Teacher Agency in Adapting to Online Teaching during COVID-19: A Case Study on Teachers of Chinese as an Additional Language in Macau
(教師發揮能動性以適應 2019 冠状病毒病期間的在綫教學：基於澳門對外漢語教師的個案研究)

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Abstract: The COVID-19 university closure forced a rapid transition and adaptation to online teaching. This paper reports on a case study that examined teacher agency in response to online teaching from February to September 2020. In the study we collected multiple data from three teachers of Chinese as an additional language, including semi-structured interviews, institutional documents, and field notes, to investigate their exercise of agency in adapting to online teaching. The analysis revealed that the participants displayed strong agency to build digital competence and develop student-centered pedagogy at different stages. At the same time, the shift to online from classroom-based teaching allowed them an opportunity to transform existing practices and seek innovative pedagogy, such as a hybrid model blending asynchronous and synchronous online teaching. This study also suggests the influence of flexible and collaborative institutional culture and teacher professional digital competence in shaping the participants' agency in addressing the diverse challenges of online teaching. These findings offer insights into the value of an agency-oriented approach to professional learning and development in educational change. Educational stakeholders should pay more attention to the dynamic interaction between educational institutional systems and teacher agentic practice.

摘要：2019 冠状病毒病引發的大學關閉迫使教育持份者需要快速轉變為並適應在綫教學模式。本文采用案例研究的方法，考察 2020 年 2 月至 9 月間澳門孔子學院的教師如何發揮能動性以回應在綫教學的轉變。我們對該孔子學院三位對外漢語教師能動性的發揮進行了半結構化訪談和參與式觀察，並分析了相關的文件資料。研究分析表明，他們在建構自身數位技能和發展以學生爲中心的教學法過程中表現出強大的能動性。同時，從課堂教學到在綫教學的轉變使他們有機會改變現有的教學實踐，並尋求教學法的創新。本研究還表明，靈活和協作的制度文化及教師的數位技能對他們發揮能動性以應對在綫教學的各

種挑戰具有重要影響。這些發現對於教學變革中教師的專業學習和發展提供了以能動性為導向的視角。基於以上發現，我們建議教育持份者應當更加關注教學體系和教師能動性之間的互動。

Keywords: Teacher agency, online teaching, teacher digital competence, Chinese as an additional language, COVID-19 pandemic

關鍵詞：教師能動性、在綫教學、教師數位技能、對外漢語教學、2019 冠状病毒病

1. Introduction

According to the United Nations (2020), the COVID-19 pandemic has caused the severest disruption of the global education system in history, with nearly 1.6 billion learners in more than 190 nations/regions being affected by the end of August 2020. In order to suppress the spread of the virus and prevent national or local outbreaks, many governments enacted a number of rules and measures such as closing down educational institutions to minimize infection rates and protect learners within the community.

Due to the suspension of face-to-face classes during national lockdowns, many governments across the world required educational institutions to deliver online courses exclusively (e.g., Mainland China, Bao, 2020; Hong Kong SAR, Moorhouse, 2020; UK, Bryson & Andres, 2020; Germany, König, Jäger-Biela, & Glutsch, 2020; Europe, North America, Asia, South America, and the Middle East, MacIntyre, Gregersen, & Mercer, 2020; Australia, Scull et al., 2020). In other words, the traditional delivery of teaching in school classrooms or on university campuses shifted overnight to teaching remotely. In these circumstances, teachers were immediately tasked with a rapid transition to online delivery, and many encountered significant challenges in adapting to this new normal (König et al., 2020).

Existing studies on teaching during the COVID-19 pandemic have mainly indicated the extant difficulties or obstacles teachers faced (e.g., MacIntyre et al., 2020) and explored the instructional strategies they adopted (e.g., Bao, 2020). However, the specific process of teachers' transformation and adaptation from face-to-face to virtual instruction remains an under-examined area (König et al., 2020; United Nations, 2020). In particular, little attention has been paid to teachers' engagement with "the dramatic changes due to the COVID-19 pandemic" (Scull, Phillips, Sharma, & Garnier., 2020, p. 3) and their efforts to cope with the emerging demands of online teaching, even though they are increasingly considered to be "active agents" (Lasky, 2005, p. 900) in response to educational change.

There is an explicit tendency in educational research to depict teachers as agentic professionals when educational systems or ecologies are undergoing change (Priestley, Biesta, & Robinson, 2015). Teachers are not "pawns" during educational change, but rather "active agents, whether they act passively or actively" (Lasky, 2005, pp. 900–901). Previous studies have revealed that teachers generally tend to enact agency towards

different forms of change such as educational reform, including resistance, ambivalence, and approval (e.g., Simpson et al., 2018; Tao & Gao, 2017). At the same time there is an intricate relationship between teacher agency and teacher identity, with teachers more likely to recognize and make what they do into "a meaningful profession rather than just a job" (Priestley et al., 2015, p. 149) if they have a sense of being able to enact agency. In this regard, more studies are needed to examine teachers as active agents or agentic professionals who develop professionally as they adapt to online teaching in the midst of the COVID-19 pandemic, especially in contexts where they might lack sufficient resources, guidance, or training. To this end, the present research reports on the professional development experiences of three teachers of Chinese as an additional language in a Confucius Institute at a university in Macau, who underwent instructional conversion from traditional face-to-face classes to emergency online language teaching in response to the COVID-19 pandemic.

The first local warning regarding the COVID-19 pandemic was raised in Macau on 5 January 2020, and the first domestic case was confirmed on 4 February 2020 (Bian, Yao, & Bian, 2020). Between 22 and 23 January 2020 the Macau government initiated a suite of prevention and control rules and regulations such as the postponement of the commencement of the next academic semester to 10 February or later, and then on 30 January 2020 made the decision to postpone all on-campus classes until further notice (GOV.MO, 30 January 2020). Educational institutions were temporarily closed down and students were informed that they must engage in learning via online education in accordance with a policy of "keeping learning amid class suspension" (in Chinese "停課不停學") throughout Macau. Language teachers in Macau universities had to transform to online teaching and implement new pedagogical approaches to address students' learning needs. Consequently, their experiences related to organizing efficient activities via this new mode of delivery must have changed substantially, with individual language teachers needing to practice agency to support students' online language learning. However, how language teachers adapted to this emergency remote teaching has yet to be studied, although their experiences of, responses to, and strategies for coping with disrupted teaching can greatly affect the quality of language education (Gong, Gao, & Lyu, 2020; Gong, Lai, & Gao, 2020; Gong, Lyu, & Gao, 2018; Ma, Gong, Gao, & Xiang, 2017). Therefore, this study attempts to examine how teachers of Chinese as an additional language responded to this dramatic educational change due to COVID-19 through the exercise of agency.

2. Literature Review

2.1 Online Teaching during the COVID-19 Pandemic

The benefits of information and communication technology (ICT) have profoundly transformed education. Its role lies not only in breaking spatio-temporal limitations and promoting the fairness of education (Passey et al., 2018), but also in enhancing learner-centered instruction and engaging learners in the learning process (Chapelle, 2008; Ertmer & Ottenbreit-Leftwich, 2013; Gong & Lai, 2018; Zheng, Lin, & Kwon, 2020). The COVID-19 pandemic accelerated this digital transformation, and the integration of ICT

into education gained even more significance at all levels of education. At the same time, however, the sudden transformation to remote teaching and learning via online platforms brought various challenges and difficulties to users (e.g., learners, teachers, policymakers, parents, etc.), changed their beliefs and concerns regarding online education, and stimulated innovation and creativity within the education sector (Chen et al., 2020; Quezada, Talbot, & Quezada-Parker, 2020).

Since the outbreak of COVID-19 in the early spring of 2020, the increasing number of studies on teachers' online teaching have mainly concentrated on their coping experiences of and instructional strategies for the remote delivery of courses, and potential factors accounting for their mastery of core challenges during campus closures. For instance, by examining the improvisation journey of learning platforms (from proximate learning to blended learning to online delivery) caused by school and university closures, Bryson and Andres (2020) argued that teachers should adopt different approaches to optimize students' extensive and intensive online learning experiences. Specifically, extensive support should include providing appropriate learning resources and guidelines for students, and intensive support should be related to deepening students' interactions with their peers and instructors. The authors called for a hybrid educational model blending synchronous with asynchronous instruction to facilitate students' online learning experiences and embrace new educational forms.

Similarly, based on observations of online teaching at a university in China, Bao (2020) classified six instructional strategies to support students' learning experiences through screens, including preparing emergency plans for unexpected issues, dividing teaching content into smaller units to promote students' learning efficacy, turning down the instructional pace for students' engagement, working with teaching assistants to enhance instructional quality, facilitating students' active learning outside of class, and blending online teaching and offline learning effectively. In another study, MacIntyre, Gregersen, and Mercer (2020) surveyed 634 language teachers from different nations/regions to investigate their coping strategies when facing stressors and problems caused by the emergency transition to online teaching during COVID-19. In particular, the language teachers reported adopting more active coping strategies than avoidant ones (e.g., disengagement, substance abuse, and denial) to accept and adapt to the educational change. At the same time, however, there was a close relationship between their coping strategies and psychological outcomes like anxiety, sadness, anger, etc.

Researchers have also paid attention to factors that affected teachers' conversion to online teaching during COVID-19 campus closures. König et al. (2020) conducted a quantitative inquiry into how early career teachers tackled the challenges of delivering lessons in online settings. This inquiry reported that the teachers' digital competence, such as their technological pedagogical knowledge (TPK), significantly predicted COVID-19 online teaching quality, measure by aspects such as maintaining social contact with and providing task differentiation to students. In another study on English-as-a-foreign-language (EFL) teachers' cognition about online teaching in Chinese universities during the pandemic, Gao and Zhang (2020) found that limited information technology literacy, insufficient network conditions, and ineffective class management could hinder the

teachers' successful online teaching. An adequate understanding of students' learning needs and online teaching practice seemed to benefit the EFL teachers' ICT literacy.

Although some work has been conducted on language teachers' transitions and adaptation to online teaching during the COVID-19 pandemic, the results concerning this issue mainly relate to teachers in contexts where English is taught as a first or additional language (e. g., Gao & Zhang, 2020; MacIntyre et al., 2020). Findings among different language teachers from other language teaching contexts, like teaching Chinese as an additional language, may be different and deserve separate attention. At the same time, even though these studies have to some extent reported various challenges/factors that teachers experienced in the online environment during COVID-19 from a macro-level viewpoint (mostly using quantitative data), they have not addressed social, educational, and program-level complexities in relation to language teacher conversion to online teaching platforms. For example, teachers' adaptive process may emerge in specific educational cultures and interact with their individual differences such as personal knowledge, learning and teaching experience, and professional commitment. In addition, like most of the previous studies conducted since the mandatory school and university lockdown due to COVID-19, general research on teachers' adaptation to online teaching has paid little attention to the agentic choices or actions they take when reacting to different challenges and factors in this dramatic educational change.

2.2 Teacher Agency in Educational Change

Recent literature emphasizes the importance of viewing teachers as agents in response to educational change (Priestley et al., 2015; Tao & Gao, 2017; Yang, 2021). The discussion of agency starts with the view that "human beings have the ability to influence their lives and environment while they are also shaped by social and individual factors" (Lasky, 2005, p. 900). According to Priestley et al. (2015), three main conceptualizations of agency have been founded on different assumptions: agency as capacity, agency as variable, and agency as phenomenon/practice (also see Feryok, 2012; Tao & Gao, 2017).

Taking a sociological approach, the notion of agency mainly focuses on "the individual exercise of power" (Feryok, 2012, p. 97) in social action, negotiating the contextual influence (e.g., social structure) on the development of the agent. Other researchers take a more complex view of agency and define it as an "emergent phenomenon—something that is achieved by individuals, through the interplay of personal capacities and the resources, affordances and constraints of the environment by means of which individuals act" (Priestley et al., 2015, p. 19). In the same vein, Lasky (2005), taking a sociocultural perspective, interpreted agency as people's practice in social settings with available cultural tools.

Additionally, agency is shaped by relationships and achieved within particular contextual conditions, including past experiences, current possibilities, and future prospects. Based on the views of agency provided by the existing literature, we feel it is essential to conceive of agency as agentic perspectives and actions in response to contextual resources and constraints in particular situations, rather than merely as a capacity and characteristic of the individual or primarily as a personal social action. Hence,

our inquiry makes use of the conceptualization of agency as a phenomenon/practice. Seen in this way, teacher agency refers to teachers' "agentic choices and actions" (Tao & Gao, 2017, p. 347) within the opportunities and constraints of local educational systems.

Teacher agency plays a pivotal role in facilitating student learning and teacher professional development. Studies on teacher agency generally tend to examine teachers' responses to issues and challenges during educational change, and have identified its close connection with teachers' emotions (Miller & Gkonou, 2018), professional identity (Buchanan, 2015; Kayi-Aydar, 2015), knowledge of curriculum and pedagogy (Sloan, 2006), and adaptive strategies (Lai, Li, & Gong, 2016; Miller et al., 2020). For instance, Tao and Gao (2017) interviewed eight English teachers during curricular reform in a Chinese university, and found that they demonstrated agentic choices and actions to adapt to the new curriculum in different individualized ways. However, their exercise of professional agency was directed by identity commitments and mediated by prior experiences and resources. Similarly, Buchanan's (2015) study on nine teachers' professional identity in a context of educational reform in northern California, USA reported that the construction of teachers as agentive professionals was shaped by reform contexts and discourses, especially the local school culture. In particular, the teachers mostly used an avoidant coping strategy (resistance) when their identity conflicted with the accountability and values related to "quality teaching and learning" (p. 715).

Billett (2006) argued that individuals at work exercised agency through making choices about what to engage in and taking actions with different degrees of engagement to continually shape and reshape their own professional trajectory. Moreover, teacher agency generally has different manifestations with multi-levelness and context specificity (Eteläpelto, Vähäsantanen, Hökkä, & Paloniemi, 2014), and thus researchers have called for more research to examine its nature and links with teacher professional development in different professional contexts, especially during educational changes (Tao & Gao, 2017; Vähäsantanen, 2015).

Specifically, in light of the educational change caused by the COVID-19 pandemic, studies are needed to explore how teacher agency was exercised to address issues of teachers' professional development in online teaching. However, existing research on teachers' transitions from face-to-face instruction to online teaching has mostly paid scant attention to the agentic choices and actions they take in specific circumstances when reacting to different resources and challenges. Also, there have been few studies investigating the interaction between teacher agency in adapting to online education and individual differences, such as learning backgrounds, personal experiences, and emotions, particularly during COVID-19 campus closures.

The notion of teacher agency will help us to understand teachers' experiences of online instruction adaption when responding to the challenges presented by COVID-19. With this in mind, the present research aims to address the following question:

RQ: How did teachers of Chinese an additional language enact agency in adapting to online teaching during the COVID-19 university closures?

3. Methodology

A case study approach (Stake, 1995) was adopted in the present study since this approach allows researchers to understand the multifaceted concept of teacher agency and the dynamic process of agency exercise within a complex, real educational context (Yin, 2003). At the same time, teachers' holistic adaptation to online teaching in response to the changes caused by the COVID-19 pandemic warranted an instrumental case study design (Stake, 2005). The research approaches presented below have been developed in the process this participatory project over one year, with the participation of three teachers of Chinese as an additional language at a Confucius Institute in a university in Macau.

3.1 Research Context

This study was situated in Macau, which was a Portuguese colony for more than 100 years before being handed over to China in 1999. According to the most recent population census in Macau, taken in 2011 (DSEC, 2011), 92.4% of the total population in Macau are ethnic Chinese, 1.5% are ethnic Portuguese, and 6.1% is composed of other ethnic groups such as Indonesian, Filipino, Vietnamese, European, and so on. Cantonese (83.3%) and Portuguese (0.7%) are the official languages of Macau, but Putonghua, the national lingua franca of the People's Republic of China (PRC), is also increasingly used, especially in the tourism and business industry (Botha & Moody, 2020). Consequently, the rising numbers of ethnic workers directly involved in the tourism and business sector highlight proficiency in Putonghua as an important type of capital, and many people make efforts to enhance their Putonghua proficiency through informal courses.

To address this learning need, since 2018 the Confucius Institute in the Macau university involved in the study has offered part-time elementary, intermediate, pre-advanced, and advanced Putonghua courses for non-ethnic Chinese adult learners who originally come from different countries/regions and who use Putonghua as an additional language in Macau. From the teacher participants' self-reports, we noted that the courses were taught in a classroom setting before the global outbreak of COVID-19, but they had shifted to exclusively online teaching and learning since the beginning of February 2020.

3.2 Participants

Because the exercise of agency can be affected by past and present experiences (Eteläpelto et al., 2014; Lai et al., 2016; Tao & Gao, 2017), this study involved teaching staff members at the Confucius Institute who had different working experiences, responsibilities, and roles. Following an initial visit and an introduction to the study both verbally and in writing by the first author, three teachers volunteered to participate in this study: one program coordinator, and two volunteer teachers. As can be seen in Table 1, the participants were heterogeneous in terms of their personal background demographics, such as their age, language background and prior experience. Consent was obtained prior to the interviews and observations, and all the participating teachers were assured of confidentiality and anonymity.

Ms. Li (program coordinator): She earned a BA degree in mainland China in the 2000s. Afterwards she worked as a teacher of Chinese as a foreign language at a college in the USA, and also obtained an MA degree with specialization in Teaching Chinese as a Foreign Language. Ms. Li was the only full-time university instructor in the Institute. As a program coordinator, she was responsible for supervising the teaching routine and quality of all the Chinese courses, and she also had different managerial roles such as training novice teachers and teaching assistants, assigning instruction tasks for volunteer teachers, and addressing learners' feedback.

Ms. Liu and Ms. Zhao (volunteer teachers): They were recruited as full-time Chinese teachers through the Centre for Language Education and Cooperation (formerly known as "Hanban"). During the COVID-19 campus closures Ms. Liu was teaching elementary courses and Ms. Zhao was teaching intermediate and pre-advanced courses.

Table 1 Participants' profiles

Name	Age	Gender	Language background	Education experience	Work experience
Ms. Li	38	Female	Putonghua, English	BA in Chinese Language and Literature MA in Teaching Chinese as a Foreign Language	Chinese language teacher in the USA
Ms. Liu	28	Female	Putonghua, English	BA in Chinese Language and Literature MA in Second Language Acquisition	No
Ms. Zhao	27	Female	Cantonese, Putonghua, English, Portuguese	BA in Teaching Chinese as an International Language MA in Teaching Chinese as an International Language	Intern Chinese language teacher in Portugal

Note: All names are pseudonyms

3.3 Data Collection

The case studies were conducted from February 2020 to February 2021. Multiple sources of data were collected as potentially appropriate to investigate the nature of teacher agency in educational change, including semi-structured interviews, participatory observations, field notes, email letters, and relevant university, faculty and Institute documents. The documents from different administrative units related to guidelines, support and even tips for online instruction during COVID-19, which were sent to university academic staff after the end of January 2020. Along with email correspondence, they helped us to make the interview questions/topics more pertinent.

A semi-structured interview format was adopted to allow the teachers to elaborate their professional experiences and personal feelings prior to, during and after their COVID-19 transition to online Chinese teaching (Holloway & Jefferson, 2000). At the same time,

the interviews were framed around several issues and concepts that had emerged from the prior literature; overall, the following topics were addressed: 1) perceived online education environment; 2) challenge and difficulty in online Chinese teaching; 3) teachers' perceptions of their professional role and commitment; 4) coping responses to transition to online Chinese teaching; 5) external resources and supports; and 6) achievement in COVID-19 online Chinese teaching. The interview questions/topics were first reviewed and assessed by two experts and one Chinese teacher interested in teacher agency and online language education. Then the questions/topics and the interview technique were pilot-tested with one Chinese teacher working in a Chinese as an additional language program, and the interview guide was revised accordingly. Each interview lasted approximately 50 minutes, and a total of three semi-structured interviews were conducted in the participants' native language, Putonghua, to minimize language barriers. The interviews were digitally recorded and transcribed.

In addition, six episodes of observations were collected in order to document Chinese teachers' interactions and ways of working with each other to deal with problems caused by the emergency shift to online language education (Pantić, 2017). Examples of observation situations included: the meeting room for observing teachers' meetings of planning online Chinese teaching and learning due to the COVID-19 pandemic (two meetings), teacher offices for observation of three teachers' online teaching practices (one observation session for each teacher), and the staff office for observing teacher collective lesson preparation (one observation session). Field notes of the observations were also kept to provide a comprehensive and contextualized account of the teacher participants' coping practices when confronting the challenges bought by COVID-19 online instruction (Wolfinger, 2002). The field notes were descriptive in nature, yielding a thicker description of the "professional and personal circumstances" (Lai et al., 2016, p. 14) of professional agency and enriching our interpretation of the research question, since some agentic choices and actions might not be fully reported in the interviews.

3.4 Data Analysis

Thematic analysis was carried out to analyze the data, which were hand-coded. The data were first categorized into organizational themes according to the research question and the literature on teacher agency in educational change and online teaching. Five organizational themes were used with regard to the two dimensions of adaptation to online Chinese teaching during COVID-19, encompassing professional transformation and the development of online teaching with opportunities and constraints within the context of university closures: 1) online education transition; 2) professional choices and actions under the impact of online teaching; 3) reasons for transformed and untransformed choices and actions; 4) their impact on student learning; and 5) reasons for the impact or lack thereof.

The excerpts under each organizational theme were then coded and recoded to generate concrete categorizations. Relevant documents, interview transcriptions, and observation field notes were read through five times, and bits of data that were relevant and important to the themes, or which struck the researchers as interesting, were first coded using original words. Similar codes were aggregated into analytic categories. The initial

coding of the analytic categories was then compared across the participants to find repeating ideas and supporting evidence in order to cross-validate the categories that emerged. For instance, "reading the user manual of Zoom", "learning to operate Zoom", and "digging into different Zoom functions" were clustered under "developing and enhancing technological knowledge", and "difficult to supervise student learning in Zoom" and "not easy for teachers to communicate with learners one to one during online teaching" were categorized under the higher-order node "contextual constraints of online Chinese education". Throughout the data analysis, annotations and memos were used to record immediate comments and reflexive thinking on the data, and these were further used to assist with data coding and categorization (Maxwell, 2005).

Due to space limitations, this paper explains the research question by presenting our interpretation of data derived from relevant documents and semi-structured interviews, supplemented with observation field notes.

Additionally, we were aware that the researchers' own beliefs and understanding may interfere with the "objectivity, reflexivity and authenticity of a research project" (Kanuha, 2000, p. 444). Therefore, participant-checking procedures were conducted after we had transcribed the interviews to ensure the accuracy of the data and the trustworthiness of the subsequent analysis (Birt, Scott, Cavers, Campbell, & Walter, 2016). One participant made minor annotations, and the other two participants returned interview transcriptions without additional comments.

4. Findings

The analysis of the data identified that the participants actively enacted agency in two primary aspects in response to online Chinese teaching during the COVID-19 university closures: learning digital skills, and enhancing student-centered online teaching. At the same time, understanding online education as an innovative opportunity, the participating teachers showed relatively strong agency in implementing new pedagogical approaches to Chinese language teaching and learning through communication and collaboration with each other. In particular, diverse innovative teaching models were used to address personal and contextual constraints at different stages of online teaching, and a blend of asynchronous and synchronous online Chinese instruction was developed as a pedagogical innovation during campus closure. It is worth noting that the participants demonstrated a few heterogeneous individualized strategies when fulfilling online teaching tasks and adapting to the transition to online Chinese teaching.

4.1 Professional Development under the Impact of Online Education: Agency Shaped by the Opportunities and Constraints of University Lockdown

Three participants reported that they had no online teaching experiences prior to the university closures caused by COVID-19, and they needed responsive adaptation and improvisation in their approaches to online Chinese teaching. The participants' accounts showed that their agentic choices and actions towards Chinese language teaching in online classes were shaped by their personal and contextual resources and constraints. Overall,

the participants' prior teaching experiences could not help them to respond to the various challenges they encountered in online language education, and thus they enacted agency not only to develop technological knowledge regarding online teaching and learning, but also to build up pedagogical competence to address learners' preferences and needs in a new educational setting.

4.1.1 Agency in Learning about Technological Skills

The three participants displayed strong agency in learning about technological knowledge so as to improve their practice while teaching Chinese online. The data analysis indicated that they all felt confused and stressed when they were originally confronted by the unexpected and rapid conversion to online teaching. Given that none of the participants had any technological background in online education, their unanimous and primary tangible goal was to learn about the different functions of online education platforms in terms of synchronous teaching and learning. For instance, Ms. Zhao talked about how she had learned to use online education tools, with a primary focus on their different functions:

> [1] Most importantly, I continue familiarizing myself with relevant online teaching tools. For example, I scrutinize Zoom functions and consider how to use the functions in my class. (Ms. Zhao)

This enactment of agency towards developing her technological knowledge was also reflected in her regular meetings with other colleagues, during which they "intensively dig into Zoom functions together and talk about how to integrate these functions into Chinese teaching, such as 'breakout rooms' in Zoom". The language teachers' knowledge categories extended to technological pedagogical and content knowledge (TPACK) in response to the increasing significance of the ICT transformation process in the educational system (Selwyn, 2012). During their adaptation to "forced" online teaching due to the COVID-19 pandemic, the participants' professional knowledge related to the function and operation of new technology and its applications was a basic precondition for effective online teaching (König et al., 2020). Consequently, all the participants continued to invest in mastering the core challenge of delivering Chinese courses online. At the same time, communication and collaboration among the participants seemed to play a crucial role in enhancing their technological knowledge. In other words, when confronted with online teaching challenges, they often worked together but displayed small individual differences in overcoming personal and contextual constraints and fulfilling instructional tasks.

In a similar vein, Ms. Liu recounted that rather than strictly following the previous instructional pace, the teachers in the Institute had to tackle technological issues at the beginning of online teaching. She also recalled an embarrassing moment in the online class because of her lack of knowledge of the "mute all" function:

> [2] In my first online class, I had no idea about "mute all" at all. One student was attending class in the street. When I turned on Zoom, all the noise came out, like the sound of cars. I just heard the noise, but did not know it was from which student. I became flustered at that moment. I finally found the "mute all" after a while. (Ms. Liu)

This experience seemed to prompt her to want to learn about the new technology, "how to use Zoom to teach". Afterwards, Ms. Liu initially learned from the Zoom User Guide sent by the university, and then talked with other teaching assistants about how to use the software. In essence, the participants' experiences of adopting digital tools involved a learning process, and their agentic choices and actions during this process were "driven by the self-perceived disjuncture" (Tao & Gao, 2017, p. 349) between their working background and the knowledge they needed for online teaching.

Notwithstanding, all three participants reported a relatively high level of adopting online teaching platforms after four to five weeks, and all were aware of the availability and convenience of online education for both learners and teachers during the periods of campus closure. For instance, Ms. Li, the program coordinator at the Institute, commented on her personal perception after mastering the core difficulty of online Chinese education: "There is a way out (literally in Chinese, 柳暗花明: where dark willows end, bright flowers come). … We did not believe we can do it at the beginning, but we make it finally." At the same time, this initial experience of mastering relevant technological knowledge enhanced the participants' confidence and competence in online teaching, after which they tended to pay more attention to student-centered pedagogical approaches in online education.

4.1.2 Agency in Transforming to Student-Centered Approaches in Online Teaching

Overall, the data analysis revealed that in the online teaching context, the participants usually transformed to student-centered instruction after a four- to five-week period of transition. Once they had successfully addressed their technological issues in terms of learning about and operating the different functions of online education platforms, they all exercised agency to support learners' access, enhance their participation, and strengthen their social and intellectual engagement in online learning (Scull et al., 2020). Poor persistence among learners has been a major challenge for teachers in online education (Ertmer & Ottenbreit-Leftwich, 2013; Lin, Zhang, & Zheng, 2017). Because of their new recognition of the differences between online and face-to-face learning, one salient change that they all perceived was that teachers needed to reduce the teaching pace to facilitate student access to synchronous instructional activities. As an example, Ms. Liu found that her learners became easily fatigued in online classes, and reduced her teaching content accordingly. Similarly, Ms. Zhao talked about how she abandoned the original instructional pace, because it led to students' poor understanding of the instructional content.

> [3] I feel it is very difficult for some students to follow my teaching in online class. In particular, for them, it is very very hard to understand some content through online learning. (Ms. Zhao)

In other words, the participants believed that students moving to online study required more time to adapt to the course progress. Moreover, the participating teachers also changed their teaching styles to stimulate student learning motivation and interest. Compared to her prior Chinese instruction, Ms. Liu reduced the number of questions she asked students in online classes, because she "worried that too much questions can decrease student self-esteem". In order to "[m]ake online instructional elements more interesting and promote student learning interest", Ms. Zhao used matching questions in her online

teaching instead of question-and-answer drills, which she often assigned to students in face-to-face classes. Specifically, the participants' accounts illustrated that they enacted agency via continuous reflection on and improvements in their instructional style, as required by the emerging features of students in online learning.

Ms. Li's interview response further shows that the participating teachers' instructional change was shaped by the concerns and problems that students perceived in the online learning context, namely the keen expectation that they would be able to promote their Chinese language proficiency. She highlighted the importance of daily-communication competence in enhancing student confidence in learning Chinese, and in their ongoing engagement with online classes:

[4] We must let them (students) see their clear and significant progress in this academic term, and also they can see their progress in each aspect during online Chinese learning. (Ms. Li)

In practice, Ms. Li and her colleagues displayed strong agency in terms of student-centered curriculum planning and teaching, with significant focus on students' communication competence. Ms. Li talked about her pedagogical transitions after switching to online Chinese education:

[5] First of all, we build an online one-to-one spoken lesson and increase its frequency later. … Secondly, we change the previous final exam form. Prior to COVID-19, each student made a presentation for the speaking test. We let students make videos right now. We encourage this speaking test form. (Ms. Li)

The flexible approaches initiated by this teaching team were designed to ensure that teachers could respond to students' core needs effectively, and enhance their engagement by increasing their learning confidence (Quezada et al., 2020; Zhang & Lin, 2021). Moreover, the participants' agentic choices and actions closed the gap between students' conventional learning and the experiences and skills needed to engage with online education, and further generated creative and innovative strategies for problem solving.

4.2 Agency as Innovation in Changing the Traditional Teaching Mode

The data analysis also illustrated that the participants in the Institute experienced two phases of online education in line with the university guidelines during the COVID-19 campus closures—the offline self-learning phase, and the online delivery phase. In particular, they sent PowerPoint slides with audio narration to students during the first two weeks of online teaching, and then shifted to synchronous online teaching based on real-time interactions with students. From the participants' accounts in relation to the asynchronous PowerPoint teaching, it can be seen that their main feelings were that this was "exhausting", "time-wasting", "confused", and "messy", while they actively enacted their agency to "make the slides with narrative details as much as possible" (Ms. Li).

According to Priestley et al. (2012), changes in education may occur as a result of engagement with innovations in teaching and learning. In practice, the challenges brought by the COVID-19 campus closures clearly necessitated educational change in terms of

curricular and pedagogical approaches, such as online teaching and assessment. The participants often exercised agency to reflect upon and alter their prior teaching modes, seeking innovative ways of blending their students' extensive and intensive learning experiences (Bryson & Andres, 2020). Overall, while the participants selected different resources and provided instant feedback to facilitate student learning during their asynchronous teaching, they focused significantly on small breakout sessions and opportunities for students to enhance their Chinese communication competence. Ms. Li believed that the pedagogical practice change brought by the shift to online teaching addressed issues of infrequent teacher-student communication, which could easily be a problem in face-to-face classes:
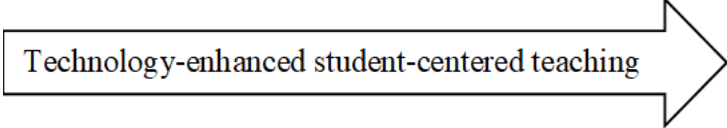
> [6] We have one one-to-one course with students every two weeks now, but we had that once a month before the COVID-19. … Students like this course very much, because they believe that this teaching mode can solve their individual learning issues and is a bespoke approach. (Ms. Li)

In addition, the participants were unanimous in their positive perceptions of retaining online one-to-one teaching, even after students were able to return to their classrooms after the campus lockdown had been lifted. More importantly, they believed that online language education is a new educational trend. As Ms. Liu reflected:

> [7] Online teaching and learning has become mainstream. It is not only for the Chinese language. Other language institutions have started online courses already. (Ms. Liu)

Table 2 summarizes the changes in the Chinese instructional model in the Institute from February 2020 to February 2021. It shows an emerging hybrid model that blends synchronous online teaching with face-to-face sessions. This shift from solely face-to-face teaching to a hybrid model, or from transferring content to designing diverse learning experiences, demonstrates the participants' agentic willingness and ability to react to challenges as they transitioned from classroom-based to online teaching.

Table 2 Education model transformation at different stages

Educational model before COVID-19 (before February 2020)	Educational model during campus closure (from February 2020 to September 2020)	Educational model after campus closure (from September 2020 to present)
Technology-enhanced student-centered teaching		
Teaching: face-to-face	*Teaching: asynchronous and synchronous online*	*Teaching: blend of face-to-face and synchronous online*
1) Large class teaching: face-to-face, with focus on grammar points,	*1) Large class teaching*: asynchronous, with focus on grammar points,	*1) Large class teaching*: face-to-face, with focus on

vocabulary, and oral Chinese practice *2) One-to-one course*: face-to-face, once a month, with focus on checking learning outcome and targeted enhancement	vocabulary, and oral Chinese practice *2) One-to-one course*: synchronous online, twice a month, with focus on checking learning outcomes and targeted enhancement	grammar points, vocabulary, and oral Chinese practice *2) One-to-one course*: synchronous online, once a month, with focus on checking learning outcome and targeted enhancement
Assessment: face-to-face, individual presentation	*Assessment*: online, video presentation	*Assessment*: online, video presentation

5. Discussion

Based on semi-structured interviews, institutional documents related to teaching and learning during COVID-19, and field notes from participatory observations, the present study has examined the exercise of agency among three teachers of Chinese as an additional language in response to their enforced transition to online teaching due to the COVID-19 campus closure. Concurring with existing research findings (Lai et al., 2016; Robinson, 2012; Tao & Gao, 2017), the study found that the teachers' adaptation to educational change was a professional trajectory. The participants demonstrated a developmental trajectory of the enactment of agency in terms of a rapid switch to online language teaching, moving from a primary focus on digital skills to a greater focus on student-centered teaching, and from traditional classroom-based teaching to a blend of face-to-face and synchronous online instruction. At the same time their professional agency was shaped by contextual constraints such as learner needs, boosted by the availability of contextual resources for online education, and strengthened by the flexible and supportive paradigm in their university context. In this regard, teacher agency in educational change should considered as part of a process of agentic choice and practice dictated by local systems and standards, not merely as an individual capacity. Educational institutions need to develop an accepting and flexible structure to encourage and allow room for teachers' pedagogical innovation and creativity in online education (Quezada et al., 2020). In addition, policy makers should build their concepts towards blended teaching, i.e., a strategic hybrid of classroom-based instruction on campus and online teaching for students at home (König et al., 2020).

Regarding the participants' online teaching adaptation at different stages, it seemed that mastering the instructional functions of digital tools or platforms was a major challenge at first, and later supporting diverse instructional purposes became a pressing issue. This result also echoes the findings of previous studies (Ertmer & Ottenbreit-Leftwich, 2013; Gong & Lai, 2018; Lyu & Qi, 2020), which consistently highlighted the importance of teachers' pedagogical competency in integrating ICT into language education. Thus, training in the management of online educational tools or platforms and facilitating excellent asynchronous and synchronous instructional experiences should become a crucial part of teacher professional development for language education. These can help "teachers develop practical strategies and classroom management techniques with respect to technology-enhanced learning-centered teaching" (Gong & Lai, 2018, p. 22). At the same

time, pre-service teachers also need to be equipped with online teaching competence, such as TPACK (Bostancıoğlu & Handley, 2018; Mishra & Koehler, 2006) to continue responding effectively to educational change in the post-pandemic era.

The findings emerging from the analysis also reveal that the participating teachers showed little variation with regard to their agentic actions in response to the rapid conversion of modules to online language teaching. This differed from the results reported in previous studies on the exercise of teacher agency in educational change, which have noted that teacher professional agency is individualized and varied across individuals (Eteläpelto et al., 2014; Tao & Gao, 2017). One possible reason behind this inconsistency might have something to do with the enactment of teacher agency in different contexts. COVID-19 forced the participants to transition to an emergency educational paradigm within a rapid period of time (two weeks in this study), and thus they tended to create broadly the same personal and pedagogical goals for their Chinese teaching. Moreover, since none of the participants had any online instructional experiences before the COVID-19 campus closure, their different personal and professional backgrounds seemed not to affect their exercise of teacher agency in online Chinese teaching. In this regard, future studies should take a closer ethnographic look at the dynamic changes in Chinese language teachers' agency in integrating ICT in the long term, especially their online teaching practices in the post-pandemic era.

6. Conclusion

The present study has investigated three teachers of Chinese as an additional language and their exercise of agency in response to the sudden transition to online teaching during a COVID-19 campus closure at a Confucius Institute in Macau. Analysis of interviews, institutional documents, and field notes suggests that the rapid adaptation to online language teaching relied heavily on teachers' professional agency to address technological and pedagogical challenges. The enactment of agency was subject to the interaction between the instructional context, including the university system, the Institute culture and student needs, and the teachers' personal resources, including professional commitment, attitudes towards online education, and competence related to a specific subject. This study offers insights into the value of turning an agency-oriented lens on professional learning and the development of online teaching during the COVID-19 pandemic, and further suggests enacting professional agency to develop pedagogical innovation in educational change not only by enhancing teachers' professional digital competence, but also by building a flexible and collaborative culture.

It should be noted that this inquiry only involved Chinese as an additional language teachers in a Confucius Institute, and any generalization of the findings to teachers in other language education settings should be undertaken with caution, although the findings do have implications for the professional development of teachers' online teaching. This research mainly focused on teachers' online teaching experiences during a COVID-19 campus closure. It would be meaningful to conduct longitudinal studies of greater duration in order to map the transition of language teachers' online teaching pedagogy, and examine the impact of COVID-19 teaching experiences on future professional development.

Although multiple data sources were adopted to enhance the trustworthiness of the research results, what was reported might be different from what was enacted in actual educational settings (Gong, Gao, Li, & Lai, 2020).

Despite these limitations, however, we believe that the findings of this research demonstrate the significance of understanding language teachers' agency in adapting to online teaching during COVID-19 university closures. At the same time, further research may pay more attention to Chinese and other language teachers' exercise of agency in educational change, and may help them to improve their professional competence to address adaptive challenges (MacIntyre et al., 2020).

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