognition (Longcamp, et al., 2006). Furthermore, another student's comment is worth attention. She noted that typing makes Chinese learning less authentic. She felt regret about losing the handwriting experience. She chose Chinese because this language has a unique writing system, compared to other alphabet languages.

The study finds that the Chinese as a second language curriculum will need to incorporate digital literacy. In brief, digital literacy is the ability to use typing skills, linguistic knowledge and composition skills to produce text and communicate using digital technology. Student feedback in this course has indicated that this beginning Chinese course will need to reposition the curriculum space allocated for character learning. It is also urgent for us to move beyond the pen-and-paper teaching and systematically introduce and train beginners in how to type and communicate online. Students can use digital devices and their typing skills to actually put their Chinese knowledge to use in real-life communication without delay.

The ability to participate in the dynamic Chinese online community with typing skills is vital in the information-rich digital environment. It is time to have a future-oriented curriculum that emphasises digital literacy, which will significantly enrich students' learning experience when their Chinese knowledge remains limited. Teachers' abilities to use and create digital content in meaningful ways also need to be strengthened. Universities' IT facilities will also need to upgrade to match this forward-looking initiative, or, otherwise, this meaningful curriculum transformation can retain its alternative role as "out of class learning". Lastly, shifting our attention to digital literacy from stroke-by-stroke handwriting ability to typing skills may further unlock the potential for the Chinese language to become a global language, as Gil (2020) has suggested.

4.6 Students

Students' roles in a distance course are significantly different from in the classroom. In online courses, students must be more responsible for their own learning and be more disciplined. There is greater emphasis on the ability to identify one's own learning needs and make plans to achieve learning objectives step by step. In this emergency course, three areas have been identified for future research attention.

Student diversity requires the course to be more inclusive and open-minded. It is important to point out that motivated tech savvy learners do not represent the diversity of the student population. For some students, campus closure and nationwide lockdown have made them more comfortable experimenting with new strategies of language learning and taking part in a digital community of language buddies. For others, studying from home has challenges their preferred learning styles, strategies and personalities.

Students with special needs such as ADHD and dyslexia may suffer more in online studying that requires long hours of desk work and written information to process (Seale, 2013). During online tutorials, some students prefer to keep their audio and video closed. The survey showed that 34.8% felt that synchronous learning made them nervous about exposing too much personal information to teachers and other students. They were participating by "watching" as an audience sitting at the back of auditorium, not as active players on the stage.

Student beliefs about technology and online learning affected the course implementation. A small minority of students (0.6%) expressed their unwillingness and reluctance to shift to online learning because they simply do not see a future in online education. Also, a small minority (4.3%) expressed they have always been very cautious about the interference of technology in human interaction. One student said his family moved to the Far North, the northernmost area of New Zealand, just to avoid the internet impacting on their lives.

From the survey, we understood that not all students are excited about technology-enhanced learning and do not all trust the use of technology for communication. Although it seemed that the majority of the students in this course did not mind installing the WeChat app to their smartphone for typing and chatting with one another, a small group of students held strong ideological concerns over this app. As a result, we cannot use WeChat for group exercises or assessment as our colleagues do in China.

Students' digital learning skills varied greatly. The survey results showed that 38.3% of students felt they were "good at online learning", and 17.0% felt they were "not good at online learning". Also, 21.3% found that they need to learn how to learn, interact and behave in a synchronous course. We need to respect the fact that many students have moved online without preparation and involuntarily. Gilbert (1999), for example, has already emphasised that prior to becoming an online student, the individual must have some basic knowledge of information technology in order to participate in a distance course.

It is wrong to assume that all young students possess digital learning skills that can enable them to survive online learning. Finally, student agency and discipline are the most desirable abilities to ensure a successful learning experience during the remote emergency learning. They need to learn how to exercise their learner agency to become competent online learners by being given simple tasks.

4.7 Teachers

Chinese teachers across the world have been navigating digital solutions to cope with the sudden shift to remote online teaching. In this study, our young teachers, the GTAs, have quickly shifted to digital platforms to carry on the learning activities. They are also enthusiastically exploring new digital pedagogies to better engage students in virtual learning.

We are confident that teachers will embrace the digital switch, and even seek further opportunities to develop online and blended education models. However, they also find engaging in such a

comprehensive curriculum transformation requires enormous efforts, private time and professional commitment to continuous improvement. For teachers who are transitioning from face-to-face to online teaching, it is important to know what is needed, both technologically and pedagogically, to be successful in teaching online (Zhang, 2014).

Technological pedagogical content knowledge (TPACK) will need to be made a compulsory module in Chinese language teacher education programmes and must further develop its theoretical strength outside the well-resourced countries (Chai, 2013). It is a new dimension of teacher knowledge that has emerged in the recent decade to describe the knowledge needed by a teacher for effective pedagogical practice in a technology-enhanced learning environment (Koehler, Mishra, & Cain, 2013).

The remote emergency teaching has pushed teachers to integrate their knowledge of technology, pedagogy and content simultaneously in the online course they teach. Thus, there is an urgent need for sustained enquiry into technology and Chinese language teacher education, materials development and teaching practices. What we need for online language teaching are new sets of skills and approaches (Levy, Wang & Chen, 2009), and these new skills must be based on the reality of the context in every country and every institution. For example, Sun and Mei (2020) investigated the level of preparedness and acceptance for preservice Chinese as a second language teachers to use technology in teaching. The model was based on Chinese teachers in China where the overall technological environment is better off and people's attitudes towards technology are generally more favourable than overseas.

Empathy is noted as another critical teacher knowledge required in the crisis context. Empathy is the capacity to share and understand another's emotion (Ioannidou & Konstantikaki, 2008). As it is a powerful communication skill, empathy will influence one's ability to succeed in coping with environmental demands and pressure in language teaching (Moafian & Ghanizadeh, 2009).

During the crisis teaching, one of the teacher participants noticed that the overall discourse in teacher-student interactions were highly empathetic, including word choice, heart-warming slogans and multimodal symbols used to make students feel warm and close. One student expressed how they felt about the empathy showed by the teachers during the emergency teaching:

> Your transparency and your empathy have been most helpful and reassuring in these times and I can't emphasize enough how grateful and admirative I am!

Integrating empathy, emotional intelligence and positive psychology as new professional knowledge and skills is key to facilitating teachers with a theoretical tool to understand their challenging professional context and their students in difficult situations. Only with this skill can we humanise our online teaching with appropriate language and suitable approaches. In the post-pandemic economy recession, higher education will require front line teaching staff and graduate assistants to be able to demonstrate empathy towards students. The role of empathy in Chinese teaching and teacher education will require more research attention.

Professional identity will need to quickly update to respond to the digital future. The emergency online teaching has caused confusion for teacher identity construction. As Comas-Quinn (2011) noted, teachers will need to figure out whether they are learning to teach online or learning to become an online teacher as an increasing number of courses shifts online. The issue is particularly important for pre-service teachers because these two paths could lead to different career orientations (Drewelow, 2013).

It is also important for front-line teachers to document, reflect on and share their experiences of transition from classroom teaching to distance teaching (Adnan, 2018; Jonker, März & Voogt, 2018; Shelley, Murphy & White, 2013). For Chinese language teachers experiencing emergency teaching, the functionality of the technology used for emergency online teaching activities can affect the roles and engagement in the learning process. Their experience could force them to rethink the nature of the technology tools and their roles in the classroom.

Technology exhaustion is a new problem challenging our teachers. Teachers are under huge pressure

to constantly learn new digital tools for, for example, better visual effects, or to make their digital games more attractive. As White and Zheng (2017) noted, with the trend in distance learning, teachers' pedagogical decisions are often taken over by the fast-developing digital tools. Therefore, before we prescribe a number of digital skills for language teachers, we need to know that teachers are vulnerable stakeholders in this emergency online work commitment. After the first few weeks of experiments with new digital tools, some of our teachers started to feel exhausted and stopped from exploring. In addition to Zoom fatigue, they are suffering from prolonged working hours. Teachers found they are spending far too much time in low-return-on-investment efforts with online teaching. They have provided one-on-one sessions on Zoom outside their teaching hours to help students who could not follow well, and have spent hours answering emails from students. While admirable during a crisis situation, this is not sustainable or healthy for long-term professional development.

5 Final remarks

This study has presented a case of curriculum innovation that sought to analyse and understand the complex factors impacting a university level campus-based Chinese language course during the Covid-19 pandemic. The sudden and massive remote online teaching has forced us to adapt to an emergency curriculum and take initiatives to reconceptualise our Chinese curriculum.

The emergency teaching experience has also served as a catalyst for making profound changes that have long been considered as unnecessary or impossible in higher education. However traditional and ill-prepared we used to be, we can draw from the experience of emergency teaching and strive to provide students with more interactive, real-time and innovation-oriented learning experience in the post-pandemic world.

Despite many limitations of this single case study, we hope that this paper has provided valuable insights for policymakers, researchers and practitioners in developing and improving digital solutions to cope with emergency teaching and its impacts on the future of Chinese language teaching and learning. In the long run, we need a well-designed online curriculum that has the capacity to genuinely recognise the theoretical advancement in Chinese language teaching and fundamentally rebrand or recreate the image of Chinese language in the digital future.

Future research on Chinese language teaching should focus on preparing teachers and students to survive and succeed in a digital future (Fraillon, 2014). Empowering digital teaching and learning is an urgent and complex task for many campus-based traditional Chinese language programmes both in and outside China. However, the paper reminds online course developers that, in designing a good online curriculum for mainstream educational settings, they need to be able to address many new issues such as policy, technical, theoretical and pedagogical issues, as experienced by our teachers and students.

Developing a good online course requires years of professional work, cooperation with administrative staff and partnership with educational organisations, repeated testing, designing and redesigning with available resources and on-site technical support (O'Neil, Fisher & Newbold, 2004). The study stresses the importance of employing a multidimensional perspective in understanding and analysing the complex environment surrounding the course.

Finally, we end by suggesting that technology is the tool, not the goal. While teaching professionals are embracing technology-enhanced teaching, we wish to offer a cautionary tale. Kubler (2018) warned us that future Chinese teaching and research should be governed by "the concerns by what the technology can do than by a concern with what it should do" (p.54). Based on his long-term observation that the technological developments have tended to surpass pedagogical and theoretical developments in online teaching, it is crucial that attention is given to advancing theories of technology-mediated Chinese language education instead of constantly searching for better technologies. Kubler also suggested that in online Chinese teaching it should always be the "pedagogical goals that drive the technology and not the

other way around" (ibid). Future research should focus on providing strong conceptual frameworks that can guide research and practice in the digital age.

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