Contextual Support for Sustainable Professional Development:

A case study of Chinese senior high school EFL teachers

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In memory of

… my parents Yuxian Zhong and Jincai Zhang

… my uncle Guangquan Zhang

… and my uncle and primary teacher Xuejun Zhang

您知道这会发生

[You knew this would happen]

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Abstract

This thesis sets out to explore how schoolteachers might be best supported to sustain Teacher Professional Development (TPD) throughout their careers. Although TPD is a thriving field, contextual support for schoolteachers' career-long TPD is under-researched. Studies from a person-oriented ecological sustainable perspective are also unusual. This qualitative multiple-case study begins to fill the gap.

Set in the context of Chinese senior high schools, the case study inquired into the lived TPD and support experiences of eleven schoolteachers of English. Three waves of semi-structured interviews were conducted with the participants, and the participatory tool of life maps was employed to facilitate the interviews and generate complementary data. The data set was also complemented by the data from an open-ended questionnaire, school observations and document analysis. Template analysis was used to identify, analyse and report the patterns in the data set.

The findings suggest features of sustainable professional growth over the span of a schoolteacher's career. Schoolteachers realise career-long TPD in the process of self-actualisation guided by their ideal professional prospects. In the process, they emulate role models and engage in a series of activities, through which their TPD ecosystems expand and their ideal prospects evolve accordingly. To enable career-long TPD, it is essential to keep the TPD ecosystem supportive for the schoolteacher as a socially developing person in education profession, permitting and supporting, rather than inhibiting, him/her to actualise his/her ideal-self in the profession by engaging in structurally interrelated activities, with all the involved processes kept consistent with each other and his/her characteristics. Overall, there is a need for a conceptual shift towards Sustainable Professional Development (SPD), i.e. to coherently understand the schoolteacher, the developmental process and ecosystem, and contextual support from a person-oriented ecological sustainable perspective.

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List of Abbreviations

CNY	Chinese Yuan
CPD	Continuous/Continuing Professional Development
EFL	English as a Foreign Language
ELT	English Language Teaching
ELTE	English Language Teacher Education
GDP	Gross Domestic Product
IELTS	International English Language Testing System
M Phil	Master of Philosophy
MA	Master of Arts
MOOC	Massive Open Online Course
PhD	Doctor of Philosophy
PPCT	Process-Person-Context-Time
SPD	Sustainable Professional Development
TESOL	Teaching English to Speakers of Other Languages
TPD	Teacher Professional Development
UK	United Kingdom
USA	United States of America

Chapter 1
Introduction

Professional development must fulfil […] the need to develop and encourage the teacher's desire to live a satisfying and stimulating personal life, which by example as well as by precept will help his students to develop the desire and confidence to fulfil each his own potential.

(Joyce, 1980, p. 20)

1.1 Background

I was excited when I first read Joyce's quote above because he expressed what I had wanted to say for many years. Joyce (1980) suggests that Teacher Professional Development (TPD) must fulfil three needs. First, the need for an efficient and humane educational system capable of adaptation to evolving social needs, and second, the need to find ways of helping educational staff to improve the wider personal, social and academic potential of the young people in the neighbourhood. I highlight the third need by quoting it separately above, as it summaries the spirit of this research. From the perspective of a teacher as a person in society, the need for the teacher's own satisfying and stimulating personal life is, as Joyce notes, 'perhaps most important' (p. 20) among the three needs.

In many societies, TPD is seen as one of the key elements of any educational reform (Villegas-Reimers, 2003), and as a result, there are considerable government efforts intended to support teachers. However, teachers themselves do not necessarily see all government efforts as support. In the Chinese school context, for example, top-down mandatory TPD is reported to be so powerful that schoolteachers felt pushed to learn (Li, 2009; Yuan, 2014). In my career as a schoolteacher and later teacher mentor since the early 1990s, I experienced the evolution of the Chinese context for schoolteachers' professional development. I not only witnessed more government

investment over the years, but also a change of attitude among schoolteachers, from yearning for to being reluctant about TPD opportunities, so I wondered: What kinds of contexts provide the best support for schoolteachers' professional development?

TPD is acknowledged as an ongoing process over the span of a teacher's career (e.g. Day & Sachs, 2004; Diaz-Maggioli, 2004; Guskey, 2000; Padwad & Dixit, 2011). But what are the positive factors influencing those schoolteachers who do sustain development throughout their careers? When I wrote the PhD proposal in 2018, as far as I was aware, very little attention was given to this question in the literature. The notion of sustainable professional development was mentioned by some writers but without an explicit definition, or taken narrowly as whether the outcome of a TPD activity could be maintained over a period of time (e.g. Mak & Pun, 2015; Sandholtz & Ringstaff, 2016). To best support schoolteachers, I sensed that there was a need to pin down Sustainable Professional Development in relation to whether career-long professional growth could be sustained.

1.2 Aims

The questions noted in the above section may be integrated into one: How might schoolteachers be best supported to sustain professional development throughout their careers? The aim of this study is to critically examine, with respect to the question, schoolteachers' lived experiences and perceptions of professional support in their contexts.

Whilst inquiring into schoolteachers' experiences and perceptions, I consider the person in the role of schoolteacher, the context in which TPD takes place, and the TPD process within and across activities over the professional life. I analyse the support provided by the context and identify the features of support that influence engagement in further TPD activities and sustained professional development throughout the career. In doing so, I aim to enhance understanding of contextual

support for Sustainable Professional Development (SPD) and SPD *per se*.

1.3 Overview

In this thesis I examine schoolteachers' career-long experiences and their related perceptions to seek an understanding of how schoolteachers might be best supported to sustain professional development throughout their careers.

I describe in Chapter 2 the context of the study, i.e. the contextual background to schoolteachers' professional development in China, and outline my route into the study. Then I begin Chapter 3 by surveying the professional development literature to review existing definitions of TPD and reach a working definition for the study, followed by an exploration of the wider literature, with a particular reference to the schoolteacher in the TPD ecosystem and the occurrence of career-long professional development. I consider theoretical issues and concepts and identify the gaps for the study to bridge. In Chapter 4 I discuss and justify the methodology I used. I outline the research design, including my research questions, and describe the research process and what I learned from it. Ethical and quality issues are also considered in the chapter.

I present the findings of the study in Chapters 5 through 7. In Chapter 5 I focus on the forms of professional support, in Chapter 6 the supportive roles of contextual elements, and in Chapter 7 the themes of support for sustained investment in TPD throughout the career. These findings chapters illustrate contextual support involved in schoolteachers' career-long professional experiences.

In Chapter 8 I discuss the findings with a particular focus on understanding the support for career-long professional development of the person in the role of schoolteacher in his/her unique context. I examine the interrelations within and between TPD activities, and then look beyond activities at the wider TPD

ecosystem, followed by a discussion of the schoolteacher as a person in the career-long developmental context. Finally I synthesise the findings and insights of the study to conceptualise Sustainable Professional Development (SPD) for consistent understanding of career-long professional development and its contextual support. I conclude in Chapter 9 with a summary of the arguments and implications for future practice and research in the field of teacher professional development.

Chapter 2
Contextual Background

2.1 Introduction

In this chapter, I describe the contextual background of the study. I first briefly introduce schools and schoolteachers in China, and then discuss the Chinese context of Teacher Professional Development (TPD), from the country's general picture to an illustration of my personal experience, and to the TPD context of the specific research site of this study. As I analyse the Chinese context, I reflect on my early thinking about supporting schoolteachers' professional development.

2.2 Schools and schoolteachers in China

Currently in China, school education consists of 12 years, ranging from Grades 1 to 12, as illustrated in Figure 2.1 below. Chinese children start to go to primary school (in Chinese pinyin, *xiaoxue*) at the age of six. After six years' schooling from Grades 1 to 6, they move onto junior high school (*chuzhong*) for lower secondary education from Grades 7 to 9. At the end of Grade 9, they sit for an examination organised by the municipal or provincial education authorities, and the results decide where they go for their upper secondary education. Every year since the 1990s, about half of the youngsters are admitted to senior high schools (*gaozhong*), and the other half to specialised schools to develop their vocational skills (Li, 2002). Senior high school education lasts for three years from Grades 10 to 12, and at the end, students take the national college entrance examination (*gaokao*) and most of them attend colleges or universities afterwards.
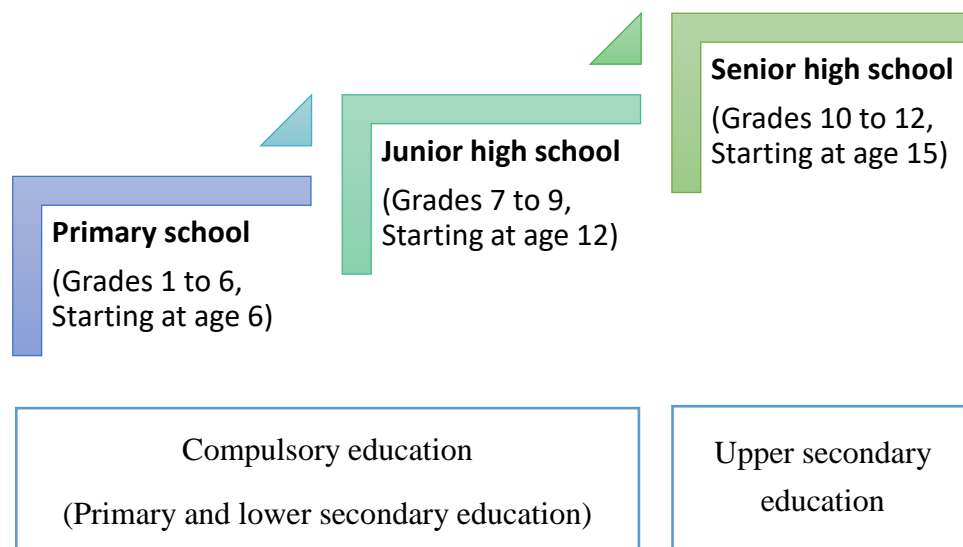
Figure 2.1 Basic education schools in China

In the Chinese context, compulsory education includes primary and lower secondary education as the *Compulsory Education Law* (NPC, 1986) stipulates. Compulsory and senior high school education are often referred to together as basic education (e.g. Liu, 1991; Yi, 2010), although pre-school education is sometimes included, especially in the official discourse of the new century (e.g. MOE, 2001a; 2021).

Among the various subjects taught at schools, Chinese, mathematics and English are often taken as core subjects by students and parents, although such interpretation has never been officially acknowledged. These three subjects are always included in the examinations from one to another education stage. All senior high school graduates sitting for the national college entrance examination, in particular, are required to take tests in Chinese, mathematics and a foreign language, regardless of their intentions to study arts or science in university. English as a foreign language (EFL) is widely taught at schools in China, though Japanese, Russian, German, French, and

Spanish are also legitimate language choices (MOE, 2018). Whereas schoolchildren across the country are expected to start learning English at Grade 3 according to the national EFL curriculum standards (MOE, 2001b; 2012), some children might start earlier, especially those in developed areas and large cities.

Besides teaching a particular subject, a schoolteacher may also serve as a classroom teacher with additional responsibilities for a specific class of students, particularly their discipline and moral education. Classroom teachers are often schoolteachers of Chinese, mathematics and English, given that they teach fewer students (two to three classes) but meet them more often (almost every day) than other teachers.

Schoolteachers are generally respected and expected to be devoted to caring for and educating the younger generation in the tradition and today's society in China. Teaching, however, has never been among the best paid professions. In 2020, there was still a case reported by the central government that schoolteachers in a remote county were paid in arrears (The State Council, 2020). The Chinese government has been making efforts to raise teachers' social status over the last four decades. To this end, September 10 was first celebrated as Teachers' Day in 1985, and later specified by the *Teachers Law* (NPC, 1993). Every year, the authorities honour outstanding teachers and make their dedication and achievements known to the public. It is also common that people express their gratitude to teachers on that day.

2.3 The overall TPD context in China

The general picture of China in the last four decades has been reform and opening-up to the outside world. Within this general picture, three features of the Chinese society are particularly relevant to schoolteachers' professional development: the dramatic and unbalanced development in social change, continuous curriculum reform in school education, and top-down mandatory TPD for schoolteachers. In

this section, I examine these features hoping to give an overall description of the TPD context in China.

2.3.1 Dramatic social change and unbalanced development

Dramatic change has taken place in China since the country introduced the policy of reform and opening-up in 1978. With its rapid, continuous economic growth, China went from a low-income country to a lower–middle-income country in 1998, and to an upper-middle-income country in 2010 (Liu, 2018, p. 70). In my own experience, for instance, the school I worked for had only two landline telephones in the early 1990s, although it was then the best equipped and most prestigious school in the province whose economy came top in the country. Today, in contrast, it is common for people across China to have a smartphone and mobile internet access. By the end of 2015, China had 1.3 billion people who possessed mobile device connections, and 62 percent of whom were using smartphones, exceeding Europe's average of 55 percent (Ji, 2017, p. 68).

The dramatic change has been system-wide and manifested in every aspect of the Chinese society, from a visible shift to modern ways of life to subtle evolution of cultural values. Whilst daily payment is commonly done by mobile applications, online exchange of Red Packets (*hongbao*) has also become popular since WeChat, the most widely used social application in China, launched its digital-wallet function in 2013. Red Packets are traditional monetary gifts exchanged for the Chinese New Year or special occasions (e.g. weddings and the birth of a baby) between family members, relatives and friends, but today, online Red Packets are also used as a tool for socialisation between colleagues and acquaintances, influencing people's social relationships (Ji, 2017). Cultural values have evolved over the last four decades. Zeng and Greenfield (2015) report that along with urbanisation, economic development, and enrolment in higher education, there is 'a reversal in the relative predominance of collectivistic and individualistic values in a number of domains' (p.

53), as reflected in the frequencies of words used in Chinese-language books from 1970 to 2008.

Despite its overall dramatic leap, China's development is unbalanced, as acknowledged by government reports (e.g. Xi, 2017) and scholarly research papers (e.g. Huang, Ning, & Tian, 2018; Zhou, Guo, & Liu, 2018). The country is now the world's second largest economy, but still a developing country with a population of 1.4 billion. Regional and urban-rural disparities persist in economics, education and other aspects. In particular, co-existing with many modern, developed cities are various much less developed rural areas. It was not until the end of 2020 that all the country's poor rural population was lifted out of poverty, defined by living on an annual income below CNY 4,000, or roughly USD 611.40 (Xinhua, 2021).

The dramatic but unbalanced development as outlined above has a marked impact on every member of the Chinese society, including schoolteachers. Alongside the social change, there has also been curriculum reform continuously bringing new educational ideals into schoolteachers' professional lives and calling for their professional change. I describe China's continuous curriculum reform in the sub-section below.

2.3.2 Continuous curriculum reform in school education

Similar to its economics, China's education in the last four decades has been a process of 'connecting to the international track' (Wang, 2011a) against a backdrop of reform and opening-up to the outside world. In the process, there were increasing challenges brought by the change of time as well as varied needs to be met given the country's dramatic social change and unbalanced development. In response to the varied needs and increasing challenges, China has continuously initiated rounds of school curriculum reform since the late 1970s.

It was a recovery period for China's school education from 1978 to 1985, during which efforts were invested to restore the conventional curriculum previously ruined by the Cultural Revolution turmoil between 1966 and 1976 (Lei, 2010; Wang, 2012; Yi, 2010). In 1986, the *Compulsory Education Law* (NPC, 1986) was enacted, initiating the curriculum reform to propel nine-year compulsory education from Grade 1 through Grade 9 (as indicated in Figure 2.1 above). Later in 1993, another round of curriculum reform kicked off with the promulgation of *China's Education Reform and Development Outline* (CPC Central Committee & State Council, 1993). The reform was to promote a shift from examination-oriented education (in Chinese, *yingshi jiaoyu*) to quality education (*suzhi jiaoyu*). As Dello-Iacovo (2009) notes, whereas examination-oriented education has long been embedded deeply in Chinese culture and society, quality education encompasses a range of educational ideals, but generally refers to a more holistic style of education which centres on the whole person (p. 241). The reform aimed, for example, 'at bringing about fundamental change to the long-standing teacher-centred and transmission-based pedagogies' (Li, 2019, p. 6).

The first round of curriculum reform in the new century was initiated by the *Action Scheme for Invigorating Education towards the 21st Century* (MOE, 1998) at the end of 1998, and officially launched later in 2001, when the Ministry of Education promulgated the *Basic Education Curriculum Reform Outline* and the curriculum standards for different school subjects. The cluster of policy documents 'articulated the vision of China's education in the popular discourse of knowledge economy and innovation' (Wang, 2011a, p. 6) at the turn of the century, and constituted 'a clear indication of China's successful connection to the international track conceptually' (ibid). As Law remarks:

> curriculum reform is China's primary manpower development response to 21st century challenges […]; it is marked by struggles regarding the social distribution of knowledge, skills and dispositions, and between preparing students to compete globally and preserving their sense of national identity.
>
> (Law, 2014, p. 333)

Currently, a further round of reform is underway. In 2018, the newly revised curriculum standards for senior high school subjects were issued (MOE, 2018), and those for primary and junior high school subjects are now high on the agenda. The reform upholds fostering integrity and promoting rounded development of people (*Lide-Shuren*) as the fundamental task of education (Hu, 2012), and underlines the key competencies and core values for Chinese student development (Lin, 2017).

As outlined above, the last 40 years of school education in China has characterised itself as a continuous process of curriculum reform, from restoring conventional curriculum to propelling nine-year compulsory education in the 1980s, and to aiming for quality education in the 1990s and knowledge economy and innovation at the turn of the century, and currently, students' key competencies and core values. The continuous curriculum reform manifests the government's concern about the varied needs for and increasing challenges to school education amidst the change of the country and the outside world. The concern is also reflected in top-down mandatory TPD for schoolteachers, which I examine in the sub-section below.

2.3.3 Top-down mandatory TPD for schoolteachers

In general, professional development for schoolteachers in China is top-down and mandatory (Zhou, 2014). As Liu (2017) contends, 'Chinese education system is a highly centralised one, and any reforms in Chinese education must be understood within such a centralised context' (p. 2). The importance of enabling TPD among schoolteachers is often acknowledged in the discourse of government documents, and top-down mandatory programmes are accordingly designed and implemented following the country's social change and curriculum reform.

From 1977 to early 1980s, in-service training for schoolteachers was 'compensatory' (Wang, 2011b; Zhou, 2014). After the Cultural Revolution turmoil (1966 – 1976), 'many teachers could not teach' (Zhou, 2014, p. 512), so training had to start by helping schoolteachers learn the textbooks they needed to teach, and 'the

minimum requirement for a qualified teacher was [then] "knowing what you teach"' (ibid). Later between mid-1980s and mid-1990s, the government shifted the focus to upgrading schoolteachers' educational credentials to a qualified level. Primary and secondary schoolteachers were then respectively expected to reach equivalent qualifications of normal school and college graduation levels, as the Ministry of Education specified in the *National Education Planning Outline* issued earlier in 1978 (Wang, 2011b).

In the 1990s, besides providing in-service training for schoolteachers to obtain required educational credentials, the Chinese government also began to build a full-coverage system of continuing education to keep all schoolteachers on track for their lifelong learning. The movement towards continuing education was initiated in 1990 when the National Education Commission promulgated the *Summary of the National Meeting on Continuing Education for Primary and Secondary Schoolteachers*. The document stipulated that the focus of in-service training for schoolteachers should be on the implementation of continuing education (Kui, 1991; Wang, 2011b).

Guided by the notion of lifelong learning, the continuing education movement so far has made explicit to schoolteachers and officials alike that TPD is mandatory for all schoolteachers, and schools and governments are responsible for the provision of relevant support. In particular, the *Teachers Law* enacted in 1993 specifies:

> The administrative departments of education under the people's governments at various levels, the departments in charge of school affairs and the schools shall work out teachers' training programmes and conduct various forms of ideological, political and professional training among teachers.
>
> (NPC, 1993)

At the end of the 20th century, as noted above (in 2.3.2), the *Action Scheme for Invigorating Education towards the 21st Century* (MOE, 1998) initiated the first round of curriculum reform in the new century. In the same document, the Ministry

of Education also stipulated that diversified continuing education should be provided for the entire body of full-time schoolteachers. Since then, there have been training programmes organised by various education authorities under the name of 'training for all' (in Chinese, *quanyuan peixun*), meaning that every schoolteacher is required to take part. Some of these large-scale programmes focus on improving the overall quality of schoolteachers, such as training in computer literacy fundamentals, whilst many other programmes aim to put curriculum reform into practice, especially those designed to help schoolteachers better understand the new curriculum standards.

For Chinese schoolteachers, TPD is mandatory not only in the sense that they are required to take part in top-down activities or programmes called 'training for all', but also in that their participation in continuing education is a basic condition to satisfy when they apply for a higher professional rank. According to the *Regulations on Continuing Education for Primary and Secondary Teachers* (MOE, 1999), participation in continuing education, either in-service training or degree study, is both a schoolteacher's right and obligation. The document also stipulates:

> The administrative departments of education under the people's governments at various levels shall establish a system for the assessment of primary and secondary schoolteachers' continuing education and the registration of their achievements. The assessment results shall be taken as one of the considerations for the appointment and promotion of teachers.
>
> (MOE, 1999)

So far, local education authorities have set up elaborate systems for the registration and assessment of schoolteachers' continuing education. Local systems may differ given the unbalanced development across the country, but they similarly make it mandatory for schoolteachers to earn continuing education credits bound with their professional promotion. Schoolteachers are required to achieve a minimum of credits each year by participating in TPD activities or programmes, on- or off-line. In many cases, schoolteachers do this as additional work to their teaching since they do not get time off for it.

As illustrated above, the overall TPD context in China is characterised by dramatic but unbalanced social development, continuous curriculum reform and top-down mandatory TPD. Against the backdrop of a fast-changing society, whilst curriculum reform constantly brings in new educational ideals for schoolteachers to conform to, the elaborate continuing education system keeps schoolteachers on the route of life-long learning through top-down mandatory TPD bound with their professional promotion. Alongside the country's rapid, continuous economic growth, the Chinese government has been steadily increasing investment in schoolteachers' professional development over the last four decades. Top-down mandatory TPD is prominent and powerful in every schoolteacher's professional life.

In the following section, I describe my school teaching and mentoring experiences to provide a personal perspective on the Chinese TPD context, and outline my route into this doctoral study.

2.4 My route into the study

Before doing my PhD, I worked in China for 25 years, first as a schoolteacher, and then a teacher mentor and researcher. As a Chinese citizen born in the early 1970s, I also personally experienced China's dramatic social change in the last four decades. It was my previous career life in the fast-changing Chinese society that started my conscious thinking about TPD. In this section, I reflect on my personal experience and examine problems in the Chinese TPD context, leading to the main question that I would like to tackle in this thesis.

2.4.1 My TPD experience as a schoolteacher

In the early 1990s, I entered the teaching profession and became an EFL teacher at a prestigious state school in Guangdong Province, economically the most developed province in China. Whilst teaching at the school, I personally benefited from the

country's dramatic change. As noted above (in 2.3.1), for instance, the school was equipped with only two landline telephones in 1993, but in 2000, a laptop computer was provided for each teacher. As a result, I became skilful in using the computer and online resources to teach, and to pursue my professional growth. I gradually stood out. Besides winning provincial and national teaching competitions, I was invited to give lessons in other parts of the country. Whereas I appreciated the privileged support from my school, I also noticed the country's unbalanced social development and its influence on schoolteachers' professional development.

I taught at the school for 15 years, with the first 4 years in the junior high school section, and the later 11 years in the senior high school section. During those years, I enjoyed my teaching, and voluntarily devoted a lot of efforts to reading and thinking about language teaching and school education. Particularly in the 1990s, I never felt being pushed to learn anything, but I knew that when needed, support was there for me. In the first few years of my teaching, for example, an experienced colleague was assigned to be my mentor, but I made my own decisions about how to learn from her. Another example was that I liked reflecting on my own teaching and luckily, the school organised annually an essay writing competition, which was not mandatory but free for teachers to join. So my reflection was indirectly recognised when I turned it into a paper and won a prize in the competition every year.

TPD opportunities in the 1990s were something like bonuses for schoolteachers, even at our school. When a colleague was given an opportunity, the others would take it as a recognition of his/her work by the leadership. For instance, I involved myself in a national project, and was supported by the school to attend conferences held in other provinces. Each time my colleagues were happy for me and took my classes whilst I was away. As noted above (in 2.3.2), the country implemented the curriculum reform shifting towards quality education since 1993, but there was not much related in-service training. Top-down mandatory TPD was not noticeable at that time. I did not feel much pressure from the reform, nor did I see any for my

colleagues and the school leadership. The school was then already leading and famous for its tradition in quality education.

In the 2000s, however, I could see top-down curriculum reform become increasingly forceful, or obtrusive, to some extent, in our professional lives. As the new century's first curriculum reform came (in 2.3.2), my colleagues around began to complain about the reform, especially the frequent change of textbooks for it. An extreme case was that the authorities introduced a new series of textbooks each year in a succession of three years. The quick switch of textbooks caused many problems for us frontline schoolteachers. For instance, textbooks in a series came out one by one on a yearly basis, so the whole set was not available before teaching, but when finally collected three years later, it was then replaced by another series. As a result, we could not do in-depth textbook analysis for our teaching, which conflicted with the belief about good teaching we firmly held as a school tradition.

The TPD environments in the 1990s and the 2000s were in sharp contrast for me and my colleagues. In the 1990s, the leadership cared about our wellbeing rather than pushing us to learn, as the then-principal said, 'Just focus on your teaching. I am the one to find support for everybody.' Formal TPD opportunities were very few, but we all found ways to learn. We voluntarily devoted efforts to reading and writing, and communicating with each other. The office was then where we enjoyed staying and much informal discussion about teaching and education took place. The office chats were particularly beneficial to my professional growth as a then-beginning teacher. In the 2000s, however, we found ourselves being pushed to participate in more and more top-down training, and gradually, my colleagues around became lukewarm about professional development. Everyone seemed to retreat to their own personal lives. We seldom stayed at the office unless we had to, just the reverse of what we did before in the 1990s.

I personally felt sad about the change of TPD environment at our school. I also noticed the crucial role of context in schoolteachers' professional development. When we felt being well supported as in the 1990s, we happily devoted ourselves to TPD activities, formal and informal. In contrast, if the environment did not support, but pushed schoolteachers to learn, they might be pushed to give up learning, even the teaching job. Disappointed at the changed environment, two close colleagues of mine, one young and the other middle-aged, left the profession in the late 2000s. I also left the school, but hoped to make myself a better language teacher. Building on my MA in TESOL (Teaching English to Speakers of Other Languages), I went to Cambridge to do my M Phil in English and Applied Linguistics.

As illustrated above by my personal experience, the last four decades of social and educational change has brought schoolteachers not just increased TPD opportunities, but also problems. In the sub-section below, I consider the problems and related questions that led me to this study.

2.4.2 Existing problems and the subject of this thesis

On completing my M Phil in 2009, I returned to China and worked as a researcher and teacher mentor. I first served a university research institute in Beijing, the capital of China, engaging in both research work and training schoolteachers from across the country. In particular, I was invited by the Ministry of Education to serve as an expert team member in a number of online training programmes for all the senior high schoolteachers in the provinces involved. After two years in Beijing, I went back to where I started my career, the capital of Guangdong Province. I played my researcher and mentor role at a district education authority for three years, and then the provincial authority for four years until I left for my PhD in 2018. My work was similar at the two local education departments, but at the provincial-level, I also did policy-advising work and related research.

Involved in teacher mentoring and policy-advising, I started to consciously think about schoolteachers' professional development and existing problems. I witnessed in my work since 2009 not only increasing government efforts intended to support schoolteachers, but also schoolteachers' mixed feelings, as I myself experienced in the 2000s (in 2.4.1), that they yearned for professional growth, but were reluctant about TPD opportunities. The problem still persisted that top-down mandatory TPD was so powerful that schoolteachers felt pushed to learn (Li, 2009; Yuan, 2014). Increased government investment brought more TPD resources and opportunities, but these did not seem to be as supportive as expected for schoolteachers. As Gao (2015) remarks, many TPD activities did not achieve expected results, and some were even disliked and resisted by schoolteachers (p. 4).

In my work, I tried to help schoolteachers enjoy their learning, for example, by offering them options to choose from, and making TPD activities or programmes as inviting as possible. However, I was aware that my efforts could help very little, given that the activities or programmes I organised were also part of the country's elaborate system of top-down mandatory TPD that pushed schoolteachers to earn continuing education credits (in 2.3.3). As a researcher, I realised that in-depth inquiry was needed in order to better understand schoolteachers' professional development, and mitigate existing problems in practice. As I reflected on the work I was then undertaking, I found myself constantly pondering:

- How might schoolteachers be best supported to sustain TPD throughout their careers?

That is now the subject of this thesis. It was the question that gradually guided me into this doctoral study. Whilst pondering the subject question, I noticed more questions, particularly those about the three interrelated concepts involved: TPD, schoolteacher and support.

A further examination showed that the top-down mandatory TPD approach in China seemed to take TPD as formal in-service training of continuing education. However, as noted above (in 2.4.1), my early professional growth also benefited from informal office discussions in the 1990s. So I asked myself: What is TPD? Does it involve informal activities? Moreover, the approach appeared to consider schoolteachers as mere lifelong professional learners, but in the 1990s, I never felt being treated so. Instead, I found myself well supported as a school community member and respected as a teacher to make my own decisions, so I happily engaged myself in various TPD activities in order to contribute to my students' successes. I therefore wondered: Who is the schoolteacher as a person in TPD? Is the schoolteacher a mere learner? In the top-down mandatory TPD approach, activities or programmes were intended to be supportive, but as discussed above, schoolteachers did not necessarily agree. They might take intended support as pressure to push them to learn. So, what does support mean in TPD? Should it be defined by schoolteachers themselves or education authorities?

As I explored further, I came to believe that I wanted to inquire into schoolteachers' professional development for my PhD. I had my early thinking written down and published in a paper (Zhang, 2017), but found myself still far from having a good understanding of many questions and their interrelations, particularly those noted above. Besides, I sensed that to best support schoolteachers, there might be a need for a notion of sustainable professional development, although very little attention was then given to it in the literature. I therefore started this doctoral study hoping to investigate contextual support for Sustainable Professional Development.

Building on the above discussion about Chinese overall TPD context, I examine the specific context of the research site for this study in the section that follows.

2.5 The research site

The specific research site of this study is Z City, a prefectural city located at the edge of Guangdong Province in southern China. The city consists of a number of districts, counties and county-level cities, with a total resident population close to seven million. Z City is about 450 kilometres, six-hour drive away from the provincial capital, i.e. the most developed area of the province. As noted above (in 2.4), I lived and worked in the provincial capital for many years, so before the study, I had knowledge about the broad context of Z City, which helped me gain access to people and logistics for the study and understand my participants' professional life experiences..

Guangdong Province is one of the most developed regions in China, but similar to the country, the development of the province is unbalanced. In 2017, for instance, the gross domestic product (GDP) per capita for the richest prefectural city reached CNY183,544, in sharp contrast to the figure of CNY24,623 in the poorest city (Statistics Bureau of Guangdong Province, 2019). Z City achieved CNY38,508, which was lower than the provincial median of CNY47,116 and ranked No. 14 among the 21 prefectural cities in the province. The moderate development and geographical distance from the developed area allowed Z City to be an appropriate research site with potential relevance to understanding schoolteachers' professional development in other parts of the province and China. (I will return to this point in Chapter 4 below.)

Z City similarly possessed a feature of dramatic but unbalanced social development (as discussed in 2.3.1). Whereas the city's urban districts were relatively developed, there were also poor areas located in the counties or county-level cities. As the country speeded up its development, Z City also expected faster change in the recent years. In 2018, for example, the city was connected by the high-speed train service with the provincial capital, taking about three hours to cover the distance, in contrast

to the six to eight hours by an ordinary train. In 2019, the city started building its new international airport, which was hoped to be completed around 2022.

Given China's 'highly centralised' (Liu, 2017, p. 2) context, continuous curriculum reform and top-down mandatory TPD were also influential in the professional lives of Z City's schoolteachers. For instance, the Ministry of Education (2018) issued the curriculum standards for the latest curriculum reform in January, and in November, Z City's municipal education bureau (2018) accordingly organised training on the curriculum standards, requiring all Grade 10 senior high schoolteachers to take part. As part of the elaborate continuing education system, there was a department in the city's education authority called 'teacher continuing education centre' (*jixv jiaoyu zhongxin*). The centre was specifically responsible for coordinating and organising various top-down mandatory training programmes and managing the records of schoolteachers' continuing education credits, which were linked to their promotion of professional titles, and eventually their salaries and wellbeing (in 2.3.3).

According to the promotion system, schoolteachers' professional titles mainly ranged from level two to level one teacher, and to senior teacher and full senior teacher, equivalent to those from associate lecturer to professor for university teachers. A schoolteacher holding a bachelor's degree usually started with the title of Level Two Teacher. The provincial human resources and education authorities (2016) stipulated in the latest document that schoolteachers applying for promotion should meet both basic and professional conditions. Except for ethics and health, the basic conditions all concerned mandatory TPD (continuing education, computer literacy, and educational credentials and years of teaching). The professional conditions not only involved moral education and subject teaching work, but also teaching research. The teaching research conditions made it mandatory for schoolteachers to write papers and participate in or lead projects researching their teaching, if they wanted to apply for a higher professional title.

Various top-down TPD opportunities were provided with the intention to support schoolteachers. As noted above, the continuing education centre of Z City's education authority coordinated and organised training programmes every year observing the province's continuing education regulations (People's Government of Guangdong Province, 1999). The programmes mainly included induction training for beginning teachers, full-coverage training for all teachers, and special training for 'backbone teachers' (*gugan jiaoshi*) and 'master teachers' (*ming jiaoshi*) selected by the authority to play a modelling and leading role among schoolteachers respectively at the school and in the city. Besides the continuing education centre, TPD activities were also regularly organised by the teaching and research office, a department commonly found in various levels of education authorities across the country. Researchers of the office usually had school teaching experiences, so they also served as teacher mentors and organised TPD activities for schoolteachers of particular subjects, as I did while working at the district- and later provincial-level education authorities (in 2.4.2). Researchers of district and municipal levels held regular meetings to provide opportunities for schoolteachers to learn from each other and sometimes from external experts.

The above discussion has shown that in Z City, just like other parts of China, there were interconnected systems of professional promotion and continuing education intended to support schoolteachers' professional development. Whereas the promotion system set out the route for schoolteachers to progress from one professional title to another throughout their careers, the TPD opportunities provided by the continuing education centre and the teaching and research office were hoped to help schoolteachers meet their promotion conditions (e.g. earning continuing education credits and involving in teaching research) and realise lifelong learning. As discussed above (in 2.4), schoolteachers might not necessarily see the top-down efforts as support. Feeling pushed to learn, they might even become lukewarm about TPD opportunities, let alone devoting themselves voluntarily to the pursuit of career-long professional growth.

Again, the question arises: How might schoolteachers be best supported to sustain TPD throughout their careers? That is what I would like to explore in this thesis.

2.6 Summary

This study is set in the context of China with the specific site in Z City, south of the country. In this chapter, I have described the contextual background of the study. I started by briefly introducing Chinese schools and schoolteachers, followed by a survey of China's overall context of Teacher Professional Development (TPD), which was characterised by dramatic but unbalanced social development, continuous school curriculum reform, and top-down mandatory TPD for schoolteachers. I then moved on to outline my route into the study and the TPD context of Z City. Relating to my personal experience, I considered existing problems in the Chinese TPD context, and set out the subject of this thesis: How might schoolteachers be best supported to sustain professional development throughout their careers?

The subject question of the study involves three interrelated key concepts: TPD, schoolteacher and support. In Chapter 3 below, I explore the literature to clarify these key concepts and identify the gaps this study is to bridge.

Chapter 3
Literature Review

3.1 Introduction

As previously discussed, the subject of this thesis is about how schoolteachers might be best supported to sustain Teacher Professional Development (TPD) throughout their careers. This concerns three interrelated concepts: TPD, schoolteacher and support. In this chapter, I explore the literature around these interrelated concerns, and set out my conceptual framework for the study. I start with a review of existing TPD definitions (in 3.2), based on which I make it transparent that TPD involves the schoolteacher in context and a career-long process of the schoolteacher's change. I then examine the schoolteacher in the TPD ecosystem (in 3.3) and the occurrence of TPD throughout the career (in 3.4). A critical look at the literature leads me to a person-oriented ecological sustainable perspective on TPD, from which I tentatively, conceptualise Sustainable Professional Development (SPD). At the end, I consider contextual support for SPD (in 3.5). Whilst examining these different TPD aspects, I identify unanswered questions that suggest the gaps for this study to bridge. I close this chapter with a brief review of key contributions in language teacher education (in 3.6) and a summary of the chapter (in 3.7).

3.2 Defining TPD

A definition of TPD is needed for the study to be based on. While Kelchtermans (2004) suggests that there is a shared understanding of the concept of TPD, no agreed-upon definition exists in the literature (Buysse, Winton, & Rous, 2009). Kelchtermans (2004) sees the following terms as variants of TPD: professional development, teacher development, staff development, and continuous/continuing professional development (CPD). There are subtle differences between these terms (Mann, 2005), but being closely related, their definitions might help triangulate

shared understanding of TPD in the field. A review of the literature suggests that these terms seem to be defined revolving around four questions:

- What is TPD? Is it an activity or a process?

- What activities are considered as TPD activities? Formal or informal activities?

- What is the goal of TPD? To meet organisational or individual teachers' needs?

- What does the teacher develop through TPD? Job-related competency or the teacher's own potential?

Each question involves two defining elements (e.g. the elements of activity and process for the first question). I henceforth refer to the questions by their related elements for the convenience of the discussion, so the above four questions are respectively, the activity-process, the formal-informal, the organisational-individual, and the competency-potential question. Consideration of these questions in defining TPD may be illustrated with the help of Day's definition:

> Professional development consists of all natural learning experiences and those conscious and planned activities which are intended to be of direct or indirect benefit to the individual, group or school and which contribute, through these, to the quality of education in the classroom. It is the process by which, alone and with others, teachers review, renew and extend their commitment as change agents to the moral purposes of teaching; and by which they acquire and develop critically the knowledge, skills and emotional intelligence essential to good professional thinking, planning and practice with children, young people and colleagues through each phase of their teaching lives.
>
> (Day, 1999, p. 4)

Day addresses all the four defining questions. He underlines both elements involved in each of the first three questions above by integrating in the definition both activity and process, formal 'conscious and planned activities' and informal 'natural learning experiences', and organisational and individual needs. However, he only notes the competency element for the competency-potential question. This is improved in his later definition with Sachs:

> CPD is essentially not about particular forms of activity but rather about a range of activities – formal and informal – which meet the thinking, feeling, acting, life, context and change purposes of teachers over the span of their careers. It is about the short- and long-term development of the person, the professional, the classroom practitioner and the occupational role he or she occupies.
>
> (Day & Sachs, 2004, p. 12)

The explicit use of 'the person' in parallel with job-related roles ('the professional, the classroom practitioner and the occupational role') suggests that the teacher as a person is considered and the element of potential endorsed, though implicitly. Day and Sachs' definition is among the very few that have so far treated all the defining questions and embraced both elements for each question.

A definition might not cover all the questions, but when a question is attended, as illustrated above, choices are made to endorse either one or both defining elements. Table 3.1 provides an overview of how defining elements are endorsed in the last four decades with respect to the four questions. In the 1980s, for instance, the elements of activity, process, formal activity, organisational needs and job-related competency were considered but separately by different researchers. Since the 1990s, there have been definitions embracing both elements involved in a defining question (e.g. Day's (1999) and Day and Sachs' (2004) definitions above). This is indicated in Table 3.1 by using an ampersand (&) between the names of the two elements. For example, I enter 'activity & process' to show that there were instances of endorsing both elements of activity and process in one definition in the related decade. I discuss in detail below.

Table 3.1 TPD defining elements endorsed in the last four decades

	Defining question and elements			
	Activity-process	Formal-informal	Organisational-individual	Competency-potential
1980s	activity, process	formal	organisational	competency
1990s	activity, process, activity & process	formal & informal	organisational, organisational & individual	competency
2000s	activity, process, activity & process	formal & informal	organisational, organisational & individual	competency, competency & potential
2010s	activity, process, activity & process	formal & informal	organisational & individual	competency, competency & potential

The activity-process question asks whether TPD is an activity or a process. In every decade since the 1980s, there are definitions solely endorsing the activity element (e.g. Buysse et al., 2009; Moore & Hyde, 1981; OECD, 1998, 2014), or the process element (e.g. Diaz-Maggioli, 2004; McMahon, 1996; Padwad & Dixit, 2011; Williams, 1982). Definitions acknowledging both elements emerged in the 1990s, but have been present since then (e.g. Day, 1999; Day & Sachs, 2004; Earley, 2010). In particular, Day and Sachs (2004) interpreted the activity element as a range of activities over the span of a teacher's career, rightly suggesting a link between the activity and process elements, i.e. TPD process and activities are not separate, but mutually interdependent.

Based on Day and Sachs (2004), it can be argued that TPD is essentially a process of change but manifested and influenced by a range of activities. TPD is intended to enable change to happen, either teacher change (Guskey, 2002), school change (Sales, Moliner, & Francisco Amat, 2017), or educational change in general (Fullan, 2007). Whatever the orientation may be, an activity makes only one event in the process of change, but can never be the change *per se*. It follows that TPD is primarily 'a continuing process of becoming' (Mann, 2005, p. 105), although both elements of activity and process are indispensable in the TPD concept.

For definitions endorsing the activity element, the formal-informal defining question asks if further distinction is made between formal and informal activities. In the 1980s definitions focused solely on formal activities (e.g. Moore & Hyde, 1981), but since the 1990s, noting both formal and informal activities has been preferred (e.g. Day, 1999; Day & Sachs, 2004; Earley, 2010; OECD, 1998, 2014). A conceptual trend seems to have been well established towards recognising the role of informal activities in TPD, and acknowledging a continuum between formal and informal activities, from most official, public, conscious and planned activities to more personal, individual, relaxed and natural activities.

The call for a recognition of informal activities has been long in the literature (e.g. Joyce, 1980; Stevenson, 1987; Webster-Wright, 2009). As Evans (2019) notes, there is a need for 'placing informal and implicit processes in a much higher position than they have hitherto occupied' (p. 14) in the research agenda. Similar to my personal experience of benefiting from office chats with colleagues (in 2.4), teachers are reported in the literature to gain TPD through informal and daily activities, such as informal conversations with colleagues (Thomson & Trigwell, 2018), interaction with others in informal online networks and communities (Macià & García, 2016), and using such social media as Facebook (Patahuddin & Logan, 2019). More importantly, TPD might also occur in routine teaching, in which teachers develop '*their own understanding of what they are doing*' (Allwright, 2006, p. 15, emphasis

in original), either implicitly as their teaching experiences accumulate, or explicitly through such efforts of practitioner research as Exploratory Practice (Hanks, 2017).

The organisational-individual question concerns whether the goal of TPD is to meet organisational or individual teachers' needs. As early as the 1980s, there were definitions with a sole emphasis on organisational needs. TPD was taken in these definitions, for instance, to seek teachers' 'improved performance in present or possible future roles in the school district' (Moore & Hyde, 1981, p. 9), 'to improve student learning' (McMahon, 1996, p. 6), or 'to meet student needs' (Diaz-Maggioli, 2004, p. 5). Definitions only concerning organisational needs were dominant in the 1980s, and then co-existed for two decades with, and finally gave way in the 2010s to definitions embracing both organisational and individual needs (e.g. Day, 1999; Day & Sachs, 2004; Earley, 2010; Padwad & Dixit, 2011).

The conceptual trend of recognising individual as well as organisational needs accords with the understanding that individual teachers are primary stakeholders of their professional development. It is unlikely that teachers would be committed to having TPD goals achieved if they do not see ownership in the goals. It might not be necessary to go far as Evans (2019) to 'conceive of professional development as relating solely to the practitioner' (p. 7). Teachers' needs, however, should be acknowledged as indispensable to TPD goals, or to an ideal TPD scenario 'that accommodates the needs of the teacher and the school as well as local authority and national priorities' (Livingston & Robertson, 2001, p. 188).

The competency-potential question asks if the teacher is expected to develop in TPD his/her potential as an individual person, or only job-related competency (including knowledge, skills, values and other qualities). Most definitions to date, even in the 2010s, focus only on job-related competency (e.g. Buysse et al., 2009; Griffin, 1983; OECD, 1998, 2014). There are, however, definitions endorsing both elements of competency and potential (e.g. Day & Sachs, 2004; Padwad & Dixit, 2011), which

might signal the emergence of a conceptual trend towards developing not only job-related competency but also teachers' own potential through TPD. The trend can be traced to the early 1980s when Joyce proposed that:

> a comprehensive programme of professional development should fulfil three functions: the provision of an adequate system of in-service training for teachers; the provision of support to schools which will enable them to improve their programmes; and the creation of contexts in which *teachers are enabled to develop their potential* [emphasis added].
>
> (Joyce, 1980, p. 19)

Recently, Kennedy (2015) similarly highlights, along with socialisation and human capital development, a subjectification purpose of teacher education to see teachers as 'autonomous educators who can contribute to the common good through the fostering of their own specific interests and talents in creative ways' (p. 185). Joyce's (1980) and Kennedy's (2015) analysis suggest that the development of a teacher's own potential is necessary for TPD, and can be mutually reinforcing with the development of job-related competency.

In the late 1990s, Day (1999) intended his definition to include but go beyond 'the acquisition of subject or content knowledge and teaching skills' (p. 4). He added in his definition teachers' 'commitment as change agents to the moral purposes of teaching' (ibid). Day's attempt pushed towards but did not yet reach a recognition of developing teachers' own potential, given that commitment to moral purposes of teaching is also job-related. Later, Day and Sachs' (2004) definition placed in parallel the 'development of the person, [and] the professional, the classroom practitioner and the occupational role he or she occupies' (p. 12), and Padwad and Dixit (2011) put teachers' 'empowerment, the improvement of their agency and the development of their organisation and their pupils' (p. 7) side by side. Although these later attempts did not explicitly endorse developing teachers' own potential, but accorded with Joyce's (1980) idea of putting teachers' potential on a par with job-related competency to meet social, school and students' needs.

The above discussion with respect to the defining questions may be summarised as four key themes in defining TPD:

- TPD is essentially a career-long process of change manifested and influenced by a range of activities.

- There is a continuum between formal and informal TPD activities, from most official, public, conscious and planned activities to more personal, individual, relaxed and natural activities.

- TPD aims to meet individual teachers' needs besides the organisational needs of students, the school, local authority, and national priorities.

- Through TPD, a teacher not only develops expected job-related competency (including knowledge, skills, values and other qualities) for the role of teacher, but also his/her own potential needed to feel fulfilled as an individual person.

These themes accord with a conceptual trend since the 1980s that there is increasing recognition of the teacher as a developing person with his/her own needs to meet and potential to fulfil through TPD, in addition to acknowledging the teacher as a professional learner who is expected to develop his/her job-related competency for organisational needs. Building on the literature reviewed above, I define TPD for the purpose of this thesis as follows:

- Teacher Professional Development (TPD) is essentially, the process of an individual teacher's change as a professional learner in education and developing person in society. It is a career-long process manifested and influenced by a range of activities, formal and informal, which contribute to the acquisition of job-related competency as well as development of the teacher's

own potential, leading to better performance in his/her professional and personal roles.

The above TPD definition provides a starting point for the study to inquire into how schoolteachers might be best supported. Meanwhile, the definition suggests two areas of literature necessary to review before examining support for schoolteachers. These two areas are the schoolteacher and the process of how TPD occurs in context, given TPD concerns an individual teacher's change over the span of his/her career. I explore the literature with respect to the two areas in Sections 3.3 and 3.4 below.

3.3 The schoolteacher in the TPD ecosystem

Ecology originated in biology and referred to 'the study and management of the environment (ecosphere or biosphere) or specific ecosystems' (van Lier, 2004, p. 3). But nowadays it is also used to denote an ecological world view, which 'assumes that humans are part of a greater natural order, a great living system' (ibid). Besides broad strands of ecological work in the social science, ecological theories in specific areas were developed by Gibson (1979) (visual perception), Bronfenbrenner (1979) (human development), and Neisser (1988) (memory, self).

Bronfenbrenner's theory is of direct relevance to TPD as it concerns an individual person developing within a specific ecosystem. It seeks to synthesise in a model the span of levels from biology through the broadest level of the ecology of human development (Lerner, 2005), offering insight into adult development despite a focus on child development (Hwang, 2014; Merriam, Caffarella, & Baumgartner, 2007). Besides, the theory evolved from an early version describing the ecology of human development (Bronfenbrenner, 1977, 1979) to its developed form of Process-Person-Context-Time (or PPCT) model (Bronfenbrenner, 2005; Bronfenbrenner & Evans, 2000; Bronfenbrenner & Morris, 2006). The PPCT model involves four interrelated

components (the developmental process, the developing person, the context of human development, and time), covering the two key areas involved in TPD noted above (the schoolteacher and the process of how TPD occurs in context).

In this section, I focus on the schoolteacher in context. Besides Bronfenbrenner's theory, I also seek insights from other sources in the TPD and the broader literature to inform my understanding of the schoolteacher in the professional role (in 3.3.1) and the context of a TPD activity (in 3.3.2) and TPD ecosystem (in 3.3.3).

3.3.1 The person in the role of schoolteacher

An individual as a schoolteacher seems to be uniquely defined not only by the workplace or work hours, but also by the person students know and know about in real life, as Clandinin and Huber (2005) note, 'Teachers teach who they are' (p. 43). In order to teach, for instance, schoolteachers use pedagogic content knowledge (Shulman, 1986), some of which 'originate in the wisdom of practice' (p. 9) closely related to their real-life experiences. In and out of the classroom, schoolteachers are involved in keeping a positive person-to-person relationship with students, which is 'a central component in successful teaching and learning' (Aultman, Williams-Johnson, & Schutz, 2009, p. 636). With their work and lives interwoven, schoolteachers are found to have various 'boundary dilemmas' (Aultman et al., 2009). For example, O'Connor (2008) reports that her participants (three Australian secondary teachers) struggled with caring for students within reasonable limits 'in order to avoid their work "taking over" (Christina) or "eating up" (Laura) their personal lives' (p. 123).

The person in the role of schoolteacher is often considered as a role model for students. Cross and Hong (2012), for example, note that their case study participants (two American elementary teachers) 'saw themselves as "role models" and advocates for the students' (p. 964). Ntshuntshe (2019) calls on schoolteachers in South Africa to become non-violent role models against corporal punishment. In

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China, schoolteachers are traditionally seen as role models, as crystallised in the phrase still currently used, *shifan*, literally, teacher models. Uitto (2012) equally underlines a Finnish tradition that 'the idea of [teachers'] "model citizenship" has been strongly present' (p. 294).

As noted at the beginning of Chapter 1, Joyce (1980) proposes three needs that TPD must fulfil, with the third but 'perhaps most important' (p. 20) need, repeated below:

> to develop and encourage the teacher's desire to live a satisfying and stimulating personal life, which by example as well as by precept will help his students to develop the desire and confidence to fulfil each his own potential.
>
> (Joyce, 1980, p. 20)

Joyce rightly highlights schoolteachers' model function to justify the need for supporting schoolteachers to pursue better personal lives and develop their own potential. More importantly, Joyce's analysis suggests approaching TPD in relation to the unique characteristics of schoolteacher role, particularly the 'unavoidable' (Day, Kington, Stobart, & Sammons, 2006, p. 603) interrelationships between schoolteachers' professional and personal selves. The unique characteristics seem to underlie the understanding of TPD previously discussed in Section 3.2, such as acknowledging the schoolteacher not only as a professional learner, but also as a developing person. I will return and discuss this further in Chapter 8.

3.3.2 The person wondering in the TPD activity context

Context seems to be everything external and relevant to the schoolteacher. Wedell and Malderez (2013) elaborate further to see context as consisting of three core components (people, place, and time). Informed by Wedell and Malderez, it may be postulated that when a TPD activity occurs, the schoolteacher is embedded in the centre of and in mutually influential relations with context, as Figure 3.1 illustrates. The context of place is in hierarchical layers, from the immediate layer of activity

venue (e.g. the classroom), to the community (e.g. the school or institution), and to the town or city, and region, and outer layers to the country and particular part of the world. For each layer, there are visible aspects, 'physically possible for an outsider to notice relatively quickly' (Wedell & Malderez, 2013, p. 16) and invisible aspects such as institutional culture. The dotted lines 'indicate the fuzzy, permeable nature of the boundaries between layers and (the potential for) a constant flow of influence between layers' (ibid).

A. Venue
B. Community
C. Town/City
D. Region
E. Country
F. Part of the world
G. World
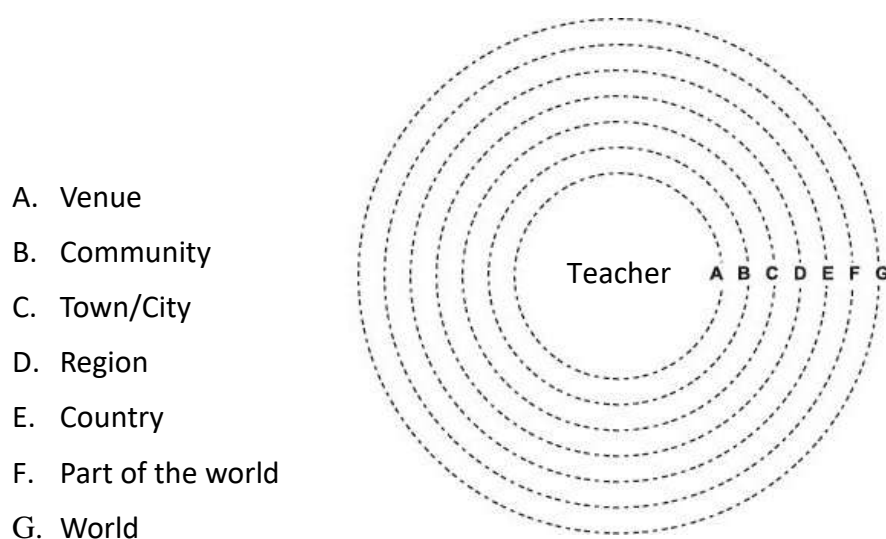
Figure 3.1 The schoolteacher as a person in the context of TPD activity
       (adapted from Wedell and Malderez (2013, p. 19))

From visualising the teacher embedded in the centre of context (e.g. Hwang, 2014; Raval, McKenney, & Pieters, 2012), a step further can be taken to acknowledge a perspective of the schoolteacher, who is an individual person wondering about the context. Such a perspective may be termed as a person-oriented perspective. By wondering, I mean that the teacher as a person potentially exercises his/her agency 'resulting from the interplay of [his/her] capacities and environment conditions' (Priestley, Biesta, & Robinson, 2015, p. 3), and conducts 'physical, cognitive,

affective, and/or motivational actions, and [make] choices based his/her purposes' (Teng, 2019, pp. 67-68) in a TPD activity.

A person-oriented perspective offers a logical sequence to understand how schoolteachers construct and construe context. Specifically, it gives an outward direction from the teacher-self and the immediate to the outer layers of context. Such a perspective seems to be useful as exemplified by bottom-up efforts in the field, including Diaz-Maggioli's (2004) conception of teacher-centred TPD and practical endeavours from an early teacher self-directed in-service programme in Australia (Logan, 1981), to recent teacher-led initiatives in sub-Saharan African countries (Kuchah, Djigo, & Taye, 2019).

Underlying the usefulness might be the consistency between a person-oriented perspective and the definition of TPD (in 3.2) as well as the role characteristics of schoolteachers (in 3.3.1). Others (e.g. activity organisers) can understand TPD by separate activities, but for the schoolteacher who participates in one activity after another, TPD is a process manifested and influenced by a range of activities over the span of his/her career. Informal activities, individual needs and his/her own potential are consequently in order in the process, as the schoolteacher teaches who he/she is, and more often than not, the best of himself/herself in order to meet the expectation of becoming a role model for his/her students.

From a person-oriented perspective, TPD involves everything interrelated in the TPD ecosystem for the schoolteacher. But how do the elements of TPD ecosystem connect with each other and influence the schoolteacher and his/her TPD? I move on to discuss this in the sub-section of 3.3.3 below.

3.3.3 The person developing in the TPD ecosystem

Bronfenbrenner (1979, 2005) conceptualises the context of human development as interrelated systems, ranging from the micro-, meso-, exo- to macrosystem. The microsystem is the system in which the developing person is participating at a given moment in his/her life. The mesosystem and exosystem are systems of interrelations between two or more microsystems. They differ in whether involving a microsystem the developing person personally participates in. Whereas the mesosystem relates microsystems with the developing person's participation, the exosystem involves at least one microsystem which indirectly influences the person's development though without his/her participation. The macrosystem is 'a societal blueprint for a particular culture or subculture' (Bronfenbrenner, 1994, p. 1645) that affects all other systems. Bronfenbrenner's human development theory offers an ecological perspective to see TPD occurring in a contextual ecosystem with all elements interrelated. As Van Lier (2004, p. 21) notes, ecology 'is the study of organisms and their relations with one another and their environment'. Above the major characteristics of ecology are the relationships between elements in an ecosystem (van Lier, 2004, 2010).

Bronfenbrenner's (1979, 2005) theory is, however, sophisticated by describing context in terms of a series of systems. It is sometimes misused (Tudge, Mokrova, Hatfield, & Karnik, 2009; Tudge et al., 2016). On the other hand, analogising the ecosystem as a set of nested Russian dolls (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 2006) might be oversimplified or 'misleading' (Shelton, 2019, p. 11) with the interaction between contextual levels excluded. There seems to be a possibility of trapping oneself in sophisticated or oversimplified thinking about context as it is so complex. To avoid being trapped, a person-oriented perspective might be needed additional to an ecological perspective. Bronfenbrenner's (1979, 2005) theory agrees with a person-oriented perspective in that his theory 'focuses on the individual's ecosystem' (Shelton, 2019, p. 59) and positions the developing person in the centre of ecosystem (Darling, 2007). This suggests the plausibility of adopting an ecological perspective to capture contextual complexity, and a person-oriented

viewpoint from the schoolteacher to seek a relatively simple but reasonable understanding of TPD ecosystem.

From a person-oriented perspective, schoolteachers might take the contextual level above activities to be microsystems, as activities in a given setting are noticeably interrelated. Slightly modifying Bronfenbrenner's (1994) definition of microsystem (p. 1645), a microsystem in TPD may be a pattern of activities, social roles, and interpersonal relations, experienced or perceived by the teacher, in a given setting with particular physical, social, and symbolic features that invite, permit, or inhibit, engagement in sustained, progressively more complex interaction with, and activity in, the immediate context. According to the given setting, various microsystems may exist, such as the microsystems of TPD, school, and family, respectively in the TPD, school and family given settings. I will return to this point in 8.3.

A schoolteacher might also take microsystems to be of two types: participating microsystems he/she personally participates in (e.g. the school microsystem), and non-participating ones without his/her participation (e.g. the policy-making microsystem in which official TPD decisions are made). Participating and non-participating microsystems are those that distinguish between Bronfenbrenner's (1994) mesosystem and exosystem as noted above.

Microsystem interrelations might not constitute a contextual level of mesosystem or exosystem from a schoolteacher's perspective. If schoolteachers consider activity interrelations as part of a microsystem rather than a different level, it is probable that they would similarly take the interconnection between microsystems only as an ingredient of the TPD ecosystem. Likewise, Bronfenbrenner's (1994) macrosystem might not be perceived by schoolteachers as a distinct level, given that the macrosystem 'consists of the overarching pattern of micro-, meso-, and exosystems characteristic of a given culture or subculture' (p. 1645) and permeates everything involved in the TPD ecosystem.

Above the microsystem level, schoolteachers might perceive the presence of the TPD ecosystem. In the TPD ecosystem, microsystems are interconnected, and activities are interrelated along with their associated social roles and interpersonal relations within each microsystem. Everything involved forms a particular pattern. It follows that a schoolteacher's TPD ecosystem might be a pattern of social roles, interpersonal relations, activities and microsystems, and interrelations within and between these elements, experienced by the schoolteacher as a professional learner and developing person, being embedded in the centre and in mutually influential relations with people, place and time.

In recent years, there have been a few studies, such as the three below, employing Bronfenbrenner's (1979, 2005) ecological theory to understand schoolteachers and their TPD ecosystems. Cross and Hong (2012) examine the emotions of two American elementary teachers through interviews, classroom observations, email communications and researcher memos. Rose (2017) analyses contextual influence on four American elementary teachers' choices of TPD activities based on data of interviews and activity records, and Fyall, Cowan, and Buchanan (2020) the mentoring ecology of three New Zealand primary schools using documentation, semi-structured interviews and field notes with respect to three mentoring dyads. Despite their different focuses, these studies report efforts to describe individual schoolteachers' TPD ecosystems, and illustrate the need for an ecological perspective in TPD and related fields.

The three studies suggest the presence of the school and policymaking microsystems and their interrelations, but far from the full picture of TPD ecosystem. Rose (2017), for example, identifies four domains of influence on the participants' choices of TPD activities, involving the school microsystem (school site needs and classroom issues) and policy-making microsystem (legislative concerns and administrative demands). No influence is yet reported from other microsystems, such as the family microsystem, which is presumably basic in a schoolteacher's TPD ecosystem. Rose (2017) highlights that one of the participants offered workshops for colleagues 'at

the urging of the district office, but she may not have persisted in this endeavour without the alignment of the other systems in which she was engaged' (p. 23). Rose uses the instance to exemplify the convergent impact of systems, but does not report further if the schoolteacher's alignment involved her family microsystem, which should be in order from a person-oriented perspective. It appears that there is a need for a perspective not just ecological, but also person-oriented in order to seek a holistic understanding of the TPD ecosystem.

Moreover, the above studies mainly research into 'context without development' (Bronfenbrenner, 1986, p. 288). They focus more on describing the TPD ecosystem, though only partially as discussed above, than individual schoolteachers' change in the ecosystem over time. As Rose (2017) notes, further research 'is needed to uncover the true extent to which convergences [of contextual influence] lead to teacher action' (p. 23). To understand how TPD might occur throughout the career, I explore the literature further in Section 3.4 that follows.

3.4 Enabling TPD throughout the career

Besides the schoolteacher in the TPD ecosystem reviewed above, the career-long TPD process is another area key to the subject of this thesis (how to best support schoolteachers to sustain TPD throughout their careers). In this section I examine the literature about the TPD process with first a focus on how TPD is enabled (in 3.4.1) and then, may best be enabled (in 3.4.2).

3.4.1 Teacher-context interaction for TPD

The interaction between the developing person and the context is prioritised in Bronfenbrenner's ecological theory of human development, particularly its Process-Person-Context-Time (PPCT) model (Bronfenbrenner, 2005; Bronfenbrenner & Evans, 2000; Bronfenbrenner & Morris, 2006). It is conceptualised that human

development occurs involving four principal components in dynamic, interactive relationships. The first component and the core of the model is process:

> More specifically, this construct encompasses particular forms of interaction between organism and environment, called *proximal processes,* that operate over time and are posited as the primary mechanisms producing human development.
>
> (Bronfenbrenner & Morris, 2006, p. 795, emphasis in original)

The power of proximal processes is mediated by the other components, i.e. by a function of the characteristics of the developing person, the immediate and more remote contexts, and the time periods in which the proximal processes take place.

As Lerner (2005) remarks, Bronfenbrenner's PPCT model is not alone among developmental systems models recognising that 'the relations between the active individual and the active context constitute the basic process of human development' (p. xix). It is in line with the movement since the 1970s that 'most developmentalists have accepted the role of person-environment reciprocal interaction theoretically' (Magnusson & Sattin, 2006, p. 406). Following this strand of research, particularly Bronfenbrenner's theory, it may be postulated that the schoolteacher and context constitute the two parties at work in the TPD ecosystem, and their interaction is the primary engine for the occurrence of TPD. Besides, the occurrence is mediated by the characteristics of the schoolteacher and the context (i.e. the TPD ecosystem). It follows that how the TPD ecosystem functions matters if TPD is to be best enabled.

According to Bronfenbrenner, it seems that the TPD ecosystem needs to function in a way that supports teacher-context interaction to be progressively more complex over time, as he notes:

> Over the life course, human development takes place through processes of progressively more complex reciprocal interaction between an active, evolving

biopsychological human organism and the persons, objects, and symbols in its immediate external environment.

<div align="right">(Bronfenbrenner, 2001, p. 6965)</div>

But how can teacher-context interaction be sustained as progressively more complex throughout the career? This relates the discussion to a sustainable perspective on TPD, which I review in the next sub-section of 3.4.2.

Before moving forward, I would like to note that the Cultural Historical Activity Theory (henceforth, Activity Theory) building on Vygotsky's (1978) work also offer insights into development by examining human activity systems. Activity Theory maintains 'internal contradictions as the driving force of change and development in activity systems' (Engeström, 2015, p. xv). Whereas Bronfenbrenner's (1979, 2005) theory approaches development from an ecological perspective with activities situated in the ecosystem, Activity Theory seems to investigate from the inside of activity systems. To understand TPD coherently, insights from both theories might be needed, given that TPD is a process manifested and influenced by a range of activities (as discussed in 3.2). I will return to this point in Chapter 8.

3.4.2 Conceptualising Sustainable Professional Development

The United Nations World Commission on Environment Development (WCED) defines sustainable development as:

> development that meets the needs of the present without compromising the ability of future generations to meet their own needs. […] In essence, [it] is a process of change in which […] all [is] in harmony and enhance[s] both current and future potential to meet human needs and aspirations.

<div align="right">(WCED, 1987, Chapter 2)</div>

Ross (2009) comments that WCED provides 'the most common definition [… but] vague and imprecise' (p. 34). Nevertheless, the WCED's definition rightly

highlights the importance of maintaining harmony among elements and balancing the current needs with future potential. The notions of harmony and balance resonate with such traditional wisdom as the Chinese *yin-yang* perspective that implies a holistic, dynamic and dialectical worldview (Li, 2008, p. 416). Besides, as van Lier (2004) notes, 'what is most important in any ecosystem is *balance*' (p. 191, emphasis in original). It follows that a sustainable perspective seems to agree with the person-oriented ecological perspective identified above (in 3.3).

Whereas a person-oriented ecological perspective acknowledges the schoolteacher's point of view to understand TPD in the TPD ecosystem, a sustainable perspective takes this further to envisage the TPD ecosystem that best enables career-long TPD with the notions of harmony and balance. With these perspectives integrated, a person-oriented ecological sustainable perspective seems to be particularly relevant to the subject of this thesis: How might schoolteachers be best supported to sustain TPD throughout their careers? As the discussion so far suggests, such a perspective is necessary given that, for instance, it is consistent with the defining trend of TPD towards balancing the schoolteacher's current needs as a professional learner with future potential as a developing person (in 3.2).

To best enable career-long TPD, a well-functioning TPD ecosystem seems to be needed from a person-oriented ecological sustainable perspective. All elements are interrelated in harmony, supporting the schoolteacher to engage in progressively more complex reciprocal interaction with context, meeting his/her current needs without compromising future potential. Such a TPD ecosystem might be Sustainable Professional Development (SPD), which I first considered in Zhang (2017) before commencing my doctoral study (as noted in Chapter 2). Based on the above discussion, SPD may now be understood as:

- a harmonious pattern of social roles, interpersonal relations, activities, microsystems, and interrelations within and between these elements,

experienced and perceived by the schoolteacher as supportive for his/her current and future potential development as a professional learner in education and developing person in society.

SPD may be represented as a living '*organic* framework' (Hanks, 2017, p. 82, italics in original), in which the schoolteacher is like a seedling surrounded by a development-friendly environment that supports him/her to thrive, and grow into an individually unique flower or tree. The above conceptualisation is nevertheless tentative, serving as a starting point to understand SPD. I will return and discuss with empirical findings in Chapter 8.

In the recent TPD literature, there is attention given to the notion of sustainable professional development. For example, Mak and Pun (2015) examine a 10-month period of a teacher community cultivated alongside a writing summer institute among 18 Chinese schoolteachers of English. Based on pre- and during-institute ethnographic data and post-institute action research data of mentoring the teachers to lead collaborative learning programmes, Mak and Pun (2015) report that the participants learned and developed as a community of practice, but the community seemed 'precarious when its members returned to their work - facing different demands arising out of personal and school lives' (p. 19). Sandholtz and Ringstaff (2016) study the sustainability of outcomes from a three-year programme offering science assistance to American K-2 teachers. In the second and third academic years after the programme, participants from five elementary schools were interviewed. The findings highlight variations across schools and the influence of principal support, resources, collegial support, personal commitment, and external factors.

The two studies underline elements at play in schoolteachers' TPD ecosystems and that harmony between the elements is needed for the outcome of a TPD activity to be sustained. No explicit definition, however, is given to the notion of sustainable professional development. Focusing only on a single activity, a teacher community

(Mak & Pun, 2015) or a TPD programme (Sandholtz & Ringstaff, 2016), the authors seem to take sustainable professional development narrowly as whether the outcome of a particular activity can be maintained over a period of time, rather than whether TPD is sustained throughout the career in a well-functioning TPD ecosystem, i.e. SPD as conceptualised above. Existing research, such as these two studies, seems to miss the essence of balancing current needs with future potential in WCED's (1987) definition of sustainable development, and Bronfenbrenner's (1979, 2005) conception of progressively more complex processes to enable human development over the life course. In other words, a person-oriented ecological sustainable perspective is as yet missing.

For the inquiry of sustainable professional development, to pin down the concept seems to be a first necessary step, as this thesis is intended to attempt from a person-oriented ecological sustainable perspective with a focus on contextual support. In Section 3.5 below I move on to review the literature about contextual support.

3.5 Contextual support for SPD

As previously discussed (in 3.3.1), context is in mutually influential relations with the schoolteacher, who is embedded in the centre of context (Wedell & Malderez, 2013). In the Chinese TPD context, for example, the government's requirements for a qualified schoolteacher shifted from 'knowing what you teach' (Zhou, 2014) in the early 1980s to possessing expected educational credentials between mid-1980s and mid-1990s as the majority of schoolteachers in the country already changed after being trained previously (in 2.3.3). Influence from the context may be taken as constraints or support by the schoolteacher, as in my personal experience discussed in Section 2.4. I found the school environment in the 1990s supportive for my professional growth, but the opposite in the 2000s.

Contextual support (for short, support) seems to be the influence the schoolteacher experiences and perceives as having positive impact on him/her and TPD, whereas constraints as having negative effect. It follows that contextual support is defined individually by schoolteachers. This is consistent with a person-oriented ecological sustainable perspective as SPD is conceptualised above (in 3.4.2). Contextual support for SPD (SPD support) might therefore be what the schoolteacher experiences and perceives as encouraging his/her positive feelings and actions about further professional development over the career life. Presumably, SPD support enhances the sustainability of TPD and proper functioning of the TPD ecosystem. Specifically, the review so far seems to suggest that SPD support might contribute to four main aspects:

- developing the schoolteacher's potential not only as a professional learner in education but also a developing person in society (as discussed in 3.2 and 3.3.1),

- having the schoolteacher's current needs met without compromising future developmental potential (in 3.4.2),

- progressively more complex teacher-context interaction throughout the career (in 3.4.1), and

- the harmony between interrelated elements (social roles, interpersonal relations, activities, microsystems) of the schoolteacher's TPD ecosystem (in 3.3.3 and 3.4.2).

In the literature of supporting schoolteachers, little attention is as yet given to SPD support. However, a few studies, though not focusing on SPD support, offer close examples contributing to one or more above aspects. In particular, Luehmann (2008) reports a case study in which an American schoolteacher assumed a social role of

blogger as she kept a weblog of stories and reflections about herself and her classroom. The participant's 316 posts over one school year were qualitatively and quantitatively analysed, triangulated with data from email exchanges and interviews with her and her colleagues. The results show that the teacher's TPD benefited from her blog writing in that she was able to wrestle with many issues central to her teaching and be recognised by herself and others as a reform-minded schoolteacher committed to excellence and equity in education.

More importantly, blogging seemed to be experienced and perceived by the teacher as SPD support, engendering her engagement in further activities potentially leading to career-long TPD. Luehmann notes that the way the participant used her blog:

> gave her multiple opportunities to engage in some teacher learning practices identified in the literature as effective in supporting teachers' professional development […] Most important, blogging enabled her to sustain a long-term engagement with each of these practices.
>
> (Luehmann, 2008, p. 330)

The SPD support appeared to involve developing the participant's potential both as a professional learner and developing person in a progressively more complex way, as she enriched her main professional identity of schoolteacher by gradually taking on related sub-identities such as learner, education blogger, advocate for urban students, and mentor of other schoolteachers.

Ciampa and Gallagher (2015) also investigate the effect of blogging, but used by 12 American teachers on their school district's e-learning platform as part of a TPD programme. Qualitative and quantitative data were collected over a 7-month period from the lead facilitator, 2 literacy coaches, and 12 teachers through semi-structured teacher interviews, blog entries, and a blog statistics tracking tool. Reported benefits include networking among colleagues and facilitating the sharing of knowledge, teaching strategies, and assessment practices. Low levels of perceived usefulness

and perceived ease of use are also highlighted, about which the authors do not explain why. Instead, they urge that schoolteachers 'must see the value in blogging as a tool to enhance their collaborative learning and reflective practice […] not an imposed task' (Ciampa & Gallagher, 2015, p. 910). It appeared that the support of blogging failed to engender the participants' positive feelings and actions about further TPD activities.

Existing research such as the above two studies appear to focus on particular tools as intended support for schoolteachers (e.g. blogging), but not why schoolteachers consider given tools as support or constraints. A comparison between the findings of the two studies suggests that what matters most for schoolteachers' career-long TPD might not be specific tools, but the perspective of support provision. Whereas the participants in Ciampa and Gallagher (2015) did not, the participant in Luehmann (2008) enjoyed person-oriented support, such as 'the freedom of choice' (p. 331) to choose blogging as a tool to support the development of her potential. Although blogging might not be provided as support exactly from a person-oriented ecological sustainable perspective, Luehmann's (2008) findings illustrate that contextual support with features of SPD support might also have the potential to enable career-long TPD, in contrast with that intended support seemed to be perceived as an imposed task by the participants in Ciampa and Gallagher (2015).

Whereas SPD support seems to be beneficial to career-long TPD and worthy of investigation, there are many questions unanswered. For instance, without a focus on SPD support, Luehmann (2008) does not report further if the SPD support perceived by the participant involved any support such as that from the school or family to enhance the harmony between elements in her TPD ecosystem. Would she continue blogging for further TPD without support from her school or family microsystem? It seems to be a question about the integration between the person-oriented and the ecological perspective in supporting schoolteachers. Similarly, there are questions about integrating the sustainable perspective. For example, could blogging enable

TPD throughout the career without the participant's progressing onto more complex TPD activities, such as having a book published?

Underlying the problem of integrating perspectives might be the lack of a coherent framework to allow consistent understanding of the key aspects involved in TPD: the schoolteacher, TPD ecosystem, career-long TPD process and contextual support. In the early TPD literature, Joyce (1980) noted the professional ecology of schools, and his discussion has inspired later calls for a coherent TPD framework, for instance, to accommodate 'both the needs of the teacher and the school as well as local authority and national priorities' (Livingston & Robertson, 2001, p. 188) and 'teachers' professional needs at various stages in their careers' (Song, 2016, p. 4), and to align 'formal in-service education strategically in relation to preservice teacher education and on-the-job professional development' (Hu, 2005, p.698). These calls, however, aim for a partial, rather than 'a comprehensive model' (Joyce, 1980) to understand TPD. The key TPD aspects are not all considered, particularly the aspects of career-long TPD process and contextual support.

I have so far analysed the key TPD aspects in the literature, leading to a person-oriented ecological sustainable perspective on TPD, from which I conceptualised, tentatively, SPD and SPD support. As the review has shown, SPD seems to be able to integrate into a framework all the key TPD aspects, including the career-long TPD process and contextual support. This might allow SPD to be a potential framework to understand TPD coherently. I therefore intend to explore SPD support further, hoping to bring light into understanding of SPD *per se*, especially whether SPD can be (re-)conceptualised as a coherent framework for TPD. To this end, a qualitative case study is in order. As discussed above, most relevant empirical studies adopt a qualitative approach. It is also a good choice for me to research into Chinese schoolteachers of English given the convenience of my past experience and thinking about the Chinese context (as described in Chapter 2). I discuss my methodological decisions in detail in the next chapter.

Before moving forward, I review below the literature about language teachers' TPD as I intend the participants of this study to be Chinese schoolteachers of English.

3.6 Language teachers' TPD

In language teaching, teacher professional development is often discussed under the 'superordinate term' (Freeman, 2001) of language teacher education, which refers to 'educating teachers of second, additional, or "foreign" languages through pre- and in-service training and development, paralleling terms like "science or math teacher education"' (Freeman, 2020, p. 15). In this section, I focus on language teachers' TPD and review key contributions in language teacher education.

The field of language teacher education was 'a relatively underexplored one' (Richards & Nunan, 1990, p. xi) in the early 1990s, but has significantly grown over the decades. Many issues have been tackled (Mann, 2005), for instance, the contrast between training and development, and the nature of teacher learning (Freeman, 2001; Richards, 2008). There are also many topics under research (Walsh & Mann, 2019b), such as teacher motivation, the 'missing ingredient in teacher education', as Lamb and Wyatt (2019) remark recently.

Over the years, the importance of teacher, context and career-long development have been acknowledged, resonating with the person-oriented ecological sustainable perspective on TPD identified above. Freeman (1982), for example, suggested early that in-service work should meet teachers' longer term concerns besides their immediate needs. In this century, Johnson (2006) advocates for a 'reclaiming of professional development for teachers, by teachers' (p. 250). Walsh and Mann (2019a) contend that: 'Any research or professional practice concerning ELTE [English Language Teacher Education] cannot ignore context' (p. 2). Richards and Farrell (2005) argue for language teachers' long-term development by noting the need for lifelong learning given 'that the knowledge base of teaching constantly

changes' (p. 1). Taking all the above insights together, Dörnyei and Ushioda speak from the perspective of teacher motivation research:

> to explain and understand teacher motivation, we clearly need to look beyond internal psychological factors […], and consider the wider sociocultural context of pathways into teacher education, career development structures, as well as teachers' social positioning, professional status and working conditions.'
>
> (Dörnyei & Ushioda, 2021) p. 153

Currently among the many challenges, a key challenge facing language teacher education is, as Hayes (2019) notes, 'how to make CPD [Continuing Professional Development] more personalised, self-paced, relevant, context-appropriate, and sustainable' (p. 157). Similarly, Freeman (2002) asked but about two decades ago, 'How can these contexts [schools as sociocultural environments] be orchestrated to support the learning of new teachers and the transformation of experienced practitioners' (p. 12)? These questions are consistent with the subject of this thesis: How might schoolteachers be best supported to sustain TPD throughout their careers? As the previous discussion has shown, there is a need for a person-oriented ecological sustainable perspective to understand TPD coherently.

Whereas a person-oriented ecological sustainable perspective considers teachers not just as professional learners but also developing persons (as previously discussed), teachers are mainly treated as learners of teaching in language teacher education to date (e.g. Freeman & Richards, 1996; Johnson, 2009), as illustrated by the wide use of the term 'teacher-learners' in the literature (e.g. Freeman, 2001; Freeman & Johnson, 1998; Walsh & Mann, 2019b). There seems to be a reluctance to move forward from teachers as professional learners with a keen interest in the nature of teacher learning over the last four decades. As 'theories of teacher learning go from behaviourist to skill theory and constructivism and on to socio-cultural views' (Malderez & Wedell, 2007, p. 15) chronologically, researchers in language teacher education accordingly acknowledge the roles of teacher and context and shift their questions from how to teach teachers, to how teachers learn to teach. With the need

for career-long TPD having been 'a recurring theme' (Richards & Farrell, 2005, p. 1) since the beginning of this century, it is time to consider, as Johnson and Golombek (2018) suggest, 'an all-encompassing, emergent, situated, distributed, and embodied characterisation of teachers as whole persons taking action in the social world' (p. 447). The central question for the field should thus be: How to support individual teachers to develop as developing persons in society besides professional learners in language teaching? As the review earlier above has shown, to pin down the concept of sustainable professional development and conceptualise SPD from a person-oriented ecological sustainable perspective seems to be a first necessary step towards an answer to the question.

It is probable that a person-oriented ecological sustainable perspective can help understand issues coherently. For instance, a lot has been done to tackle the contrast between teacher training and teacher development (Mann, 2005), the former being identified as addressing 'certain immediate needs' (Freeman, 1982, p. 22), and the latter concerning 'the longer-term development of the individual teacher over time' (Richards, 2008, p. 160). From a person-oriented ecological sustainable perspective, training represents some of the many activities in a teacher's TPD ecosystem. In other words, training influences but is not development, whereas development is manifested by training, like other activities in the teacher's career-long TPD process. From an individual teacher's point of view, training is something the teacher embedded at the centre of context wonders about: Is training supportive for him/her as a developing person and professional learner (person-oriented perspective) given whether his/her own needs in the TPD ecosystem (including the school and family microsystems) are considered (ecological perspective), and whether current needs are met without compromising his/her future developmental potential (sustainable perspective)? Such an understanding begs the question: Is there a coherent framework in which training and development, more importantly, the key aspects involved (teacher, context, TPD process and support) can be best situated?

To sum up, the literature in language teacher education joins that previously reviewed in the above sections, pointing to further exploration of SPD support and SDP as a coherent framework to understand teachers' career-long professional development.

3.7 Summary

I started this chapter with three general concepts (Teacher Professional Development (TPD), schoolteacher and support) to clarify for the subject of this thesis: How to support schoolteachers to sustain career-long TPD? These concepts were found to be complex and interrelated, leading me to explore the literature from defining TPD to the schoolteacher in the TPD ecosystem, and to enabling TPD throughout the career and contextual support for Sustainable Professional Development (SPD). In the discussion emerged a person-oriented ecological sustainable perspective, from which I conceptualised SPD and SPD support as my tentative response to the subject question of the thesis. The conceptualisations, however, related to more unanswered questions in the literature, particularly those questions about the integration of the person-oriented, the ecological, and the sustainable perspective in supporting schoolteachers (in 3.5). A critical examination also brought to light unattended problems in previous empirical studies:

- Existing studies on schoolteachers' TPD ecosystems mainly research into 'context without development' (Bronfenbrenner, 1986, p. 288), and focus only on the school and policy-making microsystems (in 3.3.3). No influence on TPD is reported from, for instance, the family microsystem, which is presumably basic in the TPD ecosystem from a person-oriented perspective.

- The notion of sustainable professional development is not explicitly defined in related studies (in 3.4.2). The notion seems to be taken narrowly as whether the outcome of a particular TPD activity can be maintained over a period of time,

rather than whether TPD is sustained throughout the career in a well-functioning TPD ecosystem.

- Little attention is as yet given to SPD support in the literature of supporting schoolteachers (in 3.5). There are empirical studies focusing on particular tools as intended support, not on why schoolteachers consider given tools as support or constraints.

As a whole, the questions and problems offer me the rationale for the study. The review has led me to approach TPD and support from a person-oriented ecological sustainable perspective. I therefore intend to focus the study on SPD support, hoping to enhance understanding of schoolteachers' career-long TPD and its support, and possibly, a coherent TPD framework. This focus is consistent with insights from language teacher education as reviewed at the end of this chapter. The literature review in the chapter has also shown that most relevant empirical studies adopt a qualitative approach and put interviews at top as the source to generate qualitative data. I discuss the methodology of this study in the chapter that follows.

Chapter 4
Methodology

4.1 Introduction

In this chapter, I focus on the methodology of my research. I begin by making my paradigmatic stance transparent. I then discuss the purpose and research questions that guided this research, and justify my research approach and design, followed by elaboration of the research design and process, including methodological decisions about the participants, data collection and analysis, as well as decisions on ethical and quality issues involved.

4.2 My paradigmatic stance

My decisions in this research have been influenced by the paradigmatic stance I adopt. A paradigm 'is what the members of a scientific community share' (Kuhn, 1996, p. 176). It is 'a basic set of beliefs that guides action' (Guba, 1990, p. 17). Paradigms 'delineate assumptions about ethics [axiology], reality [ontology], knowledge [epistemology], and systematic inquiry [methodology]' (Mertens, 2012, p. 256). In this section, I outline these four aspects of the constructivist-interpretivist paradigm within which this study has been conceived.

Assumptions regarding axiology concern the roles of values and ethics in research (Lincoln, Lynham, & Guba, 2018). Constructivists consider research as value bound, as opposed to the positivist value-free position. I see my study as an attempt by a human researcher with my own values and perspective to understand and represent the social phenomena under investigation. Besides, as Schwandt (2003) remarks, 'Understanding what others are doing or saying and transforming that knowledge into public form involves moral-political commitments' (p. 315). By this research, I hope to shed light on how schoolteachers might be best supported to sustain Teacher

Professional Development (TPD) throughout their careers, and contribute to TPD research and practice beneficial to schoolteachers, and eventually, their students and the wider society.

Ontology is about the nature of reality, of being, of whatever is, of first principles (Schwandt, 2007). Constructivists adopt a relativist ontology, i.e. ontological relativism, the philosophical opposition to realism (Lincoln et al., 2018). Whereas realism argues for one objective reality independent of human experiences, relativism contends that 'there is no shared social reality, only a series of different (individual) constructions' (Ormston, Spencer, Barnard, & Snape, 2014, p. 5). As a constructivist, I base this study on the following relativist assumptions.

- Reality is socially constructed. It is the 'constructed reality' (Lincoln & Guba, 1985, p. 83) by individual actors as they experience the world. Multiple, subjectively-defined realities exist. In this study, support for schoolteachers' professional development is viewed as having multiple mental constructions subjectively defined by individual stake-holders (e.g. schoolteachers) with respect to their own experiences in their particular contexts.

- The inquiry into social phenomena is a process of understanding how humans construct and construe their experiences and actions. Schwandt (1998) notes that the 'world of lived reality and situation-specific meanings [constructed by social actors] constitute the general object of investigation' (p. 221). To inquire into support for schoolteachers' professional development is to access individual schoolteachers' perceptions of their own experiences of and reactions to the support provided by the context.

Epistemological assumptions answer the question: 'What is the nature of knowledge and the relationship between the knower and the would-be known?' (Mertens, 2010,

p. 10). The constructivist-interpretivist paradigm underlying this study assumes a subjectivist, transactional epistemology (Lincoln et al., 2018) as outlined below:

- Knowledge, as a construct of the human mind, is subjective, personal, and unique. The social world, as Burrell and Morgan (1979, p. 5) note, 'can only be understood from the point of view of the individual who are directly involved in the activities which are to be studied'. I therefore take up in this study the frame of reference of the schoolteacher in understanding contextual support for TPD, and a person-oriented perspective on TPD as discussed in Chapter 3.

- Understanding is created through the interaction between the researcher and the participants who are inextricably interlocked in the research process. Whilst embracing 'a more personal, interactive mode of data collection' (Mertens, 2010, p. 19) as constructivists opt for, I monitor my own subjective involvement with a stance of disciplined subjectivity (Wilson, 1977).

Methodology is the theory of inquiry, a translation of the underlying axiological, ontological, and epistemological assumptions. Methodological assumptions answer the question: 'How do we know the world or gain knowledge of it' (Denzin & Lincoln, 2018a, p. 56). The paradigmatic considerations outlined above have clear implications for the methodology of this study.

- The study is idiographic inquiring into individual schoolteachers' perceptions of their lived TPD experiences, given that multiple, subjectively-defined realities exist and that the social world can only be understood 'from the point of view of those who live it' (Schwandt, 1998, p. 222). As Lincoln and Guba (1985) remark, the 'aim of inquiry is to develop an idiographic body of knowledge' (p. 38) to make 'transferability judgements possible on the part of potential appliers' (p. 316).

- I adopt a hermeneutic, dialectical approach consistent with the assumption that reality is socially constructed and research can be conducted only through the interaction between and among the investigator and respondents (Lincoln et al., 2018). This interactive approach makes efforts to 'obtain multiple perspectives that yield better interpretations of meanings (hermeneutics) that are compared and contrasted through a dialectical interchange' (Mertens, 2010, p. 19).

In the proceeding sections, I discuss my research questions and research design developed in accordance with my paradigmatic stance outlined above.

4.3 Purpose and research questions

My research questions evolved in the research process of this doctoral study, as in many studies of its kind (e.g. Aliaga Salas, 2017; Hanks, 2013). As discussed in Chapter 2, I noticed existing problems in the Chinese TPD context before doing my PhD, so I started with a research purpose to investigate why schoolteachers were not engaging with TPD and what support would make sustainable professional development more likely. In my PhD proposal, I made my first (naive) attempt to frame the research questions as follows:

1. What support of professional development do Chinese schoolteachers of English currently perceive in their personal contexts?

2. What features of current support do Chinese schoolteachers of English perceive as personally supporting for their professional development?

3. What further support of professional development do Chinese schoolteachers of English perceive they need in their personal contexts?

4. What features of further support do Chinese schoolteachers of English perceive as fully personally supporting for their professional development?

<div align="right">(My research proposal in early 2018)</div>

These early research questions provided a starting point, but needed to be unpacked for clarity. Although I decided to approach TPD from a schoolteacher's perspective, I did not yet reach the person-oriented ecological sustainable perspective identified in Chapter 3, nor did I conceive the study within the constructivist-interpretivist paradigm as I was then not consciously aware of my paradigmatic stance (in 4.2). I wanted to focus on contextual support and identify features that might contribute to Sustainable Professional Development (SPD), but despite efforts made (Zhang, 2017), my thinking about SPD and support were then more situated in my personal experience than the literature.

After commencing my PhD study, I continued to evolve my research questions as I further explored the literature and clarified the aim of the study. In the final iteration, I decided on investigating how schoolteachers might be best supported to sustain professional development throughout their careers, aiming to enhance understanding of SPD support and SPD *per se*, especially whether SPD could be conceptualised as a coherent framework for schoolteachers' professional development (in Chapter 3). Consistent with my philosophical stance, I also saw the study as an inquiry into schoolteachers' subjectively defined constructions of experiences with respect to the professional support in their particular contexts, hoping to 'develop an idiographic body of knowledge' (Lincoln & Guba, 1985, p. 38) for potential appliers.

In line with this strand of thinking about my research purpose, I set the study in the context of Chinese senior high schools with the following research questions (RQs):

- RQ1: How do Chinese senior high schoolteachers of English perceive the support provided by the context over their professional lives?

  ◦ RQ1a: What forms of support, if any, are perceived to have existed?

  ◦ RQ1b: What feelings and actions, if any, did the support engender?

- RQ2: What are the features of support that enact engagement in further professional development activities throughout the career?

  ○ RQ2a: What forms of support, if any, bring about positive feelings and actions about further professional development?

  ○ RQ2b: Why do positive feelings and actions occur?

The final iteration of research questions above is consistent with its earlier versions in asking about existing support (RQ1) and possible features that might contribute to sustainable professional development (RQ2). There are also concrete sub-questions about forms of support (RQs 1a and 2a) and engendered feelings and actions (RQs 1b and 2a) to inquire into the participants' experiences and perceptions. Support for sustainable professional development is approached by asking whether the support enacts engagement in further TPD activities (RQ2), and whether positive feelings and actions are engendered (RQ2a). I also have a why-question (RQ2b) included to probe into the participants' in-depth perceptions and allow data analysis from a person-oriented ecological sustainable perspective, which might lead to a (re-) conceptualisation of SPD and SPD support as discussed in Chapter 3.

As the above discussion has shown, the evolution of my research questions was an iterative process alongside the clarification of my research purpose. In the process, I experienced a number of stages, which brought me first the research questions in my PhD proposal, and then the revised version in my Transfer Document before data collection, and later on, adjustments leading to the final iteration. Besides my own reading and thinking, the improvement of my research questions also benefited from the discussions with my supervisors and others.

4.4 Research approach and design

In this section, I describe and justify my decisions about the research approach and design used in this study.

4.4.1 Qualitative approach

To address my research questions, I have adopted a qualitative approach. After commencing my PhD study, I became consciously aware of my philosophical stance and decided to conceive the study within the constructivist-interpretivist paradigm. A qualitative approach was then in order for this research given the consistency between qualitative research and my constructivist-interpretivist assumptions. As Snape and Spencer remark:

> there is fairly wide consensus that qualitative research is a naturalistic, interpretative approach concerned with understanding the meanings which people attach to phenomena (actions, decisions, beliefs, values etc.) within their social worlds.

> (Snape & Spencer, 2003, p. 3)

The key defining features of qualitative research highlighted by Snape and Spencer above agree with the ontological and epistemological assumptions underlying this study that reality is socially constructed, and knowledge, as a construct of the human mind, is subjective, personal, and unique. In this research, the inquiry into support for schoolteachers' professional development is seen as a process of understanding how schoolteachers construct and construe their experiences of professional support. In this regard, a qualitative approach is suitable to access, as the research questions ask, the participants' perceptions of their lived experiences and the support provided by their particular contexts.

A qualitative approach is also appropriate in that it accords with the idiographic, interactive methodology this study adopts within the constructivist-interpretivist paradigm. Qualitative inquiry involves investigation of a small number of naturally occurring cases, stemming from insistence on the need for in-depth examination of each case (Hammersley, 2013, p. 13). This makes qualitative research the right methodological choice for me to achieve the research purpose of contributing to a body of idiographic knowledge for potential appliers in the field, and to address my research questions, which ask about individual schoolteachers' career experiences and their perceptions, including feelings and actions engendered by the intended support in their unique contexts. Besides, qualitative research 'is a situated activity that locates the observer in the world [… and] qualitative researchers study things in their natural settings' (Denzin & Lincoln, 2018a, p. 10). It follows that a qualitative approach acknowledges my interaction as a human researcher with the participants, and allows me to understand and represent their experiences and perceptions as my constructivist-interpretivist assumptions presumes.

To sum up, a qualitative approach is consistent with my paradigmatic assumptions, and also the most appropriate methodological choice to address my research questions. Whereas this study aims to inquire into how schoolteachers might be best supported to sustain professional development throughout their careers, qualitative methods are, as Snape and Spencer (2003) remarks, 'particularly well suited to exploring issues that hold some complexity and to studying processes that occur over time' (p. 5).

4.4.2 Qualitative multiple-case study design

Following a qualitative approach, this research has been, specifically, a qualitative multiple-case study as set out below. I consider a case study design appropriate for the study the rationale being that on the one hand, my research questions require in-depth exploration of the participants' perceptions of contextual support, and on the other hand, despite variability in the definition and orientation (Schwandt & Gates,

2018), case study has a central tenet of being an in-depth exploration from multiple perspectives of the complexity and uniqueness of a particular social phenomenon in its natural context (Crowe et al., 2011; Simons, 2009). It is noteworthy that the research techniques that can be employed in service of the study of cases include what are widely regarded as both qualitative and quantitative methods (Schwandt & Gates, 2018), and there are different case study approaches with respect to their paradigmatic assumptions (Yazan, 2015).

I have adopted a qualitative case study approach as it assumes the constructivist epistemological commitments (Yazan, 2015) underlying this research, and, as discussed above (in 4.2.1), this study is qualitative. Merriam (1998) contends that a qualitative case study can be characterised as being particularistic, descriptive, and heuristic, in that it focuses on a particular situation, event, program or phenomenon, yields a rich, thick description of the phenomenon under study, and illuminates the reader's understanding of the phenomenon (p. 29 ff.). These defining characteristics accord with my constructivist-interpretivist paradigmatic assumptions, particularly the idiographic, hermeneutic methodology. This study is particularistic and descriptive by inquiring into how individual schoolteachers' perceived professional support in their particular contexts over their career lives. The study is also heuristic 'to go beyond the case[s]' (Stake, 2006, p. 8) of individual participants to enhance understanding of SPD support and SPD *per se* (as discussed in Chapter 3).

In this research, each participant is considered to be a case in his/her own right as a unique senior high schoolteacher of English, and all together they make a case of the phenomenon of contextual support for schoolteachers' professional development. In this regard, the study is of a qualitative multiple-case study design, as illustrated in Figure 4.1 below.
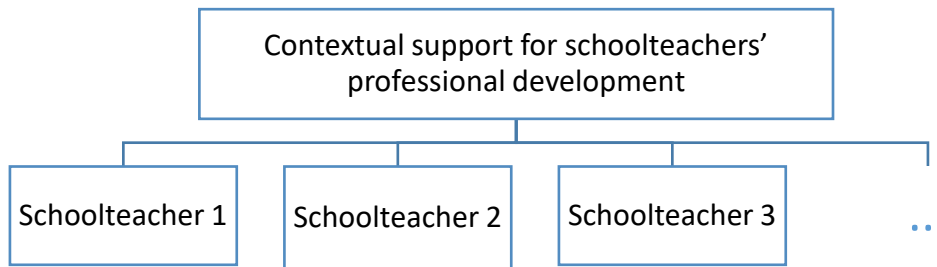
Figure 4.1 Qualitative multiple-case study design

According to Stake (1995, 2005), qualitative case studies can be further categorised into intrinsic, instrumental, and multiple case studies. Whereas all of them share the particularistic, descriptive, and heuristic characteristics, intrinsic case study places more emphasis on being descriptive, and multiple case study on being heuristic. In this study, I hope to go beyond the collection of individual participants' cases to increase understanding of SPD support and SPD *per se*, and further, to shed light on a coherent framework for teacher professional development (in Chapter 3), as Stake remarks:

> Individual cases in the collection [of multiple case study] may or may not be known in advance to manifest some common characteristic. They may be similar or dissimilar, with redundancy and variety each important. They are chosen because it is believed that understanding them will lead to better understanding, and perhaps better theorising about a still larger collection of cases.
>
> (Stake, 2005, p. 446)

From my personal experience and the literature (in Chapters 2 and 3), I had some general knowledge in advance about Chinese schoolteachers and their professional development, but I needed empirical data from my participants to further my understanding and hopefully, achieve my research purpose. I recruited participants in accordance with a qualitative multiple-case study design to address my research

questions. In the following section, I move forward to describe my methodological decisions about the participants of this study.

4.5 Participants

In this section, I focus on the participants of the study. I first set out the selection decisions and recruitment procedures, and then give a biography of each participant in this research.

4.5.1 Participant recruitment

The study being qualitative, I followed a purposive strategy (Schwandt, 2007) to identify potential participants. In this approach, participants and settings, as Ritchie and colleagues note:

> are chosen because they have particular features or characteristics which will enable detailed exploration and understanding of the central themes and questions which the researcher wishes to study.
>
> (Ritchie, Lewis, Elam, Tennant, & Rahim, 2014, p. 113).

I considered Z City as an appropriate research site for its potential relevance to understanding schoolteachers' professional development in other parts of China, as previously discussed in Chapter 2. The potential relevance was mainly manifested in the city's moderate development and geographical distance from developed areas, as well as its similar TPD contextual features to those in the country's general picture. I zoomed in on Z City's relatively developed urban districts given the emphasis of this study 'placed on the uniqueness, the idiographic and exclusive distinctiveness' (Cohen, Manion, & Morrison, 2018, p. 223) of individual schoolteachers' cases and the case of contextual support they together formed. The following criteria were applied to the selection of participants:

- A potential participant should be

  ◦ a senior high school teacher of English, who was

  ◦ teaching in the urban area of Z City, and

  ◦ interested in, and volunteered to participate in the study.

I started the recruitment process by distributing the recruitment message (Appendix 1) through the professional networks of my friends and acquaintances in Z City, in particular, researchers at the teaching research office of local education departments. Part of the researchers' work, as noted in Chapter 2, was mentoring and supporting schoolteachers of English, and WeChat was the mobile networking tool they often used. I circulated the recruitment message via WeChat and email, which allowed easy copying to schoolteachers. The recruitment message was in both English and Chinese so that my friends and acquaintances did not have to explain it for me. In the message, besides briefly setting out the project and my need and criteria for potential participants, I also invited schoolteachers who were interested to contact me directly via my Leeds University email.

Considering the time and manpower limit for a doctoral study, I decided to recruit twelve participants. This allowed for attrition of one or two schoolteachers' withdrawal, but the number of participants could still maximise the benefits of the qualitative multiple-case study (Stake, 2006). In order 'to maximise the range of information uncovered' (Guba, 1981, p. 86), the criterion of years into teaching was also considered before the actual recruitment. If possible, I hoped to have, among the twelve participants, approximately:

- four less than 10 years,

- four from 11 to 20 years, and another

- four over 20 years into teaching.

A ten-year interval was prescribed based on that Chinese schoolteachers would generally teach for about 30 years before retirement at the age of 55 for females, or 60 for males.

Twelve potential participants were recruited in about a month's time. After receiving a schoolteacher's email of interest, I sent him/her the participant information sheet (Appendix 2) and consent form (Appendix 3). Ten days were given for him/her to decide whether to participate or not, and I was available for further questions. I recruited twelve potential participants whose initial and later confirmation emails came first to volunteer to participate in the study. Besides, the twelve of them also approximately met the criteria of years into teaching as noted above. One potential participant withdrew after I met her for my first visit to her school. At the end, I had a total of eleven participants who later returned their signed consent forms and participated in the whole data collection process.

4.5.2 Participant profiles

The eleven participants were all schoolteachers of English teaching at urban senior high schools in Z City at the time of data collection (November 2019 – April 2020), but each participant's professional life was unique. I give below a brief biography of each participant. I refer to them by the pseudonyms they preferred. Unless specified, all the participants' educational qualifications were in English or English related majors.

- Four participants in their first 10 years of teaching:

    ◦ **Caiyu:** Completing her master's study in 2013, she started her teaching career at a leading school in the city and worked at the school ever since. When we met, she was also a mother of two children and just returned from her second maternity leave to resume her teaching.

- **Haidi:** She was from an ordinary school, in which she had taught for eight years since 2011 when she graduated from a local university. She became a mother in her sixth year of teaching, two years before participating in the study.

- **Yangyu:** Following his university study, he started to teach in 2010 at a leading school in the city. When we met for the study, he was in his ninth year of teaching at the school, and first year of assuming an additional responsibility to lead the teaching group of English of the grade. At home, he was a toddler's father.

- **Beibei:** After graduating from a local university of Z City, she first worked as a translator in another city of the province. She returned to the city two years later in 2009, and taught at an ordinary school since then. She was also a mother of a young child at home.

Five participants in the teaching profession between 11 and 20 years:

- **Jiemin:** She was in her 13th year of teaching at an ordinary school since she graduated from a local university in 2006. At home, she was a mother of two children, one in the primary school and the other at the kindergarten.

- **Guiyun:** She went to a normal school for her senior secondary education, and then a normal university, after which she came to Z City in 2005 and taught at an ordinary school ever since. Over the years, she completed her master's study part-time and became a mother of two school-aged children.

- **Dixi:** She started to teach at a leading school in the city in 2004 upon her graduation from university. When involved in this study, she was in her 15th

year of teaching at the school and first year of serving additionally as head of the teaching group of English in the grade. She was also a mother of a school-aged child at home.

- **Songrong:** She began her teaching career at an ordinary school in the city in 2004. During the 15 years of teaching at the school, she obtained her master's degree part-time as well as professional title of senior teacher, a title equivalent to a university associate professor as noted earlier (in 2.5). Besides teaching, she also served as a mid-level leader at the school.

- **Yaya:** Unlike the other participants majoring in English, she was a biology student in university, but assigned to teach English when she started her career in 2001. Since then, she had been a teacher of English for 18 years, the first 3 years in another city of the province, and 15 years at two ordinary schools in Z City, for two years of which, she was selected by the education authorities to teach schoolchildren Chinese in the UK, but still affiliated to her Z City school in China as an English teacher. As she taught, she studied part-time and attained her bachelor's degree in English and later, master's in psychology. Soon after we met for the study, she was promoted to be a senior teacher, and her child became a junior high school student.

Two participants over 20 years into teaching:

- **Kexin:** After studying five years in English, she graduated from a teachers college in 1993 and started her career at an ordinary school in the city. She later obtained her bachelor's degree part-time, and developed into a senior teacher. When involved in this study, she was teaching at the second school of her career, and her child was studying at a university.

- ◦ **Shuyang:** She was in her 26th year of teaching since she graduated from university in 1993. She first taught at an ordinary school for nine years and then at her present leading school. Over the years, she completed her part-time master's study, and became a senior teacher, and recently, a full senior teacher, a professional title equivalent to professorship as previously noted (in 2.5). She was also honoured by the municipal and provincial education authorities as a master teacher. At home, she had a child at university.

Whereas the above participant profiles were brief, I work in the proceeding chapters towards 'a rich, "thick" description' (Merriam, 1998, p. 29) of the participants' lived life experiences and perceptions of professional support in their contexts. In the following sections, I continue focusing on my methodological decisions in the research process.

4.6 Data collection

I discuss the rationale and procedure of my data collection in this section. I begin by providing an overview of data collection, and then consider the instruments used to collect different types of data. After that, I reflect on the pilot study and the actual data collection process.

4.6.1 Data collection overview

I collected data in this study through a procedure with several methods combined: school observations, document analysis, an open-ended questionnaire, and semi-structured interviews. I made use of these methods in a three-phased process of data collection. I started by gathering school and local contextual data through school observations and document analysis (Phase 1), and then used an open-ended questionnaire to collect the participants' biographical data (Phase 2), followed by semi-structured interviews to generate the primary data of the study about the

participants' experiences and perceptions (Phase 3). Through the process, I hoped to collect multiple sources of data to enable 'a rich, "thick" description' (Merriam, 1998, p. 29) and heuristic analysis of contextual support in the participants' career lives. Figure 4.2 presents a summary of data collection phases and instruments with the general purposes and research questions (RQs) involved in each case.

Phase 1
- School observations: To understand school contexts (RQ1a, RQ2a)
- Document analysis: To understand local contexts (RQ1a, RQ2a)

Phase 2
- Open-ended questionnaire: To understand formal career experiences (RQ1, RQ2)

Phase 3
- Semi-structured interviews: To understand in-depth perceptions (RQ1, RQ2)
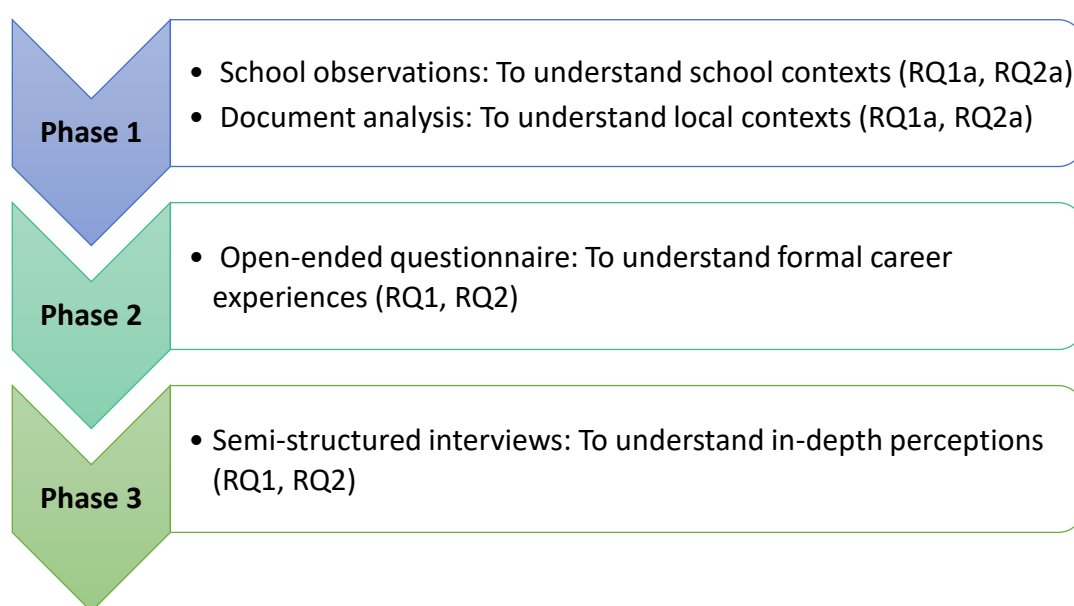
Figure 4.2 Summary of data collection instruments used in this study

My choices of data collection methods were made in accordance with the research questions of the study (in 4.3). I intended the open-ended questionnaire and semi-structured interviews in Phases 2 and 3 to be the main data sources to address the two research questions (RQs 1 and 2), whereas school observations and document analysis in Phase 1 were more relevant to the sub-questions of 1a and 2a concerning existing forms of contextual support than the other research questions.

As illustrated in Figure 4.2 by the downward arrows, the data collection process was also a deepening process of my understanding about the participants' experiences and perceptions of professional support in their particular contexts. I developed my understanding along the process through my interaction with the participants and the cumulated data, from the contextual data of observations and documents, to the biographical data of open-ended questionnaire, and to the primary data of semi-structured interviews. In the following sub-sections, I justify and describe in more detail each of the methods used in this research, as they were sequenced in the actual data collection process.

4.6.2 Contextual data: School observations and document analysis

Ritchie (2003) distinguishes between naturally occurring data (e.g. observation, analysis of documents, conversation and discourse) and generated data (e.g. in-depth interviews and focus groups). In this study, I made use of both naturally occurring data and generated data. As noted above, I started my data collection by using school observations and document analysis to collect data about the participants' school and local contexts. These were naturally occurring data, which I considered appropriate for understanding the contexts in which the participants lived their professional lives, given that naturally occurring data could 'provide an "enactment" of social phenomena in their original settings' (Ritchie, 2003, p. 45). The data collected in this phase helped place the follow-up open-ended questionnaire and semi-structured interviews in context.

The observation was undertaken when I made a familiarisation school visit. I was initially an outsider and shown around by the participants. Such 'observation for familiarisation' (McNaughton Nicholls, Mills, & Kotecha, 2014, p. 249) helped me determine contextual features relevant to later data collection, such as whether the school was equipped with a library with reading rooms for teachers. My school observations were wide-focused 'descriptive observations' (Spradley, 1980, p. 33), although I had a particular interest in what might be relevant to the participants and

their professional development. I tried to keep my observations non-judgemental to yield '*descriptive* accounts ("the boy yawned") rather than *interpretative* (the boy was bored), or *evaluative* (that was boring)' (Malderez, 2003, p. 179, emphasis in original). My observation notes therefore followed an open-ended observation protocol (Creswell, 2007, p. 137), in which one column recorded descriptive and the other reflective notes (see Appendix 4). I will return to this point below (in 4.6.5).

I also conducted document analysis, 'a systematic procedure for reviewing or evaluating documents' (Bowen, 2009, p. 27), to further understand the participants' local contexts. Chinese schools and local education authorities kept in their official documents a record of policies and activities relevant to schoolteachers' professional development. An analysis of these naturally occurring documents provided me with a window into the historical dimension of the local contexts beyond the immediacy of observations and interviews. I collected the documents distributed publically to schoolteachers from the participants and researchers of the local education departments. I also gathered relevant documents online from the official websites of education authorities from the municipal to provincial and to national levels.

4.6.3 Biographical data: Open-ended questionnaire

Besides naturally occurring data, I also made use of generated data, which yielded 'a "recounting" of phenomena' (Ritchie, 2003, p. 45), i.e. the participants' career life experiences and perceived professional support. I used an open-ended questionnaire to generate biographical data of the participants' formal life experiences and related critical events. A rationale for the use was that an open-ended questionnaire could help the participants start reflecting back on their lived experiences, paving the way for the interviews in the next phase of data collection. Besides, open-ended questionnaires 'enable respondents to answer as much as they wish, and in their own words' (Cohen et al., 2018, p. 476) through written self-reports, less awkward than oral response methods (e.g. interviews) for such biographical questions as dates of birth and marriage. Further, the open-ended questionnaire could bring me individual

participants' biographical overviews to illumine my preparation (e.g. my prompts and protocols) for the interviews that followed.

The open-ended questionnaire of this study, as shown in Appendix 5, was a table inviting the participants to list their professional life key events chronologically under the columns headed 'When', 'Where' and 'What', and tick the box and add notes next to the event they considered to be a turning point in their career lives. A sample was provided as an example for the participants to follow 'so that they [knew] the kind of reply being sought' (Cohen et al., 2018, p. 475). In the sample, for instance, I included the events of marriage and birth of a child to indicate that the participants could also note personal life events in their responses. The participants were told explicitly that they could choose to respond in English (the language they taught) or Chinese (their native language), or both, whichever way they felt best to express themselves. I did not set any time limit for the participants to complete the questionnaire. It took them generally about 30 minutes.

4.6.4 Primary data: Semi-structured interviews

I used semi-structured interviews as the main data source of this study, the rationale being that they could fit in well 'with the purpose of obtaining descriptions of the life world of the interviewee in order to interpret the meaning of the described phenomena' (Brinkmann & Kvale, 2015, p. 6). I also considered semi-structured interviews suitable for this qualitative multiple-case study in that they allowed me to go beyond individual participants' cases and 'compare the participants' responses while simultaneously seeking to fully understand their unique experiences' (Barlow, 2010, p. 496). Semi-structured interviews, as Mann (2016) notes, not only 'provide a reassuring structure [… but also the] room for negotiation, discussion and expansion of the interviewee's responses' (p. 91).

The semi-structured interviews consisted of a succession of three waves with each participant, each wave lasting 60 minutes or so. I had planned all interviews face-to-

face, but could not. I will return to this point below (in 4.6.6). The three-wave structure allowed the participants and me to maintain a sense of focus in each wave and build trust and rapport. The first wave focused on concrete details of the participants' professional lives up to the present time, the second on their imagined accounts of future career prospects, and the third on their in-depth perceptions of contextual support for schoolteachers' professional development. In between the waves, I preliminarily analysed the data from the last wave, which provided a foundation of detail that helped illumine the next (Seidman, 2006, p. 19). In the light of these preliminary analyses, I finalised before each interview my prompts (in Appendix 6) and interview protocol with my prompts simplified and space to take notes (illustrated in Appendix 7). I used the protocol as 'a guide (rather than a script)' (Mann, 2016, p. 91) as well as a notetaking template in each interview.

I also employed the participatory tool of life maps to facilitate the interviews and generate complementary data. Life maps helped capture an unfolding life in an easily accessible, visual format by inviting the participants to draw a simple map of their life journey and highlight key milestones, events, transitions and/or turning points along the way (Neale, 2017, 2019). I asked the participants to draw a past and a future life map, called 'My professional highs and lows' and 'My future career prospects', respectively, for the interviews of Waves 1 and 2. In Wave 3, the completed life maps served as a reference for the participants as they articulated their ideas about contextual support for schoolteachers' professional development. For the life maps, I provided the participants with template sheets to draw on and a sample to show them what a life map might look like (in Appendix 8).

4.6.5 Pilot study

Before the actual data collection, I trialled the instruments of school observation, open-ended questionnaire and semi-structured interview (including the participatory tool of life maps) and practised my skills of using them. The pilot study consisted of two stages, first in early October 2019 in the UK and then late in the same month in

China. At the first stage, the pilot participants were three doctoral students who had teaching experiences in China (their home country) before studying in the UK. The pilot participants for the second stage were four senior high schoolteachers of English from two urban schools in a Chinese city. The city was purposively chosen for its being in the same province with, but distant from the actual research site of Z City (in 2.5), so that the pilot school contexts could be close to those in Z City, but the pilot participants might not happen to know the participants of the main study.

The pilot participants both in the UK and China were acquaintances of mine. They volunteered to take part when I told them my need for pilot participants. I gave them the information sheet and explained further about the project. They then confirmed their participation by signing the consent form.

I reflected on and improved my data collection instruments and procedures with respect to the pilot participants' feedbacks. My reflections and adjustments are summarised below:

- School observation

    ◦ Piloted in China on October 23, 2019, when I visited the senior high school where three pilot participants worked.

    ◦ I used an Excel file to document my observation notes after the visit. Besides a sheet of my observation protocol, I found it convenient to include other relevant information on other sheets of the Excel file, such as a map of the school and screenshots of the school website. I improved my observation protocol by adding a line of general description and breaking down an entry of descriptive notes (in 4.6.2) into a number of categories, including people, participants' interaction with people, facilities,

participants' interaction with facilities, and activities and policies mentioned (as illustrated in Appendix 4).

- Open-ended questionnaire

  ○ Piloted with all the three pilot participants in the UK and three in China.

  ○ I adjusted presentation of the open-ended questionnaire by adding 'Key event that has taken place in my professional life' above the column headings of 'When', 'Where' and 'What'. I also replaced 'Critical?' by the question of 'Was the event a turning point in your professional life?' (Appendix 5). That is, I made the expected responses transparent by giving full rather than simplified prompts in the table. A more accessible phrase of 'turning point' was used as one of the pilot participants found 'critical event' difficult to understand. The instructions were accordingly modified. I also trialled two ways for the participants to complete the questionnaire, i.e. completing on their own and with me standing by for questions. The pilot participants involved all told me that they preferred to do it on their own, so I decided to get prepared in the actual data collection for the participants to complete the questionnaire on their own, but out of ethical considerations, I should ask for their preferences beforehand. The pilot participants' feedbacks also assured me that the open-ended questionnaire was not too time-consuming. It took about 30 minutes as I had expected.

- Semi-structured interview

  ○ Piloted with one pilot participant in the UK and one in China for the first wave focusing on the participants' experiences up to the present time.

- I improved my interview prompts and protocol based on the pilot participants' feedbacks. For instance, I had assumed that the participants would like to use English for the interviews as they were schoolteachers of English. In the pilot interview in the UK, although the pilot participant was a second-year PhD student living in the UK, she chose, which I followed, to speak Chinese, our native language. That reminded me that the participants in the actual data collection might prefer to use Chinese, and I should remember to ask for their language preferences before each interview. After the pilot, I also considered improving my interview skills, such as the clarity of my prompts, either in English or Chinese, and not just asking about turning points or critical incidents, as the period during which a participant felt best supported might not necessarily be the time around a turning point, as a pilot participant remarked.

- I found the pilot participants' returned life maps were condensed, so I decided to use A3 rather than A4 paper for the template sheet of life maps (Appendix 8) for the participants to draw on in the actual data collection.

As I reflected on the pilot process, I found it important to maintain a participant's perspective and taking into consideration the participants' individual differences when preparing the tools to be used in data collection. I had thought, for instance, that the instructions in the open-ended questionnaire were clear enough, so I used short prompts in the table headings. A pilot participant, however, told me that she preferred filling up a table without reading the instructions. She would only return to read them when she had a question or encountered a problem.

The pilot study also reinforced my understanding about the importance of trialling data collection methods and tools. As illustrated above, I adjusted not only the tools for the participants to use, but also those I employed as a researcher, such as the protocols for my school observations and semi-structured interviews. Given the

complexity of using data collection instruments in real-life context, it is worthwhile piloting them before use, as is well acknowledged in the literature. Seidman (2006), for example, notes the importance of piloting semi-structured interviews as 'the unanticipated twists and turns of the interviewing process and the complexities of the interviewing relationship deserve exploration' (p. 39). Nunan (1992) contends further that 'it is important for all elicitation instruments to be thoroughly piloted before being used for research' (pp. 151-152).

4.6.6 Data collection process

Overall, the actual data collection process went as planned from Phase 1 to 3, and I had my data collected and key tasks and purposes achieved with respect to the methods used. Table 4.1 provides a summary of the process along the timeline. There were, however, unexpected challenges, to which I responded by adjusting my schedules and managing myself and the data collection process to my best. I had anticipated to complete the data collection within 3 to 4 months of fieldwork, but due to the outbreak of the Covid-19 pandemic, in particular, the actual process lasted 5 months from November 2019 to April 2020. I discuss in more detail below.

Table 4.1 Timeline of data collection

Phase and date	Method	Key tasks and purposes
Phase 1		
05/11/2019 - 18/11/2019	School observation	School visits to generate observation data so as to understand workplace contexts.
05/11/2019 onwards	Document analysis	• Collect documentary data from schools and education authorities. • Conduct document analysis to

			understand local contexts.
Phase 2			
08/11/2019 – 29/11/2019	Open-ended questionnaire	•	Generate biographical data of the participants' formal career experiences.
		•	Analyse the data to prepare for the interviews.
Phase 3			
20/12/2019 – 09/01/2020	Semi-structured interview: Wave 1, face-to-face	•	Generate interview data and life maps about professional life experiences up to the present time.
		•	Analyse data to prepare for wave 2.
14/02/2020 – 17/03/2020	Semi-structured interview: Wave 2, online	•	Generate interview data and life maps about accounts of imagined future career lives.
		•	Analyse data to prepare for wave 3.
30/03/2020 – 17/04/2020	Semi-structured interview: Wave 3, online	•	Generate interview data about in-depth perceptions of contextual support.
		•	Analyse the data and prepare for further data analysis of the study.

In early November 2019, I started my actual data collection as scheduled by making familiarisation visits to the five senior high schools where the participants worked. I met them together when there were more than one participants teaching at the same school. The visits mainly consisted of a campus tour and a short indoor meeting. While being shown around, I observed in accordance with my school observation protocol (Appendix 4). There were few occasions for me to take notes, so I recorded

in the evening the day's observation in an Excel file of observation protocol. At the indoor meeting, I discussed the data collection plan with the participants, and asked them to help collect policy documents to do with their professional development. I also handed out printed copies of the open-ended questionnaire (Appendix 5) and the life map of past career experience (in Appendix 8) for the participants to complete, given that they preferred to do so before rather than during the interviews. I sent them electronic copies afterwards in the evening.

The participants were given two weeks, respectively, to complete the open-ended questionnaire and the past life map. Before the first wave of interviews, most of the participants returned their completed open-ended questionnaires and life maps. Dixi drew her life map during the interview as she was not very sure how to draw it, and Shuyang after the interview for being too busy. Similarly, I sent an electronic copy of the future life map (in Appendix 8) to the participants on January 17th, 2020, approximately two weeks ahead of the second wave of interviews as scheduled initially. All the participants sent me their future life maps before the interviews took place between February and March in 2020.

From November 2019 to early January 2020, I collected data as planned through school observations, documentation, an open-ended questionnaire, as well as the first wave of semi-structured interviews conducted face to face. The Covid-19 pandemic, however, broke out during my scheduled interval between the first and the second wave of interviews. I had hoped to conduct wave 2 interviews in early February, but could not. I rescheduled two times amidst the uncertainty, and later decided to change the last two waves of interviews from face-to-face to synchronous online interviews, following my supervisors' advice and Leeds University directive. I discuss the ethical dilemmas brought by the pandemic in Section 4.7 below.

In the last two waves of interviews changed to online, I tried to maintain my original data collection plan, hoping to minimise the influence of change on my participants

and the continuity across the three waves of interviews. I conducted the online interviews based on my planned protocols consistent with the first wave (Appendix 7). Before each interview of all the three waves, for instance, I confirmed the participant's consent to having the interview recorded with my Sony voice recorder, and asked about his/her language preference for the interview. In most cases, the participants chose to use our mother tongue Chinese. Some participants switched sometimes to English (the language they taught), and Haidi mostly spoke English in the first wave, and more Chinese than English in the last two waves of interviews. It appeared that the participants expressed themselves in the way they felt best to articulate their lived experiences and perceptions.

I adjusted my protocols given the change of the last two waves to online interviews. For instance, though the participant had previously agreed, I asked again before each interview whether he/she would like to use the video chat function. This proved to be a necessary step, particularly for Kexin prior to her second interview. For personal reasons, she preferred it to be done via audio rather than video chat, and the interview became the only audio one among the online interviews. My decision to confirm the participant's consent to video interview (though only audio recorded) was first out of ethical considerations, but through Kexin's case, I noticed the importance of pre-interview communication given the online peculiarity of placing the interviewer and interviewee in different physical environments. Shifting from face-to-face to online interviews not only brought me ethical issues, which I will discuss later, but also different experience for me to understand the importance of using data collection methods appropriately with respect to their particular features.

In April 2020, I finally managed to complete all the three waves of semi-structured interviews, and so, my data collection. The interview dates for each participant are summarised in Appendix 9. I had planned the interviews to take place about two to three weeks apart, but the actual intervals varied. Reflecting on my data collection process, I found it particularly important to be responsive to arising practical issues, especially unexpected challenges such as those brought by the Covid-19 pandemic.

4.7 Ethical issues and dilemmas

I have been consciously thinking and acting throughout the entire process of this study to make sure that my research is ethical. In this section, I describe my considerations and actions with respect to the ethical issues and dilemmas that arose in the research process.

4.7.1 Informed consent

Informed consent as 'a cornerstone of ethical behaviour' (Cohen et al., 2018, p. 123) involves 'four elements: competence, voluntarism, full information and comprehension' (ibid, p.122). In this study, my participants were competent to make judgements on their own given that they were schoolteachers. To ensure the above elements all in place, I took the following steps to obtain the participants' informed consent. I provided the information of the study first briefly in the recruitment message (Appendix 1), and then in more detail by the information sheet (Appendix 2) and consent form (Appendix 3) enclosed in my reply to the potential participants who emailed and volunteered to take part. I further explained about the study when I met them for the first time during the school visits. After the visits, the participants were given more than two weeks before they signed and sent the consent form back to me. In the process, I provided time and opportunities for questions to make sure that the participants had no problems comprehending the information, and it was up to them 'to weigh the risks and benefits associated with participating' (Howe & Moses, 1999, p. 24).

Besides the main study, I also followed a similar procedure to obtain informed consent for the pilot study (in 4.6.5) as well as the online interviews adjusted for the last two waves (in 4.6.6). For the pilot study, I first briefly explained about the study and my need for pilot participants, and then gave those who volunteered to take part the information sheet and consent form (Appendices 2 and 3) and discussed detailed arrangements with them. Before the pilot, they confirmed their informed consent

and signed the consent form. I discuss the online interviews below (in 4.7.5), including the procedures of seeking the participants' informed consent to them.

4.7.2 The right to withdraw

I informed my participants on various occasions that they were under no obligation to take part and free to withdraw at any time. As noted earlier (in 4.5.1), a potential participant withdrew after my first visit to her school. Her withdrawal not only illustrated the importance of respecting a participant's right to withdraw, but also the necessity of explaining the information of the study, face to face if possible, and discussing the data collection plan with the participants. It was the discussion at our first meeting that helped the potential participant realise her schedule conflicts. She decided to withdraw, but still offered to collect documents for me about teacher professional development at her school.

4.7.3 Confidentiality and anonymity

In this study, I promise the participants confidentiality and have anonymisation procedures implemented to protect the participants' right to privacy, 'because not doing this may result in harm' (Hammersley, 2018, p. 30). Keeping the promise of confidentiality involves some decisions preceded by substantial deliberation, and some to be made on the spot (ibid, p. 25). For example, before the data collection, I was ready to decline to answer as politely as possible, if anyone, from the school or local education authority, asked me anything that might jeopardise my promise of confidentiality. In the research process, however, some participants asked me who else took part in the study. It was unexpected, but I made the decision right away to politely decline to answer.

I have applied anonymisation and data protection to all the personal data. When reporting the results, I use a pseudonym for each participant, and take anonymisation procedures where traceability of individual participants is possible (Cohen et al.,

2018, p. 130), for instance, the name of a colleague the participants mentioned in their responses. Although I was determined to protect my participants' identities by anonymisation, I also had to consider that this in itself would be returning the participants to the position of subjects by distancing them from the research (Hanks, 2013, p. 69). Following Hanks, I decided to offer the participants the opportunity to choose a pseudonym they preferred to be known in this thesis. I reminded the participants to ensure that they would not be identified by the pseudonyms they chose. I also provided three names for each participant to choose from if they did not have one on their minds. The three names I suggested started with the same letter which I randomly assigned to each participant.

4.7.4 Issues of authority and power

I had to consider and carefully deal with the power relationship in this research. When setting the study in the context of Guangdong Province, China, I was aware that besides my role as a PhD researcher from the UK, my previous role in China as a researcher and teacher mentor at the provincial education authority (in Chapter 2) might also put me in a position of power (Fairclough, 1989, 2001) in my interaction with participants. To minimise my power position, I decided to recruit participants from senior high schoolteachers of English in Z City, who might be less aware of my early work role, given that Z City was geographically distant from the provincial capital and I used to serve primary and junior high, not senior high schoolteachers in the province.

As noted earlier (in 4.5.1), local researchers at Z City's education bureau also helped circulate the recruitment message of the study, but the researcher responsible for senior high school English teaching was not involved. I asked the two for primary and junior high schools to help, hoping that potential participants could pick up the message through communication between friends (e.g. posts of WeChat Moments) rather than official channels. In the recruitment message, I also explicitly invited potential participants to contact me directly. Direct contact between the participants

and me since then was not only a measure to protect the participants' privacy as I promised, but also a way to minimise possible influence from the local researchers' power relationship with them.

The efforts noted above appeared to help balance the power relationship between me and the participants. In the data collection process, I could feel that the participants treated me like an older colleague who was there to listen to and understand their stories and ideas. For instance, I was once left alone waiting at the school gate when I arrived on time but the participant was delayed by work, which would not have happened if the participant had taken me as a person of authority and power.

However, dilemmas also arose. For instance, whilst I was determined to minimise the influence of my roles as a PhD student from the UK and a former researcher at the provincial education authority, I had to consider meeting the participants' needs to share my expertise with them after the interviews. I carefully dealt with the dilemma by showing my interest in their puzzles, and following a learner-centred principle to help them reach solutions of their own. More challenging was that some participants also invited me to give a talk to teachers or a lesson to students at their schools. I politely asked if the activities could be postponed to the end of my fieldwork, unless there was a fixed schedule for the activity, such as giving a lesson on the open day of Shuyang's school.

4.7.5 Health and safety and responding to the Covid-19 pandemic

In the research process, I prioritised the participants' health and safety as I placed the consideration of 'first do no harm' (Iphofen & Tolich, 2018) above everything. Given that the study involved inquiring into the participants' career lives in detail, there was a possibility that talking about past experiences might be unpleasant for some participants. To minimise the occurrence of harm, I informed the participants of such a possibility before they consented to participate in the study. I also prepared myself with strategies to help. During the data collection, there were a few times the

interviewee mentioned unpleasant past experiences. In such cases, I first comforted the participant, and reminded that he/she did not have to talk about that, and then suggested moving forward to tell me something positive.

As previously noted (in 4.6.6), the Covid-19 pandemic unexpectedly broke out. I was then faced with the most thorny ethical dilemma in my data collection. When I prepared for my second wave of interviews in January 2020, university guidelines about the pandemic were not yet available, and everything was in uncertainty. I had to keep assessing and reassessing the situation, and weighing up the pros and cons of conducting the interviews online instead of face to face:

- Synchronous online interviews could help avoid unnecessary risks both for my participants and myself as we did not have to, unlike face-to-face interviews, travel and meet in person.

- However, an interview using the social media concerned online privacy (Salmons, 2014).

- I could take efforts to minimise the disturbance of the participants' privacy in an online interview, but for an interview face to face, the participants and I would have to go against the government's recommendation of staying at home to help contain the virus.

After much internal debate, I decided to prioritise the participants' health and safety and conduct the remaining interviews online following my supervisors' advice for wave 2, and also the University directive for wave 3. I took efforts to ensure my participants' rights, in particular:

- **Informed consent to online interviews.** Before wave 2 interviews, I sent my

participants an information text by WeChat (see Appendix 10) to explain the decision of change and the concern of online privacy. The participants were given a week to consider if they would agree to be interviewed online. After receiving their replies of agreement, I telephoned each participant offering a further opportunity for questions and confirmed their oral consent. I also asked if they could and they all agreed to sign a written consent form later. I obtained their oral consent before wave 3 interviews following a similar procedure. All participants later signed the consent form specific to the synchronous online interviews of the study (Appendix 11).

- **Online privacy and confidentiality.** In the information text, I informed my participants of the privacy and confidentiality issues concerning online interviews. In the follow-up telephone call, I discussed with the participants what we could do to best protect online privacy and ensure confidentiality. The interview topic for the second wave was about career prospects and the third the participants' in-depth perceptions of professional support. There was a possibility, though it appeared unlikely, that the participants might bring up something sensitive. I therefore suggested the participants telling me, if any, later in a way they considered safe for privacy protection.

- **Informed consent to the use of WeChat.** I obtained the participants' consent before the interviews. I discussed and decided with the participants to use WeChat, the most popular all-in-one communications app for text, voice and video in China today. My participants and I considered WeChat convenient and trustworthy though care to protect online privacy was always needed.

- **Informed consent to video or voice chatting.** I asked before each interview the participant to decide whether to use video or voice chatting although we had discussed previously on the phone. My participants were informed and they all agreed that whichever way of chatting was used, the interviews would

only be audio-recorded with my Sony voice recorder as in the first wave of interviews conducted face to face.

Besides, I assured my participants that they were free to withdraw their consent at any time before the online interviews, in addition to the freedom of withdrawal from the study as previously explained. The information they provided during the online interviews, the same as other data collection occasions, would be kept confidential with measures implemented following the University of Leeds data storage and protection directives.

4.7.6 Section summary

I respect at all stages of this research the ethical values of social research (e.g. minimising harm, protecting privacy, and respecting autonomy) (Hammersley, 2018). To translate the respect into ethical decisions, as outlined above, I not only needed to plan the study carefully, but address arising ethical issues as appropriately as possible. In the process, I was assured by the Leeds University Research Ethics Committee's approvals for the study, and later the online interviews changed from face-to-face due to the pandemic (see Appendix 12). Meanwhile, it was my principled sensitivity to the rights of others (Cavan, 1977; Iphofen, 2011) that enabled me to notice and do my best to respond to ethical dilemmas that arose.

At the end of the last wave of interviews, unprompted, four participants told me that their involvement in the study helped them to reflect on their career life experiences and consider planning for their future professional development. More participants commented similarly in their feedbacks for member checking a year later in August 2021. (I will return to this point in 4.9.1). Haidi, for example, notes:

> […] After participating in the interviews with Mr. Zhang, I began to think about how to improve my teaching skills and help students learn well. It provides a good chance for me to reflect on what I have done over the past ten years. It dawned on me and I began to read books about teaching. I began to

> put what I read into practice.

<div align="right">(Haidi.MC/23.08.21)</div>

The participants' feedbacks affirm my belief that efforts have to be taken to minimise the likelihood of the occurrence of harm, and ways of maximising both short and long-term benefits also have to be explored (Iphofen & Tolich, 2018).

4.8 Data analysis

In the data set of this study, I have synthesised the primary interview data as well as contextual data (written documents and school observation notes), biographical data (questionnaire responses) and complementary data (life maps and field notes). To answer my research questions (in 4.3), I analysed the primary data generated from the three waves of semi-structured interviews in relation to the other data in the set. In this section, I reflect on the data analysis of this study and my methodological decisions in the process.

4.8.1 Familiarisation with the data

I initiated data analysis by familiarising myself with the data, as in studies of this nature (e.g. Grassick, 2016). Data collection and analysis, as Merriam (1998) notes, 'is a *simultaneous* activity in qualitative research' (p. 151, emphasis in original). As soon as the data started to accumulate, I was keen on getting an overall feel of them to help prepare for the next step of data collection and the later major analytic work. The preliminary analysis resulted in reflective notes, tentative transcriptions of interview recordings, as well as prompts and protocols for the wave of interviews that followed. The process with data collection and analysis intertwined constituted a deepening process for me to understand the participants' career experiences and perceptions of contextual support as previously discussed (in 4.6.1).

After completing data collection, I continued to spend a period of time immersing myself in the data and reflecting on my previous notes in relation to my research questions and the literature (Wellington, 2015). Besides further reflective notes, this period of work also led to refined transcription of interviews, and a list of key life events for each participant summarised from his/her responses in the open-ended questionnaire, the life maps and the three waves of semi-structured interviews. At the end of this familiarisation stage, I also had an overall sense of the existing forms of contextual support in the participants' professional lives.

4.8.2 Transcription of interviews

As noted above, I transcribed the interview data after each interview to familiarise myself with the data, and thereby produced two drafts of transcription for the three waves of interviews with the eleven participants. As the research process went on, I returned many times to refine my transcription with a particular focus, first the key life events and then the forms of professional support the participants mentioned, and further, the feelings and actions engendered by the noted forms of contextual support. There have been so far four to five drafts of transcription for each interview with a participant.

I transcribed the interview recordings into to texts in the original language, i.e. in Chinese or English, or both where the language code was switched (as previously noted in 4.6.6). In the transcripts, I used a comma to indicate a pause and applied a full stop at the end of a long utterance in Chinese, given connecting clauses only with commas being acceptable in Chinese grammar. For utterances in English, I applied punctuation and new sentences based on the intonation, the content and the pauses heard. I summarise the code used in the transcripts in Appendix 13. Whereas the interviews were transcribed verbatim, I have edited, and translated if originally in Chinese, the participants' quotes in the proceeding chapters for readability purposes by, for instance, deleting false starts and stammers.

Transcribing audio recordings into transcript texts offered me the convenience to read across the three waves of interviews and obtain an overview of the data set. The transcripts also allowed me to segment the data and analyse the participants' lived experiences and perceptions within and across individual participants' cases. In order to identify emerging categories and themes in the data, my major analytic work involved various attempts of taking data apart, synthesising data, and relating and locating data (Wellington, 2015). These attempts would be difficult to make without transcribing the interview recordings into written texts. Besides, I could put a relevant segment of the transcribed data next to a tentative category (in an Excel spreadsheet), which helped facilitate my analytic work.

However, the interview recordings still played a vital role in my data analysis. Although transcripts were useful, they could never be perfect, especially those for the online interviews during which there were moments with connection problems resulting in poor sound quality and difficulties in transcription. I therefore, as noted above, repeatedly returned to the recordings and improved my transcription drafts. In particular, I preferred listening to an interview section in question to double check my transcription when I came to a decision involving the section, such as a decision on a category or quoting the section in my writing where translation was called for.

4.8.3 Forming templates

I used template analysis (King, 2004, 2012; King, Brooks, & Tabari, 2018) to approach the data of this study. According with my constructivist-interpretivist stance (in 4.2), I intended the data analysis to be 'qualitative inductive' (Patton, 2015) and hoped to discover patterns of professional support in the data set as my research questions asked (in 4.3). Template analysis was conducive to my constructivist-interpretivist position given it being a generic form of thematic analysis, providing a varied but related group of techniques to produce a list of codes ('template') to represent categories and themes of professional support

emerging from the data (King, 2004, 2012; King et al., 2018). To perform template analysis, I could start with an initial template, and then modify and add to it in the light of the ongoing analysis. Besides, template analysis allowed me to develop my initial template based on the 'implicit theories' (Silverman, 2014) inherent in the early work of the research, which helped keep the analysis on track without degenerating into 'a fairly empty building of categories'(ibid).

The data analysis involved forming templates for existing forms of professional support and features of support that encouraged career-long professional investment with respect to the two main research questions (in 4.3). To start the analytic work, I organised the interview data thematically by identifying and grouping in an Excel spreadsheet the support each participant mentioned in the interviews. For each entry of support, I put related transcript segments in the columns headed by: 'what support' (in the participant's words), 'what happened' (including time, place, and key persons involved), 'what feelings' (engendered by the support), 'what further actions' (for professional development enacted), 'what resultant events' (that took place afterwards), 'what influence' (brought about on the participant's professional life), and 'what related comments' (the participant gave on supporting schoolteachers in general). These headings were generated from my research questions (in 4.3) and interview prompts and protocols (Appendices 6 and 7).

With the data reorganised in Excel spreadsheets, I began to code each entry of professional support based on my knowledge about schoolteachers' professional development in the Chinese context and Z City as previously discussed in Chapter 2. I improvised the initial codes close to the words individual participants used to describe the support. For instance, a participant acknowledged benefiting from doing research projects, and I then tentatively coded the support as 'research projects funded/recognised by the authorities', as what the participant referred to was projects funded or recognised by the education authorities for the participant to research into her own classroom. At this stage, my initial codes were very tentative and varied from one participant to another.

After tentatively coding the support by individual participants, I put all the initial codes together in an Excel spreadsheet (as illustrated in Appendix 14 by a screenshot of the spreadsheet). The spreadsheet was messy with 149 entries, each representing a kind of support one of the eleven participants noted in the interviews. I then began to work towards a 'comfortable' (King, 2004, p. 263) template for existing forms of professional support to address the first research question (in 4.3). I first combined the support noted by individual participants, and tried to develop the initial codes into a consistent template for the combined forms of support. For example, I revised the code of 'research projects funded/recognised by the authorities' noted above and shortened it as 'research projects', so that it could be consistent with other codes, such as 'seminars', which referred to various seminars and seminar-like activities (e.g. lectures, talks, and workshops), online or offline.

There was, however, more challenging inconsistency than that between the codes of 'research projects' and 'seminars' in the initial template. A number of participants considered recognition of their work by others (e.g. students and leaders) as support for their professional growth. Unlike seminars and research projects, others' recognition was more closely related to the contextual element of people than a particular type of professional development activities. After months of internal debates and further exploration of the data, I came to differentiate existing support by defining forms of professional support as directly activity-related, in contrast to the support centred on contextual elements. I then identified and coded supportive contextual elements with an initial template based on the three core contextual components of people, place and time (Wedell & Malderez, 2013) (in 3.3.2).

Two higher-order codes hence emerged regarding the existing support perceived by the participants. One higher-order code was activity-related forms of professional support, including such lower-order codes as seminars and research projects, and the other, contextual elements as professional support with the lower-order codes of people, place and time. The template was further developed. I will return to this

point and report the findings in more detail about the activity-related support forms and supportive contextual elements, respectively, in Chapters 5 and 6 below.

Beyond forms of support and supportive contextual elements, emerging from the data set were 'recurrent and distinctive' (King et al., 2018, p. 182) themes of the participants' accounts of support that encouraged further engagement in professional development throughout the career, which was relevant to my second research question (in 4.3). In the interviews, the participants constantly acknowledged being inspired by role models to invest further in their professional growth. They spoke of role models when articulating support I coded as forms of professional support (e.g. seminars) as well as supportive contextual elements (e.g. colleagues, friends and family members). Although I previously noticed schoolteachers being role models for their students (in Chapter 3), I did not consider much about schoolteachers' own role models before the data collection. As I proceeded with my data collection and analysis, three themes emerged and kept recurring in my notes: inspiration by role models, progressively more complex professional challenges and efforts to develop professional potential.

Before consciously analysing the data for the themes of role models, professional challenges and professional potential, I seemed to subconsciously apply my 'implicit theories' (Silverman, 2014) inherent in the early work as an initial template whilst interacting with the participants and later the data. Unlike schoolteachers' own role models, I had pondered before data collection the contextual support for Sustainable Professional Development (SPD) (in Chapter 3). The themes of progressively more complex professional challenges and efforts to develop professional potential were closely related to the four main aspects of SPD support I conceptualised in the light of the literature. These aspects as an initial template were revised and developed as I carried on with my data analysis. I report the findings in more detail in Chapter 7.

As outlined above, to address the research questions (in 4.3), I first organised the

data thematically, and then developed the templates for existing support (including forms of professional support and supportive contextual elements) and the recurrent themes of support encouraging career-long professional development. Overall, the data analysis of this qualitative multiple-case study went from individual to cross-cases analysis (Duff, 2008), or in Kelchtermans' (1993) words, from vertical to horizontal analysis. I started with individual cases to organise the data and code the support noted by the participants. I also accumulated my notes from one individual case to another before the recurrent themes emerged. When conducting cross-case analysis to develop my templates, however, I also constantly returned to individual participants' cases. To analyse the recurrent themes of the participants' accounts, in particular, I read over and again the transcripts of the three waves of interviews with individual participants. Individual and cross-case analysis therefore were interwoven rather than clear-cut in this research.

Whereas forming templates was 'an iterative process of applying, modifying and re-applying the initial template' (King, 2012, p. 430), not all the efforts in the process were productive. For example, after coding individual forms of professional support, I made different attempts to develop higher-order codes. I tried categorising support forms by the degrees of the participants' volition to take part in the related activities, and later by microsystems in which the support occurred (as illustrated in Appendix 14). I gave up these two attempts given that, for instance, the former resulted in overlapping codes (e.g. classroom and classroom extension), and the latter could not resolve the dilemma of one support form (e.g. seminars) involving more than one microsystems. At the end, I focused on whether the support forms were activities by themselves and reached a more 'comfortable' (King, 2004, p. 263) level of codes above individual forms of professional support. I report the findings in more detail in Chapter 5 below.

I used a combination of tools for my data analysis, mainly Excel and Word as well as pen and paper. I tried using NVivo, but later only for drawing mind maps, not the major analysis of the data. As Wellington (2015) notes, computer software 'can be

helpful in case-study research but […] the software will not do the analysis for you' (p. 172). I found NVivo useful to search for words and phrases returning a result of frequencies. However, a specific word or phrase did not necessarily mean the same from one participant to another in my interview data, and different participants might use different words or phrases to refer to similar ideas. Besides, the most frequently used words or phrases did not necessarily mean that the represented ideas were most worth attention. Moreover, the vision of textual context was constrained in NVivo, whereas when using Word, I could freely relate a word or phrase to the context of the whole transcript across the three waves of interviews.

4.8.4 Translation

As the person responsible for the research, I also take the responsibility for the way the participants' language is represented in this research (Temple & Young, 2004). The data were mainly in Chinese. Most of the participants chose to be interviewed fully in Chinese, whereas only a few of them used Chinese in their returned open-ended questionnaires and life maps (in 4.6). I translated the data from Chinese into English when necessary, i.e., only the illustrative extracts included in this thesis were translated.

I chose not to include a third-party translator in the study, but do the translation myself, with considerations given to my promise of confidentiality as well as my personal experience and understanding about the participants and their contexts. Like my participants, I am a native speaker of Chinese, having lived and worked in the province of the research site in China for many years. Meanwhile, I am a fluent language user of English with study experience for my MA, M Phil and now PhD in British universities, as previously described in Chapter 2. During those years working as a schoolteacher and later researcher in China, I also served a translator role for the school and the district and provincial education authorities, translating between Chinese and English on various occasions, formal and informal, from occasional official documents to long-term exchange programmes.

Although I did the translation all on my own, I did my best to ensure the quality of translation and interpretation, including making use of the back-translation technique (Brislin, 1970; Cohen et al., 2018). I included and translated extracts from the interview transcripts as I first drafted this thesis. Months later when I redrafted the chapters, I translated the quotes from my first English draft back to Chinese, and checked the back-translated version against the original interview transcripts. I then improved my translation based on the comparison. As noted above (in 4.8.2), the final translated extracts were edited for readability purposes by deleting false starts and stammers, for instance.

4.8.5 Writing up as continuation of analysis

My data analysis and writing-up were interlocked and there was not a clear-cut line between the two stages. In the process of forming templates, for instance, I also made attempts to draft one section or more of a findings chapter to help improve my codes. On the other hand, I continued revising my templates after I shifted my focus of work to drafting the chapters to present my findings. As King (2004) contends, 'writing-up should not be seen as a separate stage from analysis and interpretation, but rather as a continuation of it' (p. 267). In this study, the work of selecting illustrative quotes and producing a coherent presentation of the findings furthered my understanding of the participants' experiences and perceptions manifested in the data set. Building on the understanding through drafting the chapters of findings, I moved forward to draft the discussion chapter for more in-depth analysis of the data. I explored the connections between the emerging categories and themes in relation to the literature and developed my coherent understanding of contextual support for schoolteachers' professional development.

4.9 Trustworthiness

To ensure the quality of this qualitative research, I subscribe to the criteria of what Guba (1981) describes as trustworthiness, which accords with my paradigmatic stance (in 4.2). The basic issue in relation to trustworthiness is:

> How can an inquirer persuade his or her audience (including self) that the findings of an inquiry are worth paying attention to, worth taking account of?
>
> (Lincoln & Guba, 1985, p. 290)

The criterion of trustworthiness introduces constructs of credibility, transferability, dependability and confirmability, which are respectively 'the naturalist's equivalents for the conventional terms "internal validity", "external validity", "reliability", and "objectivity"' (ibid, p.300). I set out below the strategies I used with respect to these constructs.

4.9.1 Credibility

Credibility concerns whether the findings and insights I have arrived at in the final chapters of this thesis are credible to the reader. Lincoln and Guba (1985) note that the implementation of the credibility criterion is a twofold task: to carry out the inquiry in a way that enhances the probability of obtaining credible findings and have the credibility of the findings approved by the participants (p. 296). In this study, I took different efforts across the research process to ensure the credibility of my findings.

As a way to increase the probability of producing credible findings, I planned and implemented data collection as a deepening process of understanding, from the school and local contexts to the participants' biographical overviews, and to their detailed experiences and in-depth perceptions (in 4.6). The three-phased data collection process allowed me to have 'a sufficient period of time [of prolonged

engagement] to obtain an adequate representation of the "voice" under study' (Onwuegbuzie & Leech, 2007, p. 239). My stay at the site was shortened because of the Covid-19 pandemic, but I managed to build trust with the participants through interactions, on- and offline, in the five-month data collection period. Before the pandemic, I lived in Z City for more than two months, absorbing myself in the participants' contexts and interacting with them face to face. We met for data collection and on the occasions when they invited me to share my expertise (as previously discussed in 4.7.4).

Persistent observation was also enabled in the three-phased data collection process. Whereas prolonged engagement rendered me 'open to the multiple influences – the mutual shapers and contextual factors' (Lincoln & Guba, 1985, p. 304), I focused consistently on the phenomenon of schoolteachers' professional development from the first school visit till the last wave of interviews. Persistent observation offered me the depth of inquiring into individual participants' experiences and perceptions as well as professional support across the participants' individual cases.

To maximise the credibility of the study, I also employed data and methodological triangulation (Denzin, 1970/2009, 1978). I recruited participants at varied career stages (in 4.5), and collected data from them through an open-ended questionnaire and three waves of semi-structured interviews (in 4.6). In addition, contextual data from the schools and education authorities were also gathered via observations and documentation. I interviewed the participants regarding their concrete experiences, imagined future prospects and in-depth perceptions. Besides verbal data, visual data of life maps were also generated. The different types of data from various sources allowed me to compare and verify the participants' experiences and perceptions, and the categories and themes that emerged, leading to a trustworthy understanding of contextual support for schoolteachers' career-long professional development.

In data analysis, I analysed the data vertically for individual cases and horizontally across the cases (Kelchtermans, 1993) in order to achieve data analysis triangulation (in 4.8). I also employed the technique of negative case analysis (Lincoln & Guba, 1985), such as the negative impact of contextual elements and the lack of timely support to engage in progressively more complex professional challenges, in Dixi's and Kexin's case respectively described in Sections 6.5 and 7.2 below. Negative case analysis helped me refine the emerging categories and themes, and confirm that they could 'indeed account for all instances of the phenomenon involved, even if some of the types embrace only one instance' (Shenton, 2004, p. 67)

A further strategy I adopted to ensure credibility of the study was member checks (Lincoln & Guba, 1985). Member checking was a continuous process, for which I obtained feedback from individual participants about their related data, findings and interpretations. Member checks were first incorporated implicitly in the three waves of semi-structured interviews during data collection. In each interview, the first question involved, as illustrated in the protocols in Appendix 7, a number of points from the previously collected data that I wanted to inquire further and check with the participant based on a preliminary analysis (as noted above in 4.6). I thereby had the data and my tentative interpretations checked with the participants step by step across the data collection process.

At the final stage of this study in August 2021, I carried out formal member checks by sending the participants their related excerpts from the draft of this thesis and asked for their comments. Out of ethical considerations, I kept the checking efficient by fitting the excerpts in one single-spaced page for each participant so as not to waste his/her time. All the participants returned their feedbacks and confirmed the accuracy of the findings and interpretations. For instance, Caiyu remarks, 'I think you exactly described my opinions and experience in my professional growth' (Caiyu.MC/26.08.21). Besides assuring me of the credibility of the findings, the participants' feedbacks also allowed me to learn that their participation in the study was beneficial to them, as mentioned above in Section 4.7.6.

Peer debriefing opportunities during my doctoral years also helped ensure the credibility of this study. The discussions with my supervisors as well as friends and external researchers on conference presentation and other occasions offered me the opportunities to test my growing insights and expose myself to searching questions (Guba, 1981).

4.9.2 Transferability

Transferability is about the extent to which the findings and insights generated from this research can be applied to other situations. To make judgments about fittingness with other contexts possible, I collected 'thick descriptive data' (Guba, 1981) for the study through a procedure with several methods combined (as explained above in 4.6). Based on the data, I develop 'thick description of the context' (ibid) in this thesis by describing the context of the study in Chapter 2 and including contextual information as much as possible when presenting the findings in Chapters 5 through 7 below.

I also considered maximising transferability when deciding the research site and recruiting participants, although I did not intend my participants to be typical, but saw each of them as a case in his/her own right in this study (in 4.4). I chose Z City as the specific research site taking into consideration its potential relevance to the contexts in other parts of China, and recruited participants with varied years into teaching, so as to 'maximise the range of information uncovered' (Guba, 1981, p. 86) and make transferability judgements possible for more schoolteachers in other contexts, as previously mentioned in Section 4.5.

4.9.3 Dependability

The question about dependability is whether the findings of this study would be repeated if the inquiry were replicated with the same (or similar) participants in the same (or similar) context (Lincoln & Guba, 1985, p. 290). The strategies outlined

above to ensure credibility also contribute to the dependability of the study, given credibility and dependability being closely tied and, in practice, 'a demonstration of the former is sufficient to establish the latter' (ibid, p. 316). That said, I reported in detail the research process of this doctoral project in this chapter, so as to enable 'a future researcher to repeat the work, if not necessarily to gain the same results' (Shenton, 2004, p. 71). In qualitative research:

> rather than demanding that outsiders get the same results, a researcher wishes outsiders to concur that, given the data collected, the results make sense – they are consistent and dependable.
>
> (Merriam, 1998, p. 206)

To ensure the consistency between my findings and the data collected, I conceived and conducted the study in accordance with my paradigmatic assumptions, from my purpose and research questions to research approach and design, and to participant recruitment, and data collection and analysis, as I explained in the above sections of this chapter. In the process, I triangulated my data collection and analysis to ensure that my findings could be dependable, and kept an account of all my research stages in my research journal in order to leave an audit trail.

4.9.4 Confirmability

Maximising confirmability means ensuring 'as far as possible that the work's findings are the result of the experiences and ideas of the informants, rather than the characteristics and preferences of the researcher' (Shenton, 2004, p. 72). I used data and methodological triangulation as noted above also for the purpose of ensuring the confirmability of this study. During the research, as noted above in Section 4.2, I monitored my own subjective involvement with a stance of 'disciplined subjectivity' (Wilson, 1977). For instance, when sometimes asked to comment in an interview, I politely refused the participant and told him/her that I was there to listen and we might chat about it later after our data collection. To enable the reader to determine how far my data and findings may be accepted, I outline in this thesis my personal

experience (in 2.4) and philosophical stance (in 4.2) as well as ongoing reflections on my methodological decisions in the research process. I also kept all my data, notes and drafts available for confirmability audit (Lincoln & Guba, 1985), although I am not subject to any such audit.

4.10 Summary

In this chapter, I have considered my methodological choices made in this research. I outlined the paradigmatic assumptions underpinning this study, and discussed the evolution of my research questions along the clarification of my research purpose. I then moved on to explain the decision to use a qualitative multiple-case study design in this research, and described the participant recruitment and data collection processes. I summarised and reflected on my efforts to resolve the ethical issues and dilemmas involved in the research, including those brought by the outbreak of the Covid-19 pandemic and led to my change of the last two waves of interviews from face-to-face to synchronous online ones. I then described the data analysis process, and ended the chapter by discussing the strategies used to ensure trustworthiness of this study.

In the three chapters that follow, I present the findings of the categories and themes that emerged from the data set. I focus in Chapters 5 through 7, respectively, on the categories of professional support forms and supportive contextual elements, and the themes of contextual support for career-long professional development.

Chapter 5
Findings (1): Forms of Professional Support

5.1 Introduction

From this chapter till Chapter 7, I use template analysis (King, 2004, 2012; King et al., 2018) as a method to report, besides identifying (as noted in 4.8), the patterns that emerged from the data set. I structured these chapters of findings around the categories and themes identified, drawing illustrative extracts from the data as required. This approach has both advantages and disadvantages, as King comments:

> This tends to be the approach which most readily produces a clear and succinct thematic discussion. The danger is of drifting towards generalisations, and losing sight of the individual experiences from which the themes are drawn.
>
> (King, 2004, p. 268)

To balance the advantages and disadvantages, I present the findings with more contextual detail included progressively from this chapter through Chapter 6 to 7. In this chapter, I use illustrative extracts for the discussion of each form of professional support regardless of participants, and in Chapter 6, I present the findings with the quotes from one participant grouped together whenever possible. In Chapter 7, the themes emerging from the data set are discussed with six participants' illustrative career life stories, two stories for one theme.

In this chapter, I present the findings about the forms of professional support the participants perceived in their career lives. As previously discussed in Chapter 4, these findings are directly relevant to the first research question: How do Chinese senior high schoolteachers of English perceive the support provided by the context over their professional lives? Emerging from the data are fifteen forms of support as noted previously (in 4.8.3). Given Teacher Professional Development (TPD) is a process of change manifested and influenced by activities (in 3.2), the fifteen

support forms may be grouped with respect to whether they are activities by themselves as follows:

- **Administrative decisions with activities implied**: job assignments, evaluation of professional rankings, and full coverage in-service training schemes;

- **Activities *per se***: classroom observations, open classes, teaching competitions, seminars, paper writing, research projects, and further degree study;

- **Platforms for activities:** online chatting groups, teacher communities, Master Teacher Studios, academic associations, and overseas exchange programmes.

The first group concerns administrative decisions engaging the participants in activities for their work (job assignments), promotion (evaluation of professional rankings), and TPD (full coverage in-service training schemes). The second group are TPD activities themselves, ranging from common activities in the participants' professional lives (e.g. classroom observations) to occasional activities (e.g. further degree study). The third group involves activity platforms, from easily accessible ones (e.g. online chatting groups), to those rarely available with extra conditions to meet (e.g. overseas exchange programmes). The above grouping seems to suggest that the perceived support was not only about TPD activities *per se*, but also the way they existed in the participants' professional lives. I will return to this point in Chapter 8.

In the proceeding sections, I focus on four support forms, including job assignments, seminars, research projects and Master Teacher Studios. These support forms seemed to engender more than others the participants' positive feelings and actions about further professional development. I structure each of the sections below around the conceptual themes of what the particular form of support involved, what

was perceived as supportive, and what further actions were engendered, drawing illustrative extracts from the data as required.

Generated from the participants' interview articulations, the names of the support forms are rooted in the Chinese school context. I clarify their meanings when appropriate in the discussion below. As mentioned in Chapter 4, I use pseudonyms the participants preferred to refer to them in this thesis. I have coded their illustrative quotes to show the particular participant and data source. For example:

- (Shuyang.Q/16.12.19) refers to Shuyang's responses to the open-ended questionnaire returned on 16 December, 2019, and

- (Caiyu.W3/03.04.20) refers to the 3rd wave of interview with Caiyu on 3 April, 2020.

5.2 Job assignments

In this study, I use the phrase of job assignment to refer to a decision made by the school or other authorities to assign certain work to schoolteachers. The participants experienced various job assignments throughout their careers, as the school administration decided on academic year basis individual schoolteachers' routine responsibilities (e.g. which class to teach) as well as additional ones (e.g. playing a course leader role).

The participants seemed to find job assignments influential in their careers. Some job assignments were considered to imply opportunities for further TPD or potential achievements, which might be respectively exemplified by Dixi's and Caiyu's responses below:

Ronggan: What role do you think it [the assignment of course leader] plays in your professional life?

Dixi: Maybe, it's kind of opportunity. It brought me many opportunities. Firstly it allowed me to go outside and observe many classes, and secondly, it gave me a different thinking perspective, about being a teacher.

(Dixi.W3/13.04.20)

Ronggan: So in your six years, from 2013 till present, around six years …

Caiyu: My only regret is that if you ask about [students'] achievements, I have no achievements about college entrance exams. I have never been assigned to teach Grade 12 students.

(Caiyu.W1/08.01.20)

Job assignments could sometimes mean a change to a different course of career. Yaya, for example, majored in biology in university, but was told to teach English at her start of career and she continued to be an English schoolteacher ever since:

Ronggan: So that is to say, you were assigned to teach English?

Yaya: Yes, I was assigned to, like many other things, including going abroad [to teach Chinese] […] So many times I think what I want to do is totally different from what I am doing now.

(Yaya.W1/09.01.20)

5.2.1 What job assignments were supportive

The participants seemed to consider it inspiring to be assigned to teach a key class formed by top students in the grade. For example, when asked if she had any support that encouraged her to invest more in TPD, Haidi noted teaching key classes as one of her three inspirations, the other two being colleagues and family members. She explains further:

[…] As I teach them [key class students], I must then urge myself to learn. If I am poor, I surely can't bring out good students, and I'll fail their parents.

(Haidi.W3/12.04.20)

Another job assignment the participants considered supportive was teaching Grade 12, the last year of senior high school education, critical for the participants to prepare their students for college entrance exams, as Yaya responds below:

> **Ronggan:** Is there anything or anyone that has supported you most, or is most supportive for your professional development?
>
> **Yaya:** Teaching Grade 12, I think, because if you teach Grade 12, you have to research into some slightly difficult areas.
>
> (Yaya.W1/09.01.20)

Some additional responsibilities might also benefit TPD. Jiemin, for instance, took the responsibility and managed to re-open the school counselling room three years after it was closed. She learned a lot in the process, as she articulates:

> […] It's not my major, but I am interested in this field. […] I said [to myself], hey, go and do it. I said, very, very tired. But it's like, when you do this bit by bit, you have learned a lot in the process.
>
> (Jiemin.W1/30.12.19)

Whereas the participants seemed to find the above job assignments supportive for the challenging contexts they brought, the assignment highlighted by Guiyun below seems to suggest another supportive feature, i.e. providing an opportunity to acquire an overall understanding of school teaching. Whilst doing her MA, Guiyun taught temporarily at the lower secondary section of her school, on which she remarks:

> […] Although I only taught for one semester, I still got my experience and understandings. […] Then, you know much better what to tell students when they are in senior high, and how to teach senior high with a better transition from the teaching of junior high school.
>
> (Guiyun.W3/07.04.20)

Similarly, reflecting on her 26-year career, Shuyang also noted the importance of opportunities to obtain a holistic understanding of school teaching. In her first five years, Shuyang was allowed to complete a cycle of senior high school teaching from Grades 10 to 12. She was grateful that such work arrangements had laid solid foundations for her later development. She comments:

> […] If in the first five years [of the career], a teacher can complete a cycle of teaching [from Grades 10 to 12], he or she will then have an overall understanding of the whole subject system. This will be very beneficial both to improving his or her teaching and further development in future.
>
> (Shuyang.W3/17.04.20)

As illustrated above, supportive job assignments might be those leading to more complex professional challenges (e.g. teaching Grade 12) and providing foundations for future development (e.g. an overall understanding of school teaching).

5.2.2 What supportive job assignments engendered

The participants seemed to consider as supportive those job assignments that could engender self-confidence, as Dixi responds below:

> **Ronggan:** Why do you think it [working as a course leader] is a kind of support for you?
>
> **Dixi:** First, it made me more confident. It made me realise that I could also do well in so many things. Second, it gave me a more comprehensive perspective to think about how to develop and teach the students.
>
> (Dixi.W3/13.04.20)

Some supportive job assignments might bring the participants a sense of recognition for their work, as Yangyu notes in his professional life overview (i.e. the open-ended questionnaire):

> [2011] Taught top students in the key class. Became the youngest teacher to teach top students in the key class. Felt being much recognised and inspired!
>
> (Yangyu.Q/02.12.19)

Some job assignments could inspire the participants to engage themselves in further TPD activities, as Yangyu reflects below on his involvement in test-paper writing assigned by the municipal education authority.

> […] I think this is also kind of support for my own [professional] growth, including the discussion with others, doing research on my own, and reading and learning in the test writing process. I think all this helped me a lot.
>
> (Yangyu.W3/09.04.20)

The participants were also inspired by some job assignments to make changes in their classroom practice. Haidi, for example, invested more in TPD after being assigned to teach a key class. Asked for concrete examples, she articulates:

> […] As for spoken English, I require myself to use English to teach in every class. […] Before, I was very used to saying a sentence in English and repeating it in Chinese.
>
> (Haidi.W3/12.04.20)

As the above extracts illustrate, supportive job assignments seemed to engender the participants' self-confidence and feelings of being recognised, as well as further engagements in TPD activities and teaching improvement. It is noteworthy that these assignments of jobs or roles (e.g. a course leader, teacher of key classes, and city-level test-paper writers) all involved a shift to roles with more complex professional challenges (as noted above in 5.2.1). Such job assignments seemed to be able to inspire the participants' positive feelings and actions for further investment in TPD. I will return to this point in the discussion chapter (in 8.3).

5.3 Seminars and further interactions with speakers

The word of seminar is used in this study in the loose sense, i.e. a lecture-oriented training occasion led by a speaker. The exact Chinese word the participants used was *jiangzuo* (talk event), literally referring to a talk given by a speaker. As is common in the Chinese context, the participants used *jiangzuo* as a cover term for lectures, talks, seminars and workshops. Caiyu, for example, employs the word below both for a face-to-face workshop and an online talk in her remark on their difference:

> […] This type of *jiangzuo* is not like the one by Prof W, who needed you to interact. […] Ms F's *jiangzuo* was purely of an input type.
>
> (Caiyu.W3/03.04.20)

5.3.1 Perceived provision of seminars

Very few seminars took place at the participants' schools, especially for those such as Songrong from an ordinary school. Songrong had to seize every opportunity she could find:

> […] For example, if you have a lecture and I learn about it, oh, hurry up, go and catch it; and then someone says who is giving a lecture, and I happen to have time, hurry up, go and catch it. I can only count on myself for this. Alas! I can't even get a permission to leave the school. Don't you know?
>
> (Songrong.W2/19.02.20)

When there were seminars held at the school, all the teachers would usually be required to attend, as Dixi, who taught at a leading school, remarks:

> […] There were seminars at the school before and we were required to attend. I was very serious about them, and loved to go and listen. However, we seldom have seminars.

The authorities might offer extra opportunities for department heads, course leaders, and Grade 12 schoolteachers to attend seminars outside, sometimes in other cities or provinces, as Yaya responds when asked about seminars she attended:

> As for seminars, actually, we Grade 12 [teachers] usually attend the kind of seminars on exam preparation, and those exam prep seminars can constantly show how others prepare for the [college entrance] exams, and some new directions of the exams, etc.
>
> (Yaya.W3/11.04.20)

There were seminars available as well as mandatory for all schoolteachers in the full coverage training scheme implemented by the authorities (as noted in Chapter 2). However, the participants spoke nothing of the scheme except Haidi. Haidi considered the seminars time-consuming and she used to skip those about general education and psychology. She articulates her recent change, though:

> […] For the in-service online training, I used to feel all right as long as I could [get enough credits to] pass, and then put it aside. This time, I watched them one by one, from the beginning to the end, and I took notes of something useful.
>
> (Haidi.W3/12.04.20)

With the technology development, there were more resources including seminars online for the participants to choose freely in recent years. I will return to this point later (in 6.4.1). There were also increased offline seminar opportunities, such as those provided by such programmes as the Master Teacher Studio, which I examine in Section 5.5 below.

5.3.2 What seminars were supportive

The participants' accounts of seminars ranged from a simple comment to detailed description of experiences, but they seemed to all perceive the provision of seminars as a form of professional support, as Guiyun and Yangyu remark below:

> […] It would be beneficial to attend more seminars led by experts and so on.
>
> (Guiyun.W2/16.02.20)

> […] Either online or offline, all kinds of seminar training, basically, to a very large extent, also have an inspiring effect on our professional growth.
>
> (Yangyu.W3/09.04.2)

Whether a particular seminar was perceived as supportive seemed to be related to the participants' preferences about the speaker. Some participants preferred the speakers to be leading experts (e.g. book authors) or experienced schoolteachers, as Caiyu explains:

> **Ronggan:** You mean you'd like the school to invite some book authors over?
>
> **Caiyu:** Yes, book authors, or, who has made outstanding achievements in teaching. Such teachers are also good. […] I think such teachers are even more down-to-earth.
>
> (Caiyu.W2/14.02.20)

Seminar speakers were preferred to possess real expertise, as Dixi articulates below:

> […] That depends on whether the speaker is a person truly doing research in this area. In other words, I only enjoy this kind of seminars.
>
> (Dixi.W3/13.04.20)

It seemed that the participants preferred a seminar speaker who they admired, either for his or her character, or expertise in research or teaching, or both. Shuyang offers a close articulation below seeing seminar speakers as a role model for her:

> […] For example, in 2011 I attended Mr Li's seminar. He didn't know me, but the encouragement he gave me was very strong, because I agreed with his educational ideas, and I had read his books. Hearing his voice at the seminar deeply touched me. These [speakers] are definitely good examples for my own professional development. We learn by example, don't we?
>
> (Shuyang.W3/17.04.20)

With respect to the content of seminars, the participants preferred a seminar to offer something new, although they might understand what was new based on their past experiences. Dixi, for example, refers below to a seminar in her first year of teaching as 'enlightenment':

> […] It was attending her seminar that [I learned] when teaching students, there's something like student-centred and teacher-assisted. Since then in many papers I would write, 'teacher-assisted'. And that [seminar] was kind of enlightenment.
>
> (Dixi.W1/27.12.19)

Something practical also mattered, which made theories or new ideas accessible, as Caiyu articulates:

> […] Her seminar helped me gain a clearer understanding of the curriculum standards. Right after her seminar, I went straight back to my classroom and tried out the ideas. I found her seminar really useful. She was like directly triggering my actions to make changes right away. If we have more experts like her, it would definitely, absolutely influence me a lot.
>
> (Caiyu.W2/14.02.20)

The participants also found a seminar beneficial when it dealt with what they were puzzling over, as Caiyu responds when asked about the role of seminars in her professional life:

> As for seminars, that depends on what content. If the content the speaker talks about coincides right with your current thinking points, that's really a big boost [for your professional development].
>
> (Caiyu.W3/03.04.20)

The participants also felt supported when a seminar offered assurance that they were doing things right, as Dixi reflects below:

> […] I just felt, wow, how could I have considered that much, just as the speaker did? At the beginning I didn't think I could, and my idea was that good. But after the teacher's seminar, I believe I have got the right idea.
>
> (Dixi.W3/13.04.20)

As illustrated above, supportive seminars for the participants seemed to be those that could provide something new, practical, or reassuring, or solutions to their puzzles. The specific supportive content was yet up to individual participants' decisions, to which the participants' past experiences (e.g. as to what was considered as new) or their readiness (e.g. as to what the participant was puzzling about) seemed to be relevant.

5.3.3 What supportive seminars engendered

Supportive seminars seemed to enact the participants' reflection on their own teaching during the seminar, as Haidi notes, 'When I listen to their speech, I find that there are a lot of problems in my teaching' (Haidi.W3/12.04.20). Some participants also wrote reflection diaries following a supportive seminar. Caiyu, for example, responds when asked what she did because of a seminar:

> After a seminar, I would right way, usually right after it, go through it one more time, write down in words something that impressed me most. And for this, first, the seminar had how many parts, what about, and what impressed me most. Then, regarding follow-up actions in my own practice, what would be the improving points? I would write something like that. After writing, I would go over it in about three days.
>
> (Caiyu.W3/03.04.20)

Some seminars triggered further reading. Shuyang, for example, bought books: 'As soon as I got back, I then chose a few more books about observing and assessing lessons' (Shuyang.W2/17.02.20), whereas Dixi checked for more references:

> […] For some seminars, not everything was inspiring, maybe just one point, or, two or three points. If there's a good point, I felt, ah, so it is. I would compare it with my own teaching, and check it up, and there would be more reflection.
>
> (Dixi.W3/13.04.20)

The influence of some seminars reached further, and the participants might apply what they learned to their own classroom and wrote papers afterwards, as Caiyu articulates:

> […] After Prof W's seminar, I designed my reading lessons following the three steps; that's the specific action I took. […] After practice, I may write a paper; like the seminar by Prof W, I have got a paper written. We need to reflect after practice, whether practice as such has fully implemented what she said, and then what problems needed to be solved, and what my own students' feedbacks were like.
>
> (Caiyu.W3/03.04.20)

Seminars were also referred back to when necessary, for example, writing a paper as Jiemin notes:

> […] For instance, when I wanted to write a paper before, […] I would also check up something in this area, some seminars I have learned something from.

Some participants remarked on their seminar experiences from a life perspective. For instance, Caiyu placed seminars on top among the forms of professional support that ever encouraged her to invest further in TPD, as she responds below:

Ronggan: Why do you think their seminars could be inspiring for you?

Caiyu: Because I myself also have ideals and pursuits, but as I walk on and on, they might become weaker and weaker, or the feelings are no longer strong. It's like a parabola. Sometimes when you get to the top, you slowly fall down. Then the seminars like these would burn again, or ignite your passions and dreams.

(Caiyu.W3/03.04.20)

The life inspiration could be the seminar speaker who was seen as a role model for TPD, as Songrong puts it:

[…] Seeing you people who have reached a certain level, really, you are not just doing for mere teaching, but really hope to do something in the field for everyone. […] Then I thought, how could I have said things like that? I would never ever dare to say before these people that I'm going to retire soon. No, really, no longer dare to say so.

(Songrong.W1/25.12.19)

Some participants were also inspired by seminar audience. Speaking of a seminar she attended in another city, Dixi, for instance, remarks:

[…] It was at the seminar that I found many teachers could easily say out many theories in the curriculum standards. After the seminar, they themselves paid to attend another seminar. I really admire them so much. I never thought of doing so before.

(Dixi.W3/13.04.20)

The above discussion has illustrated that supportive seminars seemed to trigger the

participants' positive actions for professional development (e.g. reflection during and after seminars, further reading, classroom application, and paper writing), and life inspirations for sustained investment in TPD by seeing the speakers or audience as role models.

5.3.4 Further interactions with seminar speakers

The participants got to know experts from outside their schools mainly through seminars, and they approached a speaker for further interaction if they found the seminar supportive and the speaker approachable, as Shuyang notes:

> […] If I can meet someone [supportive] for my professional development, maybe it'll be at some academic meeting of lucky chance, or some seminars. Those experts and academics can inspire me a lot. We frontline teachers are willing to ask them for help if they are willing to help us.
>
> (Shuyang.W2/17.02.20)

For the preferred speakers, Dixi highlights those both experienced in teaching school students and theoretical research:

> **Ronggan:** You said you'd like to be guided, by whom, then?
>
> **Dixi:** Someone just like Mr Z, who has rich experience and profound theoretical knowledge, and who can tell me which idea is right or wrong among so many of them. Is my understanding really correct? Should I go on this way? Which direction should I continue to follow?
>
> (Dixi.W2/23.02.20)

Like-minded speakers were also preferred, either sharing similar interests or values, as Caiyu responds below:

> **Ronggan:** What kind of experts or fellow teachers [to communicate with]?
>
> **Caiyu:** At least [he or she has] something to resonate with you. That is, when

you tell him or her about a problem, he or she is also following such a problem. We are both following the same thing, or he or she has already got some mature thinking about it.

<div align="right">(Caiyu.W3/03.04.20)</div>

The participants also preferred to interact with a seminar speaker they admired as a role model, as Shuyang comments, 'first to play a model role, and then provide theoretical guidance and some advice' (Shuyang.W2/17.02.20). In addition, the participants tended to further interact with those seminar speakers who were able to provide TPD opportunities. For instance, Dixi regretted missing an opportunity offered by a speaker, the then-English Language Teaching (ELT) researcher of the provincial education authority. Dixi was later asked to submit a paper, but did not manage to redraft her paper after receiving the researcher's feedbacks. Dixi expresses her regret:

[…] She said, I want to help and lead a group of teachers to do the teaching reform. And then, it was all because of my personality that I actually missed the opportunity. I didn't catch it because I was always busy with my classroom teacher work at the school, without giving a thought to my own [TPD].

<div align="right">(Dixi.W1/27.12.19)</div>

After-seminar interactions began with making acquaintance with the speaker, for example, by adding as WeChat friends. Later interactions might go beyond the seminar topic but within the scope of the speaker's expertise, depending on what practical issues that arose in individual participants' professional lives. The issues ranged from problems in their teaching and research work, to children education at home. This can be exemplified by Caiyu's articulations below.

[…] Teacher D is good at solving problems in the field of moral education, and usually, when I meet with some rather thorny problems, I will turn to him [for help].

<div align="right">(Caiyu.W3/03.04.20)</div>

> […] Prof M helped me improve my paper, and showed me how to write in an academic way. I made progress each time following his guidance.
>
> <div align="right">(Caiyu.W1/08.01.20)</div>

> […] For example, I also communicate with you. I asked you how to help my children to learn English.
>
> <div align="right">(Caiyu.W3/03.04.20)</div>

To sum up, seminars were perceived as a form of professional support, although the participants did not find all existing seminars supportive. A supportive seminar enacted the participants' active engagement in reflection during and after the seminar, and further interactions with the speaker. After-seminar interaction with the speaker extended the supportive role of seminars further into the participants' career lives, with the audience-speaker relationship evolving into that of acquaintances, which seemed to result in the participants' involvement in more TPD activities. I will return to this point in Sections 6.2 and 8.3 below.

5.4 Research projects

In the Chinese school context, the term 'research project' is used to refer to schoolteachers' focused efforts on a topic in order to improve their teaching practice in relation to theories accessible to them. The exact Chinese phrase the participants employed was '*keti yanjiu*', literally, 'project research', and '*keti*' (project) for short. Before 2016, the participants did research projects mainly out of personal interest, as Shuyang articulates below:

> […] In 2002, […] I was very curious about what [research] projects meant. Then, I asked Director F [director of teaching and research office at the city education bureau] what a project was. […] I said I was curious. I really wanted to have a try.
>
> <div align="right">(Shuyang.W1/20.12.19)</div>

In 2016, the provincial authorities (2016) issued the latest evaluation standards of professional ranks, which made doing approved research projects mandatory for schoolteachers to apply for higher professional ranks (as previously discussed in 2.5). Approved projects referred to those approved by education authorities of different levels, and thereby projects were categorised into district-/county-, city-, provincial and national levels. Since then, research projects became a buzz word among schoolteachers, as Jiemin comments:

> […] I think it has now become utilitarian to do projects. […] For example, on an occasion if I don't say I've got a project, I'll feel like so [embarrassed].
>
> (Jiemin.W3/10.04.20)

5.4.1 What activities research projects involved

The participants considered research projects to involve such activities as reflection, reading and writing, as Songrong and Shuyang highlight below:

> […] I think [doing] projects is kind of reflection, to reflect on whether the way I am doing is right or wrong. If it's wrong, what to do next, and how to improve it.
>
> (Songrong.W3/30.03.20)

> […] if you want to do projects, you'll have to keep checking references and reading journals, and every year, you'll write papers.
>
> (Shuyang.W1/20.12.19)

A research project might also involve teaching an open class as a way to showcase the research progress or outcomes. Generally speaking, an open class in the Chinese context 'is a professional development phenomenon where teachers visit and discuss each other's classes' (Wu & Clarke, 2018, p. 214), and activities before and after an open class are similar to those in lesson study (Fernandez, 2004). In the participants' projects, an open class was open to fellow research team members, and sometimes

outsiders (e.g. invited experts) for classroom observation and open discussion. For example, Caiyu articulates:

> […] When I was doing the city-level project, I undertook one of our school's open classes, also an open class for my project. We invited Prof M and Ms C [a master teacher] and others […] to observe [my class].
>
> (Caiyu.W1/08.01.20)

The participants perceived research projects as working in a team to try out new ideas in their teaching, as Guiyun responds below:

> **Ronggan:** What do you mean by participation [in the projects], specifically?
>
> **Guiyun:** That is, as a team member of the project, you take part in the implementation of some new teaching methods.
>
> (Guiyun.W3/07.04.20)

Doing research projects was also seen as a process of solving practical problems and enhancing professional development simultaneously. This can be exemplified below by Shuyang's articulation of what she learned from her first project.

> […] I thought, since each project would be relevant to the practical problems in my teaching, then I could research into problems in my teaching, and try to solve the problems and develop myself simultaneously.
>
> (Shuyang.W1/20.12.19)

Caiyu's description might illustrate how TPD activities were integrated into the process of doing research projects. For each project, Caiyu started by reading to learn about relevant theories and relating her reading to practice through trying out new ideas in her own classroom, as she notes:

> […] Since you want to concentrate on this [topic], and you've got a problem to

focus on, you'll read a lot on theories and relate them to your practice to see which way is more scientific and appropriate […] and try it out in your own teaching.

<div align="right">(Caiyu.W3/03.04.20)</div>

She then prepared an open class. She invited experts to observe the class and lead a seminar, if possible. At the end she wrote about her open class and sought expert support to help edit and publish her writing in academic journals. She describes below her feelings about having her first paper published with Prof M's help:

> […] I felt quite a sense of achievement. After all, it was my first paper published, and it's in a good journal. For me, this is also a milestone.

<div align="right">(Caiyu.W1/08.01.20).</div>

As illustrated above, a research project seemed to integrate a series of activities (reflection, reading, teaching an open class, and writing, sometimes for publication, as well as working in a team to try out new ideas and solve practical problems) in a process leading to professional development. Through research projects, the participants appeared to engage themselves in interrelated activities with reflective practice (Farrell, 2019; Mann, 2005) involved. I will return to this point in Section 8.2.2.

5.4.2 What aspects of research projects were supportive

The participants underlined some of the activities involved in research projects as supportive for their TPD. Songrong, for example, highlights reading and writing though their benefit might take time to show:

> […] In the writing process you really read books, and then you'll gain a lot. You don't care what the ending might be like, whether you can be recognised or anything else, but you'll be like that in the research process.

<div align="right">(Songrong.W1/25.12.19)</div>

Shuyang places importance below on TPD activities outside the school, which were made available by the funding of projects for an ordinary schoolteacher:

> […] I had provincial funding for my research project, so when I wanted to go outside to learn, I could use the special funds. As an ordinary teacher, there's no way that you could use the school office funding for a trip [like that], right?
>
> (Shuyang.W1/20.12.19)

Expert coaching activities were also found supportive in that they enabled the participants to relate their teaching to theories when involved in a research project, as Yangyu articulates:

> […] So from doing the project, I benefited a lot both in theory and practice. For instance, the studio [master] teacher and other experts would suggest books for us to read related to the research topic. It's theoretical coaching, and for some theoretical issues, we could explore together.
>
> (Yangyu.W3/09.04.20)

Besides activities, another aspect of research projects the participants perceived as supportive was the opportunities to get to know and further interact with external experts, as Caiyu notes below:

> […] After that [open class], I wrote a paper according to the opinions and comments from Prof M. It was after editing by him that the paper was published in an academic journal.
>
> (Caiyu.W1/08.01.20)

The participants also considered doing research projects as an opportunity to work with like-minded fellow schoolteachers, who became 'learning friends' (Harper & Nicolson, 2013) willing to support each other's TPD. I will return to this point later (in 8.3.2), but it may now be exemplified by Jiemin's comments after articulating her experience of working together against difficulties in a project:

> […] It touched me greatly. So I think a like-minded person is who may not say, sure, I will support you or anything, but in many ways we are working together without saying anything like that.

<div align="right">(Jiemin.W2/26.02.20)</div>

Research projects were also considered to be supportive as they could provide TPD focuses appropriate to different professional life stages, as Shuyang remarks:

> […] If there's no research project, many people will become sluggish. They'll have nothing to do once they get the senior professional title. I already got the senior title in 2003, so I said [to myself], I don't want to be idle so early, just waiting to retire. I wanted myself to have things to do, so I chose to do projects.

<div align="right">(Shuyang.W1/20.12.19)</div>

As illustrated above, the participants saw research projects as beneficial to TPD for their related activities, opportunities to interact with experts and like-minded fellow schoolteachers, and TPD focuses appropriate for different career stages.

5.4.3 Long-term influence of research projects

Doing research projects seemed to have helped some participants develop their awareness of problems and how to approach the problems, as Caiyu responds:

> **Ronggan:** What if you didn't do any projects?
>
> **Caiyu:** If no projects, my problem awareness would not be so strong and my way to solve a problem would not be so systematic. I would not go deep, nor scientific.

<div align="right">(Caiyu.W3/03.04.20)</div>

Some participants were more aware of relevant theories to their teaching after doing research projects. For example, Yangyu began to notice and try out theoretical ideas he learned from his readings, as he articulates:

> [...] I have begun to note down something good from theoretical books and other teachers' classes. [...] I apply what I learn from books, the theoretical ideas to my classroom practice, either sub-consciously or purposefully.
>
> (Yangyu.W3/09.04.20)

Besides engendering the participants' awareness of problems and theories, the experiences of doing research projects might also further influence the participants by contributing to their future professional success, as Shuyang remarks.

> [...] So thanks to my persistence in doing research projects, I was successfully nominated in the city and became the master teacher to lead this studio, especially the provincial level studio.
>
> (Shuyang.W3/17.04.20)

It appeared that doing research projects benefited the participants' TPD both in the short- and long-term. Shuyang's experience, in particular, seemed to provide an illustration for this. I will present her story in detail in Chapter 7 and discuss further in Chapter 8.

5.5 Master Teacher Studios

The Master Teacher Studio (in Chinese, *Minshi Gongzuoshi*) is 'a newly emerging TPD programme in mainland China' (Zheng, Zhang, & Wang, 2019, p. 838). In the participants' city, there were studios of district/county, municipal and provincial levels, with their members respectively selected from schoolteachers across the district/county, city and province. In each studio, the member teachers were led by a master teacher or *Mingshi* in Chinese (literal translation: famous teacher), who was of senior professional rank and well-known in the area. The mechanism of Master Teacher Studios was intended to serve as 'part of the country's support for teacher professional development' (Shuyang.W3/17.04.20), and produce excellent teachers in a snowball fashion, as Shuyang puts it:

[…] Such a mechanism is to encourage each excellent teacher to lead and bring out a group of excellent teachers. I really think this is a very good platform.

<div align="right">(Shuyang.W3/17.04.20)</div>

Among the participants, Caiyu, Dixi, Guiyun, Jiemin and Yangyu were members of different studios, whereas Shuyang was the master teacher leading a studio of both municipal and provincial levels, i.e., recognised and funded by the education authorities of the city and province.

5.5.1 What activities Master Teacher Studios involved

Master Teacher Studios organised various TPD activities for their members, such as seminars and reading group activities as Dixi highlights in her response below:

Ronggan: You said you are grateful for the Studio, why?

Dixi: It organised seminars, such as the expert seminars like yours, and also bought books, academic books, for us to read, and took us [outside] to observe classes.

<div align="right">(Dixi.W3/13.04.20)</div>

Although studio activities were usually based at the master teacher's school, studio members also visited different schools to observe and teach open classes. Open class teaching was a way to disseminate teaching ideas the studio developed in their research projects, as Guiyun articulates:

[…] A Studio needs to have and disseminate its own teaching ideas or models. For example, we go to other schools, sometimes with one or more other studios, to organise an event, something like an open day, and invite many teachers to come and observe classes.

<div align="right">(Guiyun.W3/07.04.20)</div>

Master Teacher Studios also ran official accounts on the mobile application of WeChat. Member schoolteachers wrote newsletters and sorted out their activity outcomes to share with schoolteachers beyond the studio, as Caiyu notes:

> As I am also her [studio master teacher] assistant, I help her manage the [studio] WeChat official account. Every day I upload our posts and micro-lesson videos.
>
> (Caiyu.W3/03.04.20)

5.5.2 What aspects of Master Teacher Studios were supportive

An aspect of Master Teacher Studios the participants perceived as supportive was that their studios helped relate their teaching to theories through such activities as research projects, as Yangyu articulates:

> […] So I think it [the Master Teacher Studio] helped me a lot in teaching research. As a team we surely had a clear research topic […] I benefited a lot from doing the research project, both in theory and practice.
>
> (Yangyu.W3/09.04.20)

Another supportive aspect was that the studios enabled their members to go beyond their own schools to see different perspectives through seminars and classroom observations. Asked why she found the studio most inspiring in her professional life, Dixi responds:

> Because I saw a different vision. Because when someone came to do a seminar, I saw a different point of view, a different vision. It could touch me deeply.
>
> (Dixi.W3/13.04.20)

Similarly, Shuyang, the master teacher leading a studio, highlights below the supportive role of the studio in enabling her to engage in more TPD activities outside her school and have a wider contact with experts and fellow schoolteachers:

> […] I used to pay myself for books or going outside to learn. But now at the least, I can use the government special funds to buy books and go outside to learn.
>
> (Shuyang.W3/17.04.20)

> […] With such a platform of the Studio, I can be in touch with more and more capable and talented people, that is, I have a wider contact with people. Every time [I meet them], I can be greatly inspired and I will remind myself I should keep going.
>
> (Shuyang.W3/17.04.20)

Haidi was not a member of any studios, but she also found Master Teacher Studios indirectly beneficial to her TPD. She was connected with Master Teacher Studios beyond her school via their WeChat official accounts, as she articulates:

> […] They shared some books in their WeChat official account. Although I am not a member of the Master Teacher Studio, I bought some books they introduced. They were useful for teaching. I had never read some books relevant to how to do teaching well before that.
>
> (Haidi.W3/12.04.20)

In addition, Haidi benefited from word-of-mouth sharing about Master Teacher Studios, connecting her with a studio member teacher as her role model who she did not actually meet:

> […] Our department head [member of a Master Teacher Studio] came back and told us at a meeting. He said she [another studio member] never wasted time. She listened to English radios on her way to her school every day. […] So I have also formed such a learning habit.
>
> (Haidi.W2/21.02.20)

5.5.3 Further actions triggered by Master Teacher Studios

The participants highlighted their further TPD actions triggered by Master Teacher Studios. For instance, Jiemin notes below that she was encouraged by the studio master teacher to progress from studio activities to writing her own papers:

> […] I worked as an assistant in it [the Master Teacher Studio], so I had written quite a lot [for the studio]. Later she [the studio master teacher] said to me, you've got so much training, and you've also taught open classes. You can put all these things together. Not too many, you may try writing a paper in a year. So I wrote a paper this year.
>
> (Jiemin.W1/30.12.19)

Following the master teacher's advice, Jiemin also formed a habit of writing memos to note down what she did and thought about in her teaching:

> […] Since she [the studio master teacher] reminded me last year, I have gradually formed a habit of noting down something, maybe very fragmental, in a small notebook or the memo app of my mobile.
>
> (Jiemin.W3/10.04.20)

Besides writing, involvement in a Master Teacher Studio also enacted further reading following studio activities, as Dixi notes below:

> […] I'm naturally influenced because of the environment. And, after hearing or seeing, ah, so it is like that, and then I will want to find something to read, to check up.
>
> (Dixi.W1/27.12.19)

To sum up, the participants seemed to see Master Teacher Studios as a supportive platform, which provided opportunities to go beyond their own schools and involve in various TPD activities. Besides, the environment of a studio might also be a context inspiring the needs to engage in further TPD activities not only for the

member teachers, but also the master teacher leading the studio. I will return to this point later (in 8.2.2).

5.6 Summary

In this chapter, I have presented findings about the forms of professional support. The fifteen forms that emerged from the data set involved administrative decisions with activities implied (e.g. job assignments), activities for Teacher Professional Development (TPD) *per se* (e.g. seminars), and platforms for TPD activities (e.g. Master Teacher Studios). Given the relevance to the research questions (in 4.3), I discussed with illustrative quotes the four forms of professional support that engendered more than others the participants' positive feelings and actions about further TPD. These four support forms were job assignments, seminars, research projects, and Master Teacher Studios. But why did such positive feelings and actions occur? In the discussion, I highlighted a number of points worth exploring further. For instance, supportive job assignments encouraging engagement in further TPD seemed to involve the participants' shifts in role (in 5.2), to which I will return in Chapter 8.

The findings also suggest that contextual elements (people, place and time) (Wedell & Malderez, 2013) played a part in the forms of professional support existing in the participants' career lives. For instance, the participants preferred to further interact with seminar speakers they admired as role models, and the further interaction could lead to the participants' engagement in more TPD activities (in 5.3). I present the findings about supportive contextual elements in Chapter 6 that follows.

Chapter 6
Findings (2): Contextual Elements as Professional Support

6.1 Introduction

In this chapter, I present the findings about contextual elements as support for Teacher Professional Development (TPD). The chapter is structured with respect to the three core components of context (people, place and time) (Wedell & Malderez, 2013). I first focus on the supportive role of people, and then the positive influence of place and time. At the end, I consider the influence of contextual elements interrelated in the participants' career lives. The discussion in the chapter is hoped to further address the research questions posed in Chapter 4.

6.2 The supportive role of people

The participants noted various people supporting their TPD, including students, leaders, colleagues, and external experts in the school microsystem, as well as friends and family members respectively in the friendship and family microsystems. I examine the supportive roles of these key persons below.

6.2.1 Students

The participants considered it influential in their professional lives whether their work was recognised by students or not. Jiemin, for instance, placed opportunities and recognition on top when asked what could support a schoolteacher to develop sustainably. She highlights students' recognition as she elaborates:

> […] I think everyone wants to be recognised. Recognition can be in many ways. It does not necessarily mean how much money or what awards. Sometimes I will also feel ecstatically happy at a recognition from the students.
>
> (Jiemin.W3/10.04.20)

Students' recognition could be a simple positive comment after a lesson:

> […] Maybe when I finish teaching an open class, for example, the students say to me, I found your class very interesting. It may just be a word of interesting. I'll take it as a kind of recognition for me.
>
> (Jiemin.W3/10.04.20)

Being recognised was taken by Jiemin as a reason to convince herself that her teaching work was worth further devotion, as she notes, '[…] There should be something as a form of recognition to make myself think what I am doing is worth doing in future' (Jiemin.W3/10.04.20).

Similarly, Shuyang relates students' recognition to the meaningfulness of a schoolteacher's work:

> […] If a teacher contributes heart and soul but receives no recognition from anybody, especially students and parents, he or she must feel very lonely. That is, what you are doing would seem to be meaningless.
>
> (Shuyang.W3/17.04.20)

Students' recognition, as manifested by their affections for the schoolteacher, could engender further devotion to students. In the academic year of 2019, for instance, it was legitimate for Shuyang to give up teaching one of her two classes, but she chose not to. She found it difficult to leave her students who loved her, as she articulates:

> […] I had already taught a week, and I found the students adorable and they also loved me. I could still go to the leaders and tell them [my situation], but it would be unbearable for me to give up either class of them.
>
> (Shuyang.W2/17.02.20)

Besides recognition, students' academic achievements was also an inspiration for the participants. A class Yangyu taught before, for example, were initially the most difficult to teach among their peers, but later did remarkably well in college entrance exams. The students were grateful even years after graduation for Yangyu's work as their then-English and classroom teacher. Many of them kept in touch with him, and every year they got together and expressed their gratitude to Yangyu for his devotion that had changed their learning attitudes and consequently their later life courses. Yangyu was greatly inspired, as he puts it:

> […] So not just their academic achievements were inspiring for me. Their gratitude and recognition were also an inspiration for me, a great inspiration.
>
> (Yangyu.W3/09.04.20).

Students' recognition and achievements brought Yangyu a sense of achievement as a schoolteacher playing the role of a life guide in students' development, inspiring him to keep devoting himself to the teaching profession. Yangyu elaborates:

> […] Before I felt that I was helped to some extent, or influenced greatly by others, either my teachers or my good friends, on the road of my professional growth. They were like my guides along the road. But now I myself have also played such a role, so I feel a great sense of achievement, and I firmly believe that I will walk on along this professional road.
>
> (Yangyu.W3/09.04.20)

The above extracts from Jiemin, Shuyang, and Yangyu illustrate that the participants highly valued the recognition from their students, from a simple positive comment after a lesson, to affections and gratitude for the teacher before or after graduation. It appears that students' recognition could influence the participants' perceptions of the meaningfulness of their work, and in turn, their devotion to the profession and future TPD. As Dörnyei and Ushioda (2021) note, 'teaching is a highly interpersonal rather than simply personal endeavour' (p. 156). These findings resonate with the considerations of TPD-student learning dialectic (Johnson & Golombek, 2018) and

relational aspect of teacher motivation (Dörnyei & Ushioda, 2021) in the literature. I will return to this point later (in 8.4.2).

6.2.2 School leaders

Leaders' recognition was considered important by the participants. Dixi, for example, was thankful for a director of her school who recognised her journal writing during her classroom teacher work:

> […] I'm extremely grateful for a director of moral education. He praised my journals at the first classroom teachers' meeting in each semester. He said they were well written and even had them printed out [for dissemination]. He often encouraged me. I think he's really nice.
>
> (Dixi.W2/23.02.20)

Central to the director's recognition seemed to be his attentiveness to Dixi's sustained efforts she invested in her work, as Dixi remarks:

> […] [The director] could see something of a teacher, something a teacher said and accumulated. I think it greatly encouraged me. It was a great inspiration for me.
>
> (Dixi.W2/23.02.20)

Dixi saw the director's recognition as a turning point in her professional life. Three years before, Dixi was pulled to the lowest point by a discouraging job assignment (which I will describe in 6.5 below). Dixi explains how the director's recognition brought change to her and people around her, helping her gradually recover from the discouraging job assignment and move on again:

> […] I think because I wrote [journals] while I did my classroom teacher work, and I got that [recognition] from the director, others could then notice me and change their impressions of me. […] Yeah, it has changed a lot in me.

Besides recognition, leaders' trust was also considered supportive for TPD. Jiemin, for example, joined a teaching competition in 2008, her second year into teaching, but did not perform as expected at the city-level final. She was sad although she had won the school- and district-level competitions. When she looked back, however, she was grateful that her leaders continued to trust her and offer her TPD opportunities, as she remarks:

> […] I know at some schools, if you haven't done this well, your leader would be so and so. But our leaders, so many generations of them, are quite open-minded. They let you free to try. They may hope you to get things done at one go, but they will also trust you if you can't reach their expected outcomes.
>
> (Jiemin.W1/30.12.19)

The leadership's continued trust seemed to sustain Jiemin's enthusiasm for further TPD activities over the years after the competition. This can be exemplified by her articulation of trying out new teaching ideas inspired by her new principal, who came to the school in 2017. Jiemin remarks:

> […] He's the youngest principal in the district, so he's got many new ideas. I think, the principal has something new; I shall then follow up to have something new.
>
> (Jiemin.W1/30.12.19).

The participants also considered the leadership's overall strategy for teachers' TPD as supportive. Shuyang, for example, comments after articulating how one of her former leaders helped young schoolteachers:

> […] So in the school where I used to work, this leader's overall strategy was particularly good. He cared very much for teachers' development, and he's selfless.

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The leader's strategic thinking seemed to be at play when he, the then school principal and deputy head of the education bureau, offered Shuyang a seminar opportunity in the capital city of another province in 1997, her fourth year into teaching. Shuyang attended the seminar as the only frontline schoolteacher in the team led by the leader, the other members being a mid-level leader of her school and eight school principals. Shuyang was excited at the offer as seminar opportunities were then rare across China, let alone those outside of the province and offered to a young schoolteacher:

> […] The leader also wanted a frontline teacher [to attend the seminar]. Then he came and asked me. We're going somewhere to learn. Would you like to go? Surely I was very excited and happy, so I went.
>
> (Shuyang.W1/20.12.19)

The seminar turned out to be 'the most important start' (Shuyang.W1/20.12.19) for Shuyang's TPD (More detail will be presented in 7.2.1), and the leader was respected by Shuyang as the first of important others in her professional life:

> […] I am truly grateful to him, this old leader. I call him the person who helped me to the war horse. […] There are important others in the course of life, right? He's the first of my important others.
>
> (Shuyang.W1/20.12.19)

As the above illustrates, some school leaders positively influenced the participants' professional lives by providing recognition, continued trust, and opportunities with an overall strategy for teachers' professional development.

6.2.3 Colleagues

Some participants noted that they benefited from informal discussions with their colleagues, as in the case of Jiemin, who considered her colleagues' advice during their office chats to be important in her TPD. She was thankful, for instance, that she took a colleague's advice to accept the classroom teacher job assignment following her second maternity leave, as she reflects:

> […] I followed his advice at that time. Looking back, it's been two years. Now I think, it's not bad. I've gained a lot. Surely I was a bit more tired [than not doing the classroom teacher work], but I've got my gains.
>
> (Jiemin.W3/10.04.20)

Jiemin valued the sincerity in their office chats, which suggests a role of harmonious interpersonal relations in the supportiveness of informal discussions with colleagues. She comments:

> […] While we chat, between colleagues, we give pertinent advice and good help from the heart. So we're all sincere when we three English teachers chat together.
>
> (Jiemin.W3/10.04.20).

Besides generating sincere advice, office chats could also be inspiring, as Jiemin remarks below:

> […] In the discussion process, one of my older colleague's words may inspire me, one of mine may inspire my younger colleague, and one of hers may inspire me. I think chatting like this is quite inspiring.
>
> (Jiemin.W3/10.04.20)

Colleagues could also be supportive as a role model for TPD. Haidi, for example, had a colleague who majored in mathematics in university, but loved and taught

English, and was often assigned to teach key classes. Haidi considered the colleague as her role model, one of those who inspired her to invest further in TPD:

> […] She's an enterprising person. She practises spoken English every day. […] She writes papers and does part-time master's study, too. We're relatively close and often stay in the same office, so I'm influenced in some way.
>
> (Haidi.W3/12.04.20)

Haidi's colleague mentor was another key person who played a supportive role in her professional life. When Haidi started teaching in 2011, the school appointed the EFL (English as a Foreign Language) course leader of the grade to be her mentor for a mentoring programme (called *yilao daixin*, literally in English, the old leading the new). Haidi's colleague mentor initially played the acculturator role in Malderez's classification of a mentor's roles (in Aliaga Salas' (2018) interview report), helping Haidi into the culture of the school and the wider profession, as she articulates:

> […] [She] always tells me how to make full preparation for the class, and how to handle some students' problems. When I first entered this school, she helped me adapt to the school life and told me how to be a good teacher.
>
> (Haidi.W1/25.12.19)

An additional mentoring relationship seemed to bring Haidi and her colleague mentor closer, for which Haidi tended to turn to her mentor for help on site ever since her start of career.

> […] She's influenced me quite a lot. I usually turn to her if I have any problems. She's been leading me since I started my career, so it's like, I'll turn to her whenever I don't understand anything.
>
> (Haidi.W2/21.02.20)

The expertise of colleague mentors appeared to be relevant to whether the mentoring relationship could last long and be supportive for the participant. This can be

exemplified by Yangyu's experience with two colleague mentors. The mentoring relationship with his first mentor, who was not much more experienced than Yangyu, turned out to be superficial, as Yangyu comments:

> […] It was a mere formality because the [mentor] teacher was also very young, probably only a few years older than me. He came a few years earlier. So he probably didn't have much experience, and he himself also felt a bit embarrassed.
>
> (Yangyu.W1/30.12.19)

Another colleague with over thirty years of teaching experience became Yangyu's mentor in 2011, his second year into teaching. The mentoring relationship lasted on though it ended in the sense of the school mentoring programme two years later. Their communication continued even after the mentor's retirement. Yangyu considered his second mentor influential and supportive in his professional life:

> […] It was not until he became my mentor that I realised how to be a good English teacher, and how to develop myself professionally and enhance my own professional abilities.
>
> (Yangyu.W1/30.12.19)

Mutual classroom observations and discussions with his second mentor were what Yangyu considered particularly supportive for professional development and what he would share with younger colleagues, as he notes below:

> **Ronggan:** Did you observe each other's classes in the two years?
>
> **Yangyu:** Yes, we observed each other's classes, many, many classes. So [now] I also tell younger teachers that classroom observations are really very important.
>
> (Yangyu.W1/30.12.19)

The above has illustrated that colleagues played a supportive role in the participants' professional lives. School colleagues could be inspiring and sincere contributors in informal discussions, as well as TPD role models. The participants were brought closer with some colleagues by an additional mentoring relationship, enabling support on site during and after the school mentoring programme.

6.2.4 External experts

Some participants highlighted the supportive role of such external experts as higher education academics, researchers of local education authorities, and well-known schoolteachers. For instance, asked what support she wished to continue to have, Caiyu noted a few external experts besides her department head. She named three local experts: the teacher presiding over the Master Teacher Studio she was involved in, an English Language Teaching (ELT) researcher at the municipal education bureau, and a university professor who helped with her paper writing. Caiyu also mentioned four experts outside the city: two professors whose seminars impressed her and two schoolteachers she continued to be in touch with after their seminars, Teacher D and Teacher F.

Unlike local experts who supported the participants through various activities and personal communications, experts from outside of the city were occasional seminar speakers. The participants might, however, continue to interact with them and get supported after seminars. This can be exemplified by Caiyu's interaction with Teachers D and F, both well-known as top ten best classroom teachers in the country. The two expert teachers influenced Caiyu a lot as they gradually became her 'critical friends' (Campbell, McNamara, & Gilroy, 2004; Day, 1999). They visited Caiyu's school in 2014, her first year into teaching. Since then, Caiyu often turned to them for advice, as she notes, '[…] I added them to my WeChat contacts long ago. I will contact them whenever I have a question' (Caiyu.W1/08.01.20).

The further interaction seemed to have changed the audience-speaker relationship to that of acquaintances, contributing to Caiyu's sustained investment in TPD (I will further discuss this in Section 8.3). For instance, Caiyu followed the two expert teachers' books and seminars, as she articulates:

> […] Teacher D is from my hometown. […] His books have influenced me a lot. I've bought all his books. I chat with him on WeChat after reading his books, or turn to him when I have a question. [He gives me] all kinds of help.
>
> (Caiyu.W1/08.01.20)

> […] Teacher F gave a seminar [live online] yesterday afternoon. I didn't have time as I had lessons. Until in the evening, after putting my children to bed, I then had time to watch the replay. There's another seminar. I will watch it this evening. She did two seminars. [They] should be very good, and yes, truly helpful to me.
>
> (Caiyu.W3/03.04.20)

Caiyu's interactions with Teachers D and F seemed fruitful. Caiyu found herself working harmoniously with her students and her students kept making progress:

> **Ronggan:** So your interaction with your students …?
>
> **Caiyu:** Very, then very harmonious, no conflicts at all, never ever. I have never lost my temper to my students, yeah, happy and cheerful every day. So the cohort […], when I took over, they were basically the last, but made progress bit by bit, and they were already the best in the fourth exams, I mean, among regular classes.
>
> (Caiyu.W1/08.01.20)

6.2.5 Friends

Friends seemed to be supportive by inspiring the participants to invest in their TPD. Kexin, for example, was encouraged by two close friends to make professional progresses. Kexin and the two friends graduated from the same teachers college in 1993 but since then taught at different schools. That is, the two were Kexin's friends

in the microsystem developed in her education experience. Kexin highlighted two life decisions which she would not have made without the two friends' encouragement and influence as role models. One decision was to obtain a part-time bachelor's degree, and the other the professional rank of senior teacher. Kexin elaborates below the latter decision:

> […] I had met all the conditions except taking the test of ICT [information and communications technology] and getting a paper published. I didn't want to do such things. Later both of them had already got promoted [to the senior teacher rank]. They said, it's not that difficult at all, so they kept pushing me to do it.
>
> (Kexin.W3/01.04.20)

When Kexin interacted with her friends, aspects of their interactions invisible to outsiders seemed to exert influence on Kexin's TPD, as she comments below in contrast to the culture about the teaching of open classes at her present school:

> […] If you hang out with someone who makes progress, you'll make progress too. You'll definitely not if you hang out with those not, like the colleagues [I just mentioned] who care nothing about open classes. They won't consider anything new, so I won't either, nor do I want to observe their classes.
>
> (Kexin.W3/01.04.20)

Rather than directly as in Kexin's case, some interaction with friends might lead to the participants' further investment in TPD indirectly. This can be illustrated by Beibei's experience with her foreign friends from different countries. Beibei used to meet them for sports and meals. Besides providing opportunities to practise English, the gatherings also inspired Beibei to improve her English, as she articulates:

> […] Sometimes when I chatted with them, I couldn't follow them. I couldn't follow once they foreigners murmured to each other, so every time I got home after a meal with them, I would get down to some learning.
>
> (Beibei.W3/02.04.20)

6.2.6 Family members

Family members' critical remarks sometimes inspired the participants to further invest in TPD. For example, Songrong's father, a retired schoolteacher of physics, was always critical of Songrong's professional development. His critical remarks pushed Songrong to progress professionally from writing papers to obtaining her master's degree and later her professional rank of senior teacher. Songrong articulates below how she was motivated by her father to write papers:

> […] He often laughed at me and said: what a shame; you can't even write a paper as a teacher. So every time he said so, I was motivated. I took his mocking as a driving force, so I've got something written.
>
> (Songrong.W3/30.03.20)

Some participants, such as Jiemin, were positively influenced by their family members as a role model of professional development. Jiemin's mother only completed lower secondary education but never gave up learning, which inspired Jiemin a lot:

> […] She even taught herself to do accounting on computer. She had never touched a computer before. Everything was on abacus in her time. So I think in many aspects, my mother has much influence on me, including trying to empower myself and how to work towards my goals.
>
> (Jiemin.W3/10.04.20)

Some participants noted that the process of caring for children benefited their TPD as it helped better understand students, as Guiyun remarks:

> […] In the process of caring for [your own] children, you'll truly experience the growth of a person, including cognitive growth, the whole process of psychological maturation, and you'll know your students better. I think this is helpful for classroom teacher work.
>
> (Guiyun.W1/29.12.19)

The participants also considered family members supportive by sharing childcare responsibilities, which allowed the participants to invest more time and energy in TPD. Beibei, for instance, appreciated her mother-in-law's help to take care of her son over a month so that she could make her first visit to an English-speaking country, the USA in 2017. Beibei took the trip as a turning point in her professional life, giving her confidence in her English language abilities and that her hard work could pay off. Asked what would have happened without family support, Beibei responds:

> If nobody helped care for my child, definitely I couldn't work as a classroom teacher, and the time and energy to spend on my work would be much less, much less in every respect.
>
> (Beibei.W3/02.04.20)

The above extracts have illustrated that family members could be supportive for the participants' TPD, either directly or indirectly. They might be inspiring for their critical remarks or influence as a role model. Whereas the childcare process could help the participants better understand school students, family members' sharing of childcare responsibilities could allow the participants to invest more in TPD.

6.3 The positive influence of place

In this section, I examine the supportive role of place for the participants' TPD, specifically, the positive influence of collegial atmosphere and that brought by the change of place in the participants' professional lives.

6.3.1 Collegial atmosphere

Some participants noted that school collegial atmosphere positively influenced their TPD. Yangyu, for example, was encouraged to make continuous progress by the collegial atmosphere for teaching and research at his school, a key school in the city.

In particular, he highlighted the ELT group he was part of in his second and third year into teaching. The group was led by the former school ELT department head everyone admired. Yangyu benefited from the group's spirit of teamwork and shared interest in teaching and research, as he articulates:

> […] I benefited a lot from the cooperation in such a good team. […] We often discussed teaching and research issues. So in such an atmosphere, you were pushed to spare no efforts to make progress, and you kept making progress, either out of an [external] push or your own initiative.
>
> (Yangyu.W3/09.04.20)

The presence of excellent fellow schoolteachers also seemed to contribute to the supportive collegial atmosphere, as Yangyu remarks:

> […] An external factor is other excellent teachers. They may be your idols or role models, who either give you a goal or some invisible pressure. I think various external factors would inspire you.
>
> (Yangyu.W3/09.04.20)

Another collegial atmosphere the participants found supportive was a humanistic atmosphere in which everyone felt relaxed without being pushed to work and enjoyed good interpersonal relations with colleagues. For example, Jiemin placed a humanistic atmosphere on top when asked about the most important support she ever had in her professional life. She elaborates below about what she meant by humanistic:

> […] In this environment, I feel very relaxed. That is, I think I have a very good environment. In such an environment, first of all, you don't have too much work pressure to make you feel unwilling to work. Secondly, colleagues are getting well along with each other and the help between colleagues is very sincere.
>
> (Jiemin.W3/10.04.20)

However, some collegial atmosphere was found not very supportive for TPD. Yaya, for instance, attributed her being lukewarm about TPD to the influence of her first school into teaching, where the colleagues had little interest in TPD. She notes, '[…] Maybe the year I just graduated had too much influence on me, which made me a little bit reluctant to make progress' (Yaya.W1/09.01.20). It appeared that the impact of collegial atmosphere could be long-lasting with positive or negative effects on the participants' further investment in TPD.

6.3.2 Place change

Some participants articulated the positive impact of school location change, making more TPD resources and activities accessible. Songrong's school, for instance, moved from the suburb to the urban area in 2008, her fourth year into teaching. The change shortened the time from around two hours to less than half an hour to reach downtown. Songrong was able to benefit from the resources in a nearby university and other parts of the city since then:

> […] We're [now] close to University Z, so I would go there and spend hours in the library like a student. And then I go to places like the city book centre and so on. It's eye-opening and really helpful.
>
> (Songrong.W3/30.03.20)

The location change enabled Songrong to observe many more classes downtown, especially those at the key schools of the city, which helped her notice her gaps from others and inspired her to improve her own teaching. She notes:

> […] At least for me, I was shocked. When I saw others' classes and then looked at my own, I could see many shortcomings, and I felt much pressure.
>
> (Songrong.W3/30.03.20).

Some participants experienced in their professional lives changing jobs from one school to another. The change of the school contexts implied a shift in setting of TPD, which allowed the participants to notice the differences between schools, including the aspects of place 'invisible' (Wedell & Malderez, 2013) to outsiders. Shuyang, for example, came to her present leading school in the city from an ordinary one in 2002, the ninth year of her career. Unlike her former school, the new school had many uniform teaching requirements, such as restricting teachers from printing handouts only for their own students, except those for all students across the grade. Shuyang was faced with professional challenges as 'no individuality was allowed' (Shuyang.W1/20.12.19) in her teaching, as she articulates:

> […] So I don't think my teaching was in a very good state in the first three years. I was thinking, there would be no way for me to implement many of my innovative ideas in such a [uniformity] framework.
>
> (Shuyang.W1/20.12.19)

The challenges led to Shuyang's reconsideration of how she should progress with her TPD, which seemed to prepare her for a potential change whilst looking for a way out. The change happened when she was enlightened by a speaker's words at a seminar two years later in 2004. Shuyang took the speaker's advice and made her life decision to be a teacher-researcher besides a schoolteacher. I will further present and discuss Shuyang's professional life story later (in 7.2.1 and 8.3.3).

6.4 The positive influence of time

In this section, I examine the positive influence of time on the participants' TPD, firstly focusing on time change, and then professional prospects, and at the end, past experience.

6.4.1 Time change

The participants seemed to meet with various professional challenges over the course of their careers. The mastery of basic computer skills constituted a challenge for Kexin in 2009, her sixteenth year into teaching, for instance. She had to pass five module tests on computer skills to apply for her senior teacher professional rank. She worked hard and passed all the tests, which she found supportive for her later development:

> […] I felt much better after learning the five modules at one go. Since then the computer has become popular, and I use the computer quite skilfully with much ease as I'm no longer a green hand.
>
> (Kexin.W3/01.04.20)

Whereas individual efforts could turn professional challenges into support as in Kexin's case above, earlier challenges might become less challenging as time gradually changed. Unlike Kexin, basic computer skills seemed to be something natural for Haidi, who started her career in 2011, eighteen years later than Kexin. Haidi could skilfully use the computer and internet to prepare her daily teaching, as she articulates:

> […] I will search information on the internet and make it easy [for my students]. If the video from WeChat is good enough, I will use it directly. But if it's not good enough, I will make PPT [PowerPoint slides] by myself.
>
> (Haidi.W3/12.04.20)

Haidi also benefited from the change of time with technology supporting her to access online resources and communities for her TPD. Asked about the important support in her career, Haidi highlights MOOCs (Massive open online courses) and WeChat reading groups below:

> […] Reading groups for professional development [via WeChat], too, to expand

my knowledge and exchange ideas. And, MOOCs can give me extra knowledge because you're free to choose to listen to what knowledge you are interested in.

(Haidi.W3/12.04.20)

Besides gradual change of time, there was also sudden time change brought by some particular events. The Covid-19 outbreak in late 2019 was such an event that led to an unexpected change of time, and consequently professional challenges for the participants. One challenge was the shift from offline to online teaching during the delayed start of the spring semester in 2020, following the authority's directive which responded to the epidemic by 'suspending classes without stopping learning' (Minstry of Education, 2020). Unprompted, for instance, Jiemin articulated her experience and reflections. As the society suddenly paused to function, she had to solve problems all on her own at home in order to teach, as she notes:

[…] My computer is broken. I had no choice but turned to my colleagues for advice. So I used a few boxes and a clothes hanger to make a stand for my mobile, something like a video camera. I put them together and then I managed to give lessons.

(Jiemin.W2/26.02.20)

Besides online teaching difficulties, Jiemin also felt the pressures to play her various social roles in the challenging time, as she remarks:

[…] We have to work from home, and play all our roles at the same time, as a caretaker, a teacher, and roles in all aspects. Facing all such pressures, how to relieve ourselves? How to have a good planning?

(Jiemin.W2/26.02.20)

The sudden change of time seemed to inspire the participants' reflection on future TPD, as Jiemin reflects below:

[…] Because the epidemic is very unusual and sudden, I think this is also a very

critical time point for the development of all aspects of us teachers.

<div align="right">(Jiemin.W2/26.02.20)</div>

[…] So I think the abilities for a teacher to develop should not only include the ability to solve subject matter problems, which is basic, but more importantly, a broad vision and the ability to manage high technology.

<div align="right">(Jiemin.W2/26.02.20)</div>

Besides challenges, the unexpected change into an epidemic time also brought the participants support they did not have before. The education authorities integrated and provided online national and local resources for teaching and TPD (e.g. Xinhua, 2020). Various institutions also offered webinars and academic resources free for schoolteachers. Jiemin was excited at the resources and opportunities, which helped broaden her vision:

[…] In this period of time, many resources are free to use, including academic papers in the CNKI database, so I hurried to download quite many of them before my computer got broken. I found something in their papers. For example, I read a paper and found I had never ever heard of or thought of such a topic. […] So I think if you want to broaden your vision, it's extremely critical to supply yourself with many resources.

<div align="right">(Jiemin.W2/26.02.20)</div>

As illustrated above, time change, either gradual or sudden, seemed to bring about challenges in the participants' professional lives, and the process of overcoming the challenges might result in learning and reflection, contributing to TPD.

6.4.2 Professional prospects

The participants' perceptions of career prospects seemed to be influential on their further investment in TPD. This can be exemplified by Dixi's wish to write a book of her own, a 'very useful and widely disseminated' (Dixi.W2/23.02.20) one. As Shelton (2019) notes, 'people are aware of the passage of time, and may premise

<div align="center">152</div>

their behaviour on assumptions about the future' (p. 105). Dixi accumulated for her future book by writing reflective journals about her work, and she came to realise over the years her need for theoretical knowledge. Asked about the progress of her book, she responds:

> I'm now accumulating, but I strongly feel that my knowledge of theories is not enough. I've written a lot, but only about teaching cases, that is, what I can get from my thinking about a few cases, but for the rich theories behind, I don't know enough.
>
> (Dixi.W3/13.04.20)

The need for theoretical knowledge became an inspiration for Dixi's hope to do her master's study in the near future, as she articulates:

> […] I like to do further study first because I want very much to study like before. Second, I really don't have enough theoretical accumulation, and my understandings of many things are not systemic. I really want to continue my study.
>
> (Dixi.W2/23.02.20)

It appeared that Dixi's vision of producing a book of her own gave impetus for her investment in TPD and love for the profession. Asked why necessary for the school to support a teacher to write a book, she articulates:

> A teacher who likes to write a book and express his or her own thoughts must love the profession a lot. Only because of love does he or she want to write, to share with others, and to make his or her ideas known to more people.
>
> (Dixi.W3/13.04.20)

Perceptions of career prospects, however, did not always positively impact on the participants' further engagement in TPD and the teaching profession. For example, in her twelfth years of teaching, Guiyun did not feel good about her professional

prospects in the teaching profession. The workload, for instance, was too much for her, as she articulates:

> […] Many times I have to make choices [about to stay in the profession or not]. One's energy is limited, but you tell me to look after two children at home, and work as a classroom teacher, and teach two classes of students. Then tell me, which thing can I do well? None of them. So I would rather give up.
>
> (Guiyun.W1/29.12.19)

In the summer holiday, Guiyun tried a job at a company. Asked if she would quit her teaching job, she responds:

> Yes. I was thinking then if the company job was more challenging or suited me better, or there was something I wanted more there, I would probably choose to keep the company job. For instance, the income was high, first of all. I was then paid CNY8,000 a month, and I just started the job! But even now [two years later] I can't get CNY8,000 a month [teaching at the school].
>
> (Guiyun.W1/29.12.19)

Guiyun finally chose to stay in the teaching profession so that she could fulfil her family responsibilities better, as she notes, '[…] I gradually found that there's no way to take care of my family at the same time' (Guiyun.W1/29.12.19) working at the company. It appeared that the participants' decisions were made in relation to their family or other factors in their contexts. Besides, career prospects, particularly those about work load and income, might negatively impact on the participants' retention in the profession, let alone investment in TPD. I return to this point in Chapter 8.

Professional prospects about support for further study also seemed to influence the participants' investment in TPD. For instance, Guiyun benefited from the district policy which financially supported her master's degree study, and she considered it the most important support ever for her TPD. Besides her learning gains, she also

highlighted the formation of a microsystem based on the education experience, as she articulates:

> […] At that time I got to know many classmates, most from this province, and some from H province, too. Alas, I can still have classmates [to make friends with] at such an age!
>
> (Guiyun.W1/29.12.19)

Guiyun appreciated the supportive policy that she considered could encourage many more schoolteachers to invest in further TPD, as she remarks when asked for her ideas about the policy:

> If such a policy had been in place earlier, actually many teachers would like to get upgraded, to do further study. It would play a facilitating role.
>
> (Guiyun.W1/29.12.19).

As illustrated above, perceptions of career prospects were influential on the participants' investment in further TPD, either positively or negatively. I will discuss this further in Chapter 8.

6.4.3 Past experience

Some participants' past experiences seemed to positively influence TPD over the course of their careers. For example, when Yangyu began teaching in 2010, he was unconvinced of his job assignment and his past experience as a top university graduate gave him the first push to devote himself all into his work:

> […] Why should I, a graduate of a top university, be inferior to those who graduated from second-tier universities? Why could they teach a good class and I couldn't? Why could they teach good students? I asked. Maybe it was such a dauntless spirit that motivated me to contribute my devotion willingly.
>
> (Yangyu.W3/09.04.20)

At the end of the first semester, Yangyu was rated high in the teacher evaluation, and in the second semester onwards, he was assigned to teach a key class. The job assignment became the first of the three ones Yangyu considered supportive and influential in his career. It made him the youngest teacher ever to teach a key class at the leading school, and pulled him out of his low mood, as he recalls:

> […] and then I spared no effort to devote all my time and energy to this class, all myself. It [the job assignment] rebuilt my belief, my faith, and my confidence. I was a whole new person, no longer so desperate, or depressed.
>
> (Yangyu.W1/30.12.19)

The second supportive job assignment came in the following autumn semester in 2011. Yangyu and another teacher were told to train top students in the grade for a national English competition. The students' competition success brought him the third supportive job assignment in 2013, test-paper writing authorised by the city education bureau, which greatly inspired Yangyu:

> […] It was kind of inspiration for my life. It gave me a sense of honour, and recognition, and achievement. Ah, I felt like at the peak of my life at that time.
>
> (Yangyu.W1/30.12.19)

Yangyu attributed the job assignment to his previous hard work and successes, as he remarks:

> […] I kept making progress based on earlier foundation. If I didn't teach well, others might not trust me with the competition class. […] Because of the competition success, then, either by chance or luck, I was known to or recognised by our education bureau leaders. […] So I was involved in writing test papers for the whole city.
>
> (Yangyu.W3/09.04.20)

Yangyu's career life thus gradually rolled out with one past successful experience leading to another, and in turn positively influencing his investment in his work and TPD, as he comments:

> […] More and more achievements gradually encouraged me to make progress step by step, and step by step more and more achievements. This is a positive cycle.
>
> (Yangyu.W3/09.04.20)

A succession of successful experiences seemed to accumulatively strengthen Yangyu's confidence in further TPD, as he reflects:

> […] I think this [positive cycle] is very important. Psychologically, I was made more confident. The more recognition and respect I won, the more confident I became, and in turn, I would push myself to invest more in learning and doing [teaching] research.
>
> (Yangyu.W3/09.04.20)

Whilst progressing from 'one achievement to another' (Yangyu.W3/09.04.20) over the years, Yangyu gradually took on more responsibilities in his professional and personal lives, which seemed to be closely interrelated. When he became a father in 2018, for instance, he retreated from his city-level research responsibilities as he puzzled about the balance between his teaching and research, and that between his work and family:

> […] Now in deed, too much. I need to do a classroom teacher, and a course leader, and other stuff, too. So as for teaching research, I felt short of energy to supply for my wish. It's truly a puzzling problem, I mean, between research and teaching. […] I worked as part-time researcher for two [city] centres until last year. I gave them up last year for my baby child.
>
> (Yangyu.W1/30.12.19)

As exemplified above by Yangyu's story, the participants' TPD might be influenced positively by their past experiences. With positive influence accumulated, the participants might be encouraged to constantly invest in further TPD throughout their careers, but they seemed to need at some point to balance the interrelations between various elements in their TPD ecosystems, particularly the relationship between the school and family microsystems.

6.5 Contextual elements interrelated in the professional life

Contextual elements seemed to be interrelated in the participants' professional lives, leading to highs and lows over the course of career. Besides positive influence as illustrated above (6.2 through 6.4), contextual elements were also found to impact negatively on the participants and their TPD. In this section, I examine Dixi's recent years' professional life, in which she experienced the lowest point in her 15-year career as well as support that helped her recover and move forwards again.

Since Dixi started teaching in 2004, the trajectory of her career life generally moved upwards as she drew in her life map. She experienced, however, her lowest point in 2013, when she was not allowed to move on with her students to Grade 12, the graduating year for senior high school students (previously noted in 5.2.1). Dixi took the leadership's decision as mistrust of her ability, and felt deeply hurt:

> […] It was a big blow to me. They didn't allow me to teach Grade 12. This is kind of questioning a teacher's teaching attitude and abilities. It's something I can never ever bear.
>
> (Dixi.W1/27.12.19)

Dixi soon lost all interest in TPD. It was three years later in 2016 that she began to recover from the discouraging job assignment, thanks to the recognition of a school director who praised her work as a classroom teacher (presented in 6.2.2). In 2017, Dixi joined Ms C's Master Teacher Studio, which provided various TPD activities

and raised Dixi's interest in TPD again. Before the studio, TPD 'opportunities were extremely few' (Dixi.W1/27.12.19) for Dixi. The studio was considered by Dixi to have offered her most professional support in her career, and inspired her most to engage in further TPD activities, as she remarks:

> […] Later I joined her [Master Teacher] Studio, and then I could attend many seminars, meet many well-known experts, and have the opportunities to observe classes, and so on. Wow, all of a sudden, a totally different horizon. It was then that I began to really like theories, and like to do research.
>
> (Dixi.W1/27.12.19)

Besides the studio activities, Ms C also helped Dixi to move forwards again. Ms C was always a supportive colleague since Dixi graduated from her university, the same university Ms. C attended. Dixi saw Ms. C as the one who supported her most over the years. Asked if there was any support she wished to keep, Dixi notes:

> I've got most professional support and help from Ms. C. I'm greatly influenced by her persistence in English [teaching research]. I'm really grateful to her for this.
>
> (Dixi.W2/23.02.20)

Ms. C was also a role model for Dixi. In particular, Dixi always admired Ms C's persistence in learning about teaching theories, and followed her example to read and accumulate theoretical knowledge, as well as doing research projects.

> […] She did research projects. It also brought me to think that I wanted to do a project too. It provoked my thinking about English education. It's kind of enlightenment.
>
> (Dixi.W2/23.02.20)

Dixi was also inspired by Ms C to have a dream in her career prospects to produce a book of her own (as discussed in 6.4.2).

Her act of writing books was inspiring for me. It brought me to think I also wanted to write a book. But I may not write books in the same way. I must write something of my own.

(Dixi.W2/23.02.20)

In contrast to the discouraging job assignment six years before, Dixi was encouraged in 2019 by her job assignment as the EFL course leader of the grade. Since then, she consciously engaged herself in TPD activities, as she reflects below:

[…] Then he [the grade leader] suddenly announced me to be the course leader […] I think it turned out to be okay. Later I found out, unexpectedly, I actually can do many things well. […] And then, I [began to] pay attention to my professional development.

(Dixi.W1/27.12.19)

As illustrated above, not all contextual elements influenced positively on the participants and their TPD. Sometimes, a particular contextual element, such as the leadership's mistrust implied in Dixi's 2013 job assignment, could be destructive to the participants' self-esteem and TPD, resulting in the lowest point of career and no more interest in TPD. The recovery process, however, might be many years long. As in Dixi's case, it took her six years to pull herself together and begin to invest consciously in further TPD. In the process, the element of people (e.g. the director's recognition, the trust implied in the 2019 job assignment, and Ms C's company as a supportive colleague and role model), place (e.g. the Master Teacher Studio culture), and time (e.g. prospects of producing a book) seemed to be interrelated and jointly supported Dixi to recover her enthusiasm for TPD and a future in the profession.

6.6 Summary

In this chapter, I have examined the positive influence of contextual elements of people, place, and time on the participants' Teacher Professional Development (TPD). The sources of positive influence ranged from interpersonal relations

(recognition, trust, and sincerity) with key persons (students, leaders, colleagues, experts, friends, and family members), to place change (school location change and school transfers) and culture (collegial atmosphere), and to gradual and sudden time change, and past experience and perceived career prospects. It is noteworthy that except for place and time change, most sources of positive influence seemed to be 'invisible' (Wedell & Malderez, 2013), i.e. 'not directly accessible to the senses, and therefore take longer and more effort to understand' (p. 16) for outsiders. Over the course of the participants' careers, the positive influence of contextual elements might accumulate, but could be mediated by the influence from other elements in the TPD ecosystem, such as those in the family microsystem. Besides, not all contextual elements influenced positively on TPD. They seemed to be interrelated, supporting or discouraging the participants' investment in further TPD.

In Chapter 7 below, I situate the discussion in the context of individual participants' professional lives and present the findings about how TPD might be sustained throughout the career.

Chapter 7
Findings (3): Career-Long Professional Support

7.1 Introduction

Previously in Chapters 5 and 6, I focused respectively on the forms of professional support and positive influence of contextual elements. The support forms and contextual elements highlighted by the participants were not separate in their career lives. Instead, everything seemed to be interrelated and jointly influenced the participants and their Teacher Professional Development (TPD) over time, with three 'recurrent and distinctive' (King et al., 2018, p. 182) themes emerging from the data set (as noted in 4.8.3). These themes are of direct relevance to the second research question: What are the features of support that enact engagement in further TPD activities throughout the career? (in 4.3). The three themes are as follows:

- TPD might be sustained over the course of career with:

  ◦ timely support to engage in progressively more complex professional challenges,

  ◦ efforts to integrate support to develop professional potential, and

  ◦ the company of role models in the pursuit of professional excellence.

In this chapter, I present the findings under the above themes respectively in Section 7.2 through 7.4. The chapter focuses on six participants in particular, each section consisting of two participants' illustrative professional life stories for the discussion. Individual participants' life stories are presented given that my research questions ask about career-long TPD (in 4.3). Meanwhile, as previously discussed (in 5.1), this

way of presentation includes more contextual detail so that the advantages and disadvantages of my thematic discussion approach may be balanced (King, 2004).

7.2 Timely support to engage in progressively more complex professional challenges

In this section I examine the professional life stories of Shuyang and Kexin, who were both in their 26th year of teaching when interviewed. Their stories might complement each other to illustrate the roles of timely support and increasingly more complex professional challenges in the career-long process of sustaining TPD.

7.2.1 Shuyang: Engaging in progressively more complex challenges

In the last 26 years, Shuyang progressed from a novice to a master teacher, leaving a relentlessly upward career trajectory as she drew on her life map of past experience. She started her career at an ordinary school in 1993. After two years of teaching in the junior high school section, she taught senior high school students ever since. She transferred to the present leading school in 2002, and later between 2009 and 2013, taught on the school's branch campus. Shuyang obtained her professional titles of senior teacher (associate professorship) and full senior teacher (professorship) respectively in 2003 and 2019, her 10th and 26th year into teaching. Since 2017, she was recognised as the master teacher to preside over a Master Teacher Studio of both municipal and provincial levels, as noted previously in Section 5.5.

Asked about the most important events in her professional life, Shuyang highlighted three particular seminars, which led her to engage progressively in more complex professional challenges. The first seminar was organised by university academics disseminating research on school learners' learning strategies. It took place in the capital of another province in 1997, Shuyang's second year of teaching senior high

school. She was then, as a classroom teacher, wondering how to help her students manage their studies:

> […] Now that I taught senior high, I could feel the great stress my students had in their studies. […] They felt very painful, and I was also anxious. At that time, I was searching for a solution.
>
> (Shuyang.W1/20.12.19)

What Shuyang was pondering seemed to have prepared her to pick up the seminar support and find it timely for her:

> […] I was listening, burning with excitement. I thought, oh, yes, that's a good approach. Then I said to myself, I'll go back and do the learning guidance experiment too.
>
> (Shuyang.W1/20.12.19)

Shuyang felt greatly inspired and promptly took actions. She bought at a conference discount a book for each of her students and another 26 for herself. Shuyang was not rich as a young schoolteacher, but hoped for 'the more reference materials, the better' (Shuyang.W1/20.12.19). Immediately she was back at the school, she started her experiment by giving her class an extra lesson on learning strategies every other week. Her experiment turned out to be beneficial to her students' awareness of learning strategies and gradually their learning outcomes.

> […] The effect was obvious. Before, the students didn't realise diligence was [only] one of the non-intellectual factors, but there are many others. […] So, the students' learning habits changed greatly with the extra lesson involving everybody.
>
> (Shuyang.W1/20.12.19)

The following year of 1998 was 'a milestone year' (Shuyang, Q/16.12.19) in Shuyang's teaching career. The class of students did remarkably well in the college

entrance exams, and Shuyang was awarded by the school and became known to fellow schoolteachers in the city. The municipal education authority began to involve her in some city-level work, as she notes: 'From then on, I was selected to do quite many important teaching tasks for the whole city' (Shuyang, Q/16.12.19). The city-level work helped extend Shuyang's professional life context further to the city right at the time she was ready to look beyond her own classroom after closing her first five years of teaching.

The second seminar, a training session for the then-new curriculum standards, was held in the provincial capital in 2001, Shuyang's eighth year into teaching. The seminar came at a time when Shuyang was curious about doing a research project of her own, but puzzling over what topic to focus on:

> […] When I read journals then, there were many research project reports, so I was curious, wondering, what does it mean by research projects? […] I was then curious, thinking hard about having a try to do a project.
>
> (Shuyang.W1/20.12.19)

The seminar inspired Shuyang to decide her topic, and later successfully applied for her 'first project in life' (Shuyang.W3/17.04.20) in the following year, which made another 'milestone year' (Shuyang.Q/16.12.19) for her. Since then, Shuyang took a step further from her experiment inspired by the first seminar, to doing research projects (discussed in 5.4), engaging her in more complex professional challenges.

Shuyang's early experiment seemed to have paved the way for her gains from the second seminar and follow-up actions, suggesting that her TPD was 'cumulative' (Bolam & McMahon, 2004, p. 50) rather than happening all at one go. Shuyang obtained knowledge of learning strategies from the first seminar and then applied it to her teaching, based on which she was able to relate learning strategies to learning motivation the speaker talked about at the second seminar:

> […] So my [first] project was exactly inspired by Ms H. It was in her talk that I got to know about learning motivation. I thought, learning motivation is right in the same direction as learning strategies I explored earlier. Great, so what I did was right, and it's also in line with the trend of the whole country.
>
> (Shuyang.W1/20.12.19)

Besides, Shuyang found the second seminar speaker, Ms H, not only an admirable speaker, but also an inspiring role model who started from the same place as an ordinary schoolteacher and showed Shuyang attainable professional prospects. Ms H rose from a teacher of a low-resourced countryside school to the then English Language Teaching (ELT) researcher of the provincial education authority, which greatly inspired Shuyang:

> […] Although I was sitting far, everything she said reached my heart. I truly admire her. I think, a teacher like her, in such difficult circumstances, then, and so on.
>
> (Shuyang.W1/20.12.19)

Ms H's exemplary influence seemed to reach far in Shuyang's professional life. Eleven years later in 2012 when they met for another seminar, Shuyang went up and expressed her gratitude to Ms H, which was 'a very human response', as one of my supervisors comments, and seemed to suggest a role of interpersonal relations in Shuyang's TPD, specifically, the relationship between the seminar speaker and a schoolteacher (as previously noted in 5.3.4 and 6.2.4).

> […] Ms. H's seminar might have an audience of thousands. There must be different feelings. And then over ten years later, I told her, I said, your seminar had a great impact on my life. She also felt quite pleased.
>
> (Shuyang.W1/20.12.19)

The third seminar occurred at a university in another province in 2004, two years after Shuyang transferred to her present leading school. She was puzzling over her future development, finding herself 'bound hand and foot' (Shuyang.W1/20.12.19)

by the school's uniform teaching requirements. Shuyang could not recall the theme of the seminar, but well remembered the speaker's words, which resonated with her situation after joining a leading school from an ordinary one. She 'felt the light suddenly dawn on [her] heart' (Shuyang.W1/20.12.19) when she heard the timely advice from the speaker, an old professor:

> […] That's exactly a version of me! Then he went on, as for a teacher's professional development, the lofty realm a Chinese, as a scholar, should reach is to author books or works. Many secondary school teachers have got plenty of practical expertise, but at the end, they just retire as such. Quite a pity, nothing has been refined.
>
> (Shuyang.W1/20.12.19)

The professor's words inspired Shuyang to make a pamphlet out of her first project in the following year of 2005, her 12th year into teaching. Shuyang also made a life decision to be a teacher-researcher and record her own footprints of development by producing written works, a decision which led her to more complex professional challenges than ever before.

> […] So later when I completed the project in 2005, I must keep a record of my own footprints of development. I produced a booklet from the project. […] It was then when I got the booklet compiled that I placed myself at the position of a research-oriented teacher. To be research-oriented, I should then do projects.
>
> (Shuyang.W3/17.04.20)

As illustrated above, the three particular seminars inspired Shuyang to take up a path of becoming a teacher-researcher, devoting herself to teaching as well as research into the classroom in her own context. Along the path, Shuyang constantly invested in TPD and obtained achievements in return. Whilst being a popular teacher among students, she completed six projects sponsored by the municipal and provincial education authorities over the years, and had two books published in recent years. Shuyang's persistence in doing research projects, as she explicitly noted (in 5.5.3), transformed her into an officially recognised master teacher well respected by fellow

schoolteachers in the city. Looking ahead, other schoolteachers at a late career stage might wait for retirement rather than professionally moving on, but Shuyang was anticipating to seek further TPD, as she notes in her life map, 'strive hard to learn about theories and enhance theoretical understanding' (Shuyang, MF/17.02.20).

Shuyang's professional life story seems to be a case in which TPD was sustained over the course of career through the pursuit of becoming a teacher-researcher. The process appeared to be cumulative, starting by applying what she picked up at the first seminar, and then becoming curious about what research projects meant before the second seminar. In the process, timely support, particularly the three seminars, seemed to be essential, as Shuyang remarks, the seminars 'had a great impact on my life' (Shuyang.W1/20.12.19). The reason for this might be that they came at the right moment in time and helped Shuyang sustain investment in TPD by engaging her in progressively more complex professional challenges.

But what constitutes timely support for a schoolteacher in general? Who decides if it is timely? And how? Why do challenges matter for career-long TPD? Why should professional challenges be progressively more complex? How do we know that the schoolteacher perceives the challenges as progressively more complex? Many more questions might follow.

For now, it may be summarised that the seminars seemed to be timely in that they came with the inspiration Shuyang needed at a time when she was ready to learn. Respectively when the first, second, and third seminar occurred, Shuyang was pondering how to help her students, what topic for her first project and what next for her future development. On the other hand, following one seminar to another, Shuyang was inspired to take up further activities, from applying seminar learning to her class, to doing projects of her own, and to producing written works from teaching and research. The complexity across these activities seemed to increase progressively, i.e. they were challenging but manageable for Shuyang, so she was

able to move forwards in the last 26 years, and still enthusiastic about her future TPD.

I will refer back to Shuyang's story for further discussion in Chapter 8. I now move on to describe Kexin's experience (in 7.2.2), in which timely support and progressively more complex professional challenges did not seem to be present, especially in her later career life.

7.2.2 Kexin: 'I did something, but couldn't get it refined'

Upon her graduation from a prestigious teachers college in 1993, Kexin started her career at an ordinary school, first teaching junior and since 2001, senior high school students. In 2009, her 16th year of teaching, Kexin obtained her professional title of senior teacher, and transferred to the present school, which offered a satisfactory salary though the position was then competitive. In the last 26 years, Kexin taught well and produced excellent students. She also outperformed others in teaching for school open classes and competitions in the district. Kexin supported her TPD by subscribing and reading academic journals for many years. At the school, besides the training for all teachers, she was selected to receive such extra training as the municipal- and later provincial-level 'backbone schoolteacher' training programme, a high-level programme for top schoolteachers (noted previously in 2.5).

Kexin seemed to be a quiet person. She tended to accept rather than actively seek TPD opportunities at the school. When articulating her experience of teaching for competitions and open classes, she notes her passiveness about those opportunities:

> […] I was asked to teach for all occasions to do with anything outside the school, classes open to visitors, competitions and so on. I was pushed to do all this. I never tried like others to grasp whatever opportunities there might be. I'm not the kind [of person]. Nothing like that. All passive.
>
> (Kexin.W1/05.01.20)

Over the years, Kexin developed professionally at her own pace, with what she learned on her own or from previous training influencing her teaching 'subtly rather than immediately' (Kexin.W3/01.04.20). When challenged to teach an open class, however, she felt her previous reading or training, which might happen a few years ago, come to life and inspire her:

> […] So basically I didn't have much change after being trained. I've learned something. That's it. Maybe at some point many years later, I suddenly felt I wanted to do so-and-so. It struck me like that when I had to teach an open class.
>
> (Kexin.W3/01.04.20)

For example, Kexin once applied round-robin storytelling to teach an open class, which she considered 'the most impressive application' (Kexin.W3/01.04.20) in her career. It was seven or eight years later after the training programme around 2004 in which she learned about round-robin storytelling. Kexin recalled the technique in her search for new ideas to teach the open class. She interpreted then teaching an open class as a challenge to introduce something new. Her application of round-robin storytelling to teach grammar was applauded by her students and colleagues. Kexin was greatly encouraged. She then became the one bold enough to teach an open class on grammar at the school:

> […] I felt really good. Other teachers also found the class a success. And then, I gave another open lesson on relative clauses. I no longer feared to teach grammar in an open class. It's not exactly about fear, but kind of trying something new.
>
> (Kexin.W3/01.04.20)

Although Kexin's efforts (e.g. her round-robin storytelling above) received inspiring feedbacks, she did not go beyond occasional applications of teaching techniques sourced from her reading and training. She repeated similar efforts a few years on, given that the school required all senior teachers to teach an open class once a year. Her enthusiasm later faded out, with colleagues around lukewarm about open classes

(noted in 6.2.5). It seemed that Kexin did not manage to engage in more complex professional challenges on her own, for instance, writing something after her open classes as Caiyu did (in 5.4.1). She wrote a paper as required for her application of senior professional title. Asked if she would write papers without the requirement, she responds below noting her greatest regret as failing to refine her innovative attempts into written texts:

> Definitely not. Probably none. My greatest regret in this life is that I don't like writing, nor can I write, so for many things, I did something in my practice, but I couldn't get it refined in written texts with a theoretical perspective.
>
> (Kexin, wave 3/01.04.20)

Kexin did not seem to manage or be supported to find a way out to sustain TPD for her unique characteristics with little interest in writing. Her reading habit was later given up, as she notes, 'I basically don't read much after becoming a senior teacher, probably because I don't have to write papers any more' (Kexin.W3/01.04.20). Looking ahead, Kexin expected nothing more than retirement. Asked about her career prospects, she responds:

> Nothing important to expect. Just go to work every day, and then retire healthy on time. That's what I'm thinking about. Nothing else, no other plan. […] I will teach a few more cohorts and retire in eight years' time.
>
> (Kexin.W2/20.02.20)

An arising question is: How might schoolteachers be best supported to sustain TPD throughout the career with respect to their unique characteristics, as in Kexin's case? Although Kexin seldom sought TPD opportunities actively, she took actions leading to TPD when feeling challenged, such as searching for new ideas to teach an open class, and writing a paper to apply for her senior teacher title. The challenges failed, however, to help sustain her investment in TPD over time. There appeared to be a need for the challenges to be consistent with the school culture and Kexin's own developmental pace and personal preferences. I will return to this point in Chapter 8.

Besides, the support forms of open classes and professional rank evaluation (also noted in 5.1) seemed to engage Kexin in mandatory professional challenges, rather than those growing out of a progressive process of developing her own interests. In contrast, as presented above (in 7.2.1), Shuyang actively, rather than passively, engaged in challenges in a cumulatively more complex process to fulfil her curiosity and potential in doing research projects. It was in the process that Shuyang noticed support in the seminars and found it timely for her. It seemed that given no such process of developing her own potential, Kexin did not note any timely support, although she experienced various support, including some extra training additional to that for all schoolteachers.

I will refer back to Kexin's story in Chapter 8 for further discussion. I now move onto Section 7.3 to describe the professional life stories of Beibei and Yaya, who tried their best to integrate support to fulfil their professional potential.

7.3 Integrating support to develop professional potential

Beibei and Yaya were respectively in their 10th and 18th year of teaching when interviewed. They provided illustrative professional life stories of sustaining TPD through efforts to fulfil their professional potential with support external to their schools. I examine their stories below.

7.3.1 Beibei: Seeking external support to fulfil potential

Beibei was a young schoolteacher from an ordinary school. Graduating from university in 2007, she first worked as a project translator at a company in another city of the province for a year. In 2009, Beibei started her teaching career in the city, the place where she grew up. Since then, as she taught, she strove hard to develop herself, particularly her language potential in English and translation. Beibei's love for English showed in senior high school when finding herself extremely interested

in English but could not do very well in other subjects. Supported by her teacher of English 'like a life guide' (Beibei.W1/06.01.20), she later chose without hesitation to study English in university.

Beibei's work experience as a translator from 2007 to 2008 were influential in her pursuit of developing her language potential, as she remarks, 'the influence of the year was far-reaching, until today' (Beibei.W1/06.01.20). She was highly motivated because of the year's work, in which she experienced embarrassed moments and 'felt a bit humiliated' (Beibei.W3/02.04.20). She realised she needed to cross a big gap in order to be an excellent user of English as a Foreign language (EFL) and translator between Chinese and English. In her ten years of teaching career, Beibei never stopped learning in spare time, as she articulates:

> […] There's so much to learn to be a translator, and so many things I don't know. […] In the first few years after my return [to the city to teach], I learned desperately. I spent three or four hours learning every day after work.
>
> (Beibei.W1/06.01.20).

Besides inspiring, Beibei's translator experience was also supportive by offering her the resources for reflection. She reflected on her translator work in relation to her past English learning experience to inform her further learning, such as the decision to work hard on English grammar. When she did oral interpretation before, she could not translate though she understood an utterance. It took her a long time to realise that her poor mastery of grammatical knowledge was where the problem lay:

> […] I thought over the problems. They puzzled me for a long time. I reflected on the whole process of my English learning, and asked if there was anything wrong. That's why I learned English grammar so desperately these years.
>
> (Beibei.W1/06.01.20)

With support from her school not in place, Beibei turned to external support for her development of potential. She tried every means to seek support in her context. She connected with friends and acquaintances, and made full use of online resources. Besides grammar learning, she made foreign friends to practise oral English, and did lots of reading, as she notes, '[…] I bought almost all the English-Chinese magazines I could get from dangdang.com, and read them all' (Beibei.W1/06.01.20). She herself paid to complete many online open courses. In recent years, Beibei took classes of simultaneous interpretation online with face-to-face training during holidays. She hired a private tutor to prepare her for the spoken module of IELTS (International English Language Testing System), for which she wished to score high so as to obtain a master's degree from abroad or teach IELTS herself someday. In addition, she self-funded to visit the USA in 2017 with students and teachers from a language school, with whom she got connected through a friend.

Family support also played a role in Beibei's pursuit to fulfil her potential. With her family's support, for instance, she was able to visit the USA for her first trip abroad and to an English-speaking country in 2017 when her son was three years old. Asked which period of time in her professional life she felt best supported, Beibei notes her family support since 2017 below:

> I think I've got very good support from my family since I reached the age of 33. My mother-in-law was willing to look after my son, so I could pay a one-month visit to the USA. If not, I couldn't have made it.
>
> (Beibei.W1/06.01.20)

Beibei's persistence paid off and her learning gradually fed into her teaching at the school, suggesting that her development of language potential was beneficial to her TPD as well as her teaching at the school. She achieved an overall score of 7.5 for IELTS and won the first prize in a city-level teaching competition in 2019, her tenth year of teaching. Her normal teaching stood out as she could, for example, provide from her simultaneous interpretation practice up-to-date examples and materials in

students' real life. She also had more new ideas waiting to try out in her classroom. For instance, after tutoring some IELTS students part time, she had an idea 'to see if some IELTS writing techniques can be applied to English writing in the college entrance exam' (Beibei.W2/18.02.20). By sharing her own learning experience with her students, she also set an example for them to develop and fulfil each his/her own potential (Joyce, 1980), as she remarks:

> […] When a teacher keeps moving forward, his or her students would more or less do the same. I hope I can influence my students this way.
>
> (Beibei.W1/06.01.20)

As the above illustrates, Beibei's pursuit of fulfilling her professional potential not only helped sustain her TPD by inviting constant investment over the years, but also offered an appropriate focus of her own to integrate external support for her TPD. Through various activities outside her school (e.g. on- and off-line courses, private IELTS tutorials, and overseas travels), Beibei managed to extend her TPD context from the school system to varied places with different people (e.g. tutors, friends, acquaintances, and family members). Gradually she developed microsystems to develop her language potential while playing diverse social roles (e.g. student and classmate of simultaneous interpretation classes, and IELTS student and tutor) in the process, as a developing person in society.

Being a socially developing person, Beibei's pursuit to fulfil her potential seemed to be driven by, as Joyce (1980) notes, the 'desire to live a satisfying and stimulating personal life' (p.20). However, her pursuit engendered financial issues. For instance, she spent, respectively, on her trip to the USA and simultaneous interpretation classes close to and more than half of her annual income. Beibei admitted, '[…] I think I was a bit crazy' (Beibei.W3/02.04.20), although she considered the investment as necessary and rewarding. Asked if she was inspired to do more by her experience of translator work, Beibei notes her wish to make more money:

No more. I think that's quite enough. Poverty is the biggest driving force for me. Now I think about money all day. Alas, I have to pay my housing mortgage. So I think I've tried my best. […] Why do I want to tutor IELTS students [part-time]? Because I think the pay is pretty good. That is part of the reason. […] The main reason is that people in the circle are excellent.

(Beibei.W3/02.04.20)

Beibei tried her best to keep the pursuit of fulfilling her potential in harmony with her responsibilities both at the school and in the family. This can be exemplified by her experience of taking simultaneous interpretation classes in another city in the summer holiday of 2019. She went with her husband and son, as she articulates, '[…] When I went to classes, my husband took my son to play around. The child was happy, so were the adults' (Beibei.W1/06.01.20). When looking backward and forward about her professional life, she also notes:

[…] I didn't panic [about my learning] in the first few years because I knew I had to do well in my work at the school first, and then had my own baby and took care of him. […] Now I have to speed up. […] If not, I'll be old, so I'm striking hard to do my best.

(Beibei.W2/18.02.20)

Whereas Beibei began to pursue the fulfilment of her professional potential at her start of teaching career, Yaya, whose story I present below (in 7.3.2), did not. Yaya waited many years with her professional potential constrained before she returned and unlocked her potential. Yaya's story might provide an illustration of the attraction of professional potential in a schoolteacher's professional life context.

7.3.2 Yaya: 'I'm actually returning to who I am'

Yaya was from an ordinary school. She taught English like the other participants, but unlike others, she majored in biology as an undergraduate. She was assigned at her start of career in 2001, and continued to be an EFL schoolteacher ever since. Yaya first taught at a junior high school in another city of the province. Three years

later she returned to the city (also her hometown), and since then taught senior high school students. In 2010, after competitive examinations, she was selected to teach schoolchildren Chinese in the UK whilst her school affiliation in China remained. She came back two years later and went on teaching English at her previous school for another four years. In 2016, her fifteenth year of teaching, she transferred to her present school. Yaya was considered by her colleagues to have unusual experience. In her eighteen years of career, she not only taught at three different schools in two cities, but also taught Chinese abroad for two years. Though starting from a non-English major, she made herself a good EFL schoolteacher well known in the city over the years.

However, Yaya did not think she was really good at English. At her start of career, she was assigned to teach English, so she had to change her major from biology to English (noted earlier in 5.2). In order to become a more qualified EFL teacher and obtain higher professional rank, she studied part time for three years and earned her bachelor's degree in English in 2005. Whilst teaching in the UK, she empowered herself by working hard to improve her English. But asked if her experience abroad made her more confident, she responds:

> It's not about self-confidence. After all, English is my obvious weakness, because I was not systematically trained. I mean, for what I teach and what I do. Although my students achieved very good scores in exams, but the problem is, I'm not the kind of person who was trained formally and systematically [to be an English teacher].
>
> (Yaya.W1/09.01.20)

Yaya could not confine her potential in biology, which she tended to show and develop whenever possible. Although she taught English, for instance, she won the first prize when the school asked her to join a biology teaching competition in the city in 2004. When she did her part-time master's study from 2016 through 2018, she chose to work on psychology, which was her dream biology-related field since she was a biology undergraduate. Looking forwards, Yaya was keen on physical

fitness and wished 'to be the one who knows physical fitness best among English teachers' (Yaya.W2/17.02.20). To this end, she sought external support and obtained a physical fitness coach certificate in her spare time. When the interviews occurred, Yaya just submitted her application for the professional rank of senior teacher in English. If her application could be approved, she considered it the right time to plan her future career on her own will:

> […] Once you've reached the professional rank of senior teacher, you'll find yourself at another stage of career planning, because you've basically got your work under control.
>
> (Yaya.W1/09.01.20)

Yaya returned and unlocked her long-constrained potential, which seemed to be deeply rooted in her past experience. She noted that physical fitness was the field she truly loved to research into because physical education was her best subject ever since childhood, and physical fitness was fundamentally related to anatomy, and more generally, biology. She was returning to the field she preferred and was good at very early on before her teaching career, as she remarks: '[…] As your age grows, you'll return to the field you are good at. […] so I feel I'm actually returning to who I am, the field I liked at the beginning' (Yaya.W2/17.02.20).

Whereas Yaya related her potential in physical fitness to her university education as a biology major and her childhood experience about physical education classes, Beibei's language potential could trace back to as early as her senior high school learning experience (in 7.3.1). It seemed that professional potential might be the abilities in a particular area the participants found himself/herself good at from early on in their past experiences. Central to professional potential might be the belief of likelihood to excel in the professional area, formed in and shaped by education and personal life experiences. The participants seemed to decide the likelihood to excel by weighing between different areas, rather than by interpersonal comparison in the

same area. Yaya, for example, saw her potential lie more in biology than English, although she already stood out as an excellent EFL schoolteacher in the city.

Rooted in past experiences, professional potential seemed to be in a favourable position to invite the participants' constant investment, even when support from the school system was not in place. Professional potential might be constrained, as in Yaya's case, but the participants might tend to develop it whenever possible, either consciously or subconsciously. Yaya tried to confine her potential in biology as she changed her major into English, but she constantly returned to biology-related areas, such as choosing psychology for her master's study and physical fitness for future development. The likelihood to excel and relevance to professional life seemed to contribute to the attraction of professional potential and make it different from a mere personal interest or hobby. Physical fitness, for instance, might be a mere hobby for many people, but for Yaya, it was an area worth continued investment as she saw it as an area in which she believed she could excel in her future career life.

As illustrated by Beibei's and Yaya's stories, the pursuit of fulfilling professional potential appeared to be a process of inviting the participants' sustained investment in TPD over the course of their careers. I will return to this point in Chapter 8. In Section 7.4 below, I turn to Caiyu's and Haidi's professional life experiences to examine role models' influence in their pursuit of professional excellence, another process that seemed to engender career-long TPD.

7.4 Role models' company in the pursuit of professional excellence

The participants acknowledged the positive influence of role models on their TPD, as noted from time to time in previous discussion. In this section I present the stories of Caiyu and Haidi, two young schoolteachers respectively in their sixth and eighth year of teaching. They both highlighted role models as supportive for their pursuit of professional excellence.

7.4.1 Caiyu: Following role models to pursue professional excellence

Caiyu taught at a leading school. Following her master's study, she came to the city from another province to start her career in 2013. Caiyu made a good beginning with her work well recognised by students and parents in the first year. She won the first prize in a lesson teaching and a microteaching competition in the city respectively in the second and third year. In the fourth year, she was selected to be a member of Ms C's Master Teacher Studio, and then had the first paper in her career published in an academic journal in the fifth year. Over the last six years, Caiyu gradually developed into a promising young teacher at the school and in the city, illustrating an upward career trajectory with sustained TPD, as shown in her life map of past experience she drew. In the interview, she notes, '[…] I think I keep making progress; I never stop learning new things' (Caiyu.W3/03.04.20).

Caiyu's continued effort in TPD seemed to be directed by her imagined professional prospects of becoming an excellent schoolteacher. Asked why she managed to keep making progress, Caiyu noted her ideal and belief as the 'fundamental driving force' (Caiyu.W3/03.04.20) that supported and pushed her to move forward constantly. She explains further in her responses below:

> **Ronggan:** By ideal and belief, you mean?
>
> **Caiyu:** I mean what kind of teacher I want to be, and then I work hard to become such a teacher, so I never stop reading and learning, followed by practice and reflection.
>
> **Ronggan:** You mean you hope to become an excellent teacher?
>
> **Caiyu:** Yes, that's the direction.
>
> (Caiyu.W3/03.04.20).

Besides her imagined career prospects, Caiyu also highlighted the influence of role models, which supported her to sustain enthusiasm for TPD. When finding herself slacking, for example, she sought inspiration from those she identified as role

models in her context. After articulating her admiration for two webinar speakers, who were also frontline schoolteachers like her, she remarks:

> […] So when I was at the lowest point slacking, there was such a seminar. All of a sudden, it hit me. See, how excellent others are. You need to speed up. It's kind of seeing a wise, good man and trying to emulate him. So again, I could pull myself together and promptly take actions.
>
> (Caiyu.W3/03.04.20)

Whereas professional excellence might be abstract, role models seemed to help exemplify it and offer a real-life example for Caiyu to follow. Caiyu was influenced, for instance, by a colleague a few years older than her, Ms L, from whom Caiyu learned to develop more harmonious relationship with her students:

> […] I learned from her and gradually became tolerant, inclusive and understanding with students. I was greatly influenced by her. […] Ms L never loses her temper to students, or criticises them publicly. So I've got it from her, and my relationship with students has become more harmonious since 2014.
>
> (Caiyu.W3/03.04.20)

Another role model influential in Caiyu's professional life was Ms C from another leading school, who led the Master Teacher Studio Caiyu was involved in since 2017. Caiyu got to know Ms C early. In 2013, Caiyu did her practicum at Ms C's school and Ms C was her tutor. Since then, Caiyu followed Ms C's guidance to progress professionally, as she remarks:

> […] Ms. C is my guide. She shows me the direction to go forward, that is, which way I should take. Otherwise, I myself wouldn't think it matters if I don't do it.
>
> (Caiyu.W1/08.01.20)

Besides demonstrating professional excellence, Ms C also guided Caiyu to sustain TPD by engaging in progressively more complex professional challenges. At the beginning, Caiyu emulated Ms C to read widely after she saw Ms C's bookshelves. Later, Caiyu followed Ms C's advice to join teaching competitions, and first participate in, and then lead research projects, cumulatively moving forward to take on more complex professional challenges. Every time Caiyu was ready to take another step further, there came Ms C's encouragement. After working under Ms C for a project, for instance, Caiyu was encouraged to lead a city-level project on her own in 2017:

> […] I followed her [Ms. C] to do projects. My first step was participating in her project. I taught an [open] class as she asked and after the class I wrote a paper. When I showed her the paper, she said I did it well, 'You can also apply for a project on your own'. I said, 'Oh, really? I can apply for a project by myself?'
>
> (Caiyu.W1/08.01.20)

Then in 2018 when Caiyu was wondering about her next move following her city-level project, Ms C timely advised her to apply to lead a provincial-level project:

> […] I had completed the [city-level] project, but the matter [of research] didn't come to an end. I was thinking about what should be my next move. Very timely, Ms. C said, you can apply for a provincial level project.
>
> (Caiyu.W1/08.01.20)

As illustrated above, role models seemed to support Caiyu behind the scene of the TPD activities in her pursuit of professional excellence, particularly the activities of seminars, teaching competitions, and research projects. These activities were those Caiyu considered to inspire her constant investment in TPD:

> **Ronggan:** Among the support you've received, what support, if any, inspired you to invest more in your professional development?
>
> **Caiyu:** The first is expert seminars, and the second teaching competitions.

These two aspects pushed me forward most, and successful applications of projects, too.

<div align="right">(Caiyu.W3/03.04.20)</div>

Caiyu's story outlined above provides an illustration that career-long TPD might be enabled by the pursuit of professional excellence with role models' company along the process. The process, however, could be more arduous than expected. Although Caiyu seemed to be highly motivated by her ideal and belief, she sometimes felt like slacking, and called for role models to inspire her. She turned to role models (e.g. Ms L and Ms C) when she needed someone to show her how to translate professional excellence into actions in her context. She might also be at a loss about the steps to take to reach professional excellence, but with Ms C's guidance, she was able to make progress constantly, following the steps illuminated by Ms C's forerunner experience as a role model. It seems that role models might help sustain TPD throughout the career by inspiring enthusiasm, exemplifying professional excellence, and guiding the way to progressively engage in more complex professional challenges. I will return to this point later (in 8.4.3).

In the following sub-section (7.4.2), I turn to Haidi's story. Whereas role models noted in Caiyu's story above might be all in her present context, the participants also seemed to find role models from their past experiences, as in Haidi's case.

7.4.2 Haidi: 'When you have role models around, you'll try your best to achieve something'

Haidi taught at an ordinary school, with many students from villages and towns much less developed than the downtown districts. Whilst teaching English, Haidi also worked as a classroom teacher since her start of career in 2011. Over the years, Haidi became a winner of the Classroom Teacher Award and a teaching competition at the school, and a paper competition in the district. She was also awarded by the organisers of some provincial-level English competitions for her students' good

performance. Haidi was a caring and responsible teacher for her students, as she notes, '[…] The moment I became a teacher, I felt it is my duty to teach them well. Being a teacher is not just a job' (Haidi.W1/25.12.19). Before starting her teaching career, Haidi met teachers who helped change her life and inspired her to be a teacher of the same kind. Unprompted, Haidi remarks:

> […] Actually, education gave me a chance to move from a poor village to a rich city. Education has changed my life. […] So, I also want to be a teacher to help change my students' lives. Most of them are from poor villages, so I just also want to be their teacher to help them to, like me, change their fates.
>
> (Haidi.W1/25.12.19)

Haidi grew up in a poor farming village in the remote area of a nearby city, as she articulates, when in the primary school:

> […] many students were from poor villages. We had to walk a long way to school, almost one hour, […] and one hour to go back home.
>
> (Haidi.W1//25.12.19)

Haidi disliked even today her then-classroom teacher, who was a negative example of schoolteacher she warned herself not to follow:

> […] She was always angry with us, and always hit us with a piece of chalk. At that time, I thought if I were a teacher, I would never do things like that. […] That teacher was very bad. I dislike her even now. So I try not to be such a teacher.
>
> (Haidi.W1/25.12.19)

Luckily, from junior high school to university, Haidi met nice teachers, and some of them influenced her positively and became role models for her teaching career, as she remarks, '[…] So I am very grateful. My teachers play an important part in my life. They are so kind and full of wisdom' (Haidi.W1/25.12.19). In particular, Haidi

noted her English teacher in Grade 8, who was encouraging and 'changed [her] life' (Haidi.W1/25.12.19). Because of the teacher, Haidi began to show great interest in English and later chose English as her major. Another was her classroom teacher in Grade 12, a very kind and patient schoolteacher. Haidi remembered well that the teacher did not blame her when she once lost the class newspaper subscription fee of CNY150, as she articulates, '[…] I was very regretful and sad because I was very poor at that time' (Haidi.W1/25.12.19). In university, her teachers and classmates helped her with her life and studies, especially the department head she always turned to when she met with problems. With gratitude, Haidi was determined to become a schoolteacher like her own teachers, kind, encouraging, patient, and wise:

> **Ronggan:** So you are still very grateful to your Grade 8 teacher and Grade 12 teacher?
>
> **Haidi:** Yes, and university teachers, too. They changed my life. They gave me support, so I'm determined to be a teacher.
>
> (Haidi.W1/25.12.19)

Besides her past education experience, Haidi also found role models among people in her present context, such as an enterprising colleague who developed into a well-accepted English teacher from a non-English major (noted previously in 6.2.3). In the following extract, Haidi also mentions me as her role model, suggesting that Haidi tended to notice whoever might be role models in her context. As a researcher, I interacted with Haidi following my research procedures with ethics in mind (as discussed in Chapter 4). She did not know me before participating in this study, but she probably noticed that I started from the same place as an ordinary schoolteacher like her, which might be an inspiration for her.

> **Ronggan:** Do you have other experience that inspired you to work harder for your professional development?
>
> **Haidi:** No more experience. But I do have role models such as you to influence me up to a point, because, when you have excellent people as role models around, you'll try your best to achieve something.
>
> **Ronggan:** Like the colleague you just mentioned?

Haidi: Yes, and you too.

<div align="right">(Haidi.W3/12.04.20)</div>

As illustrated above, role models for the participants seemed to be individuals with qualities or experiences that could engender feelings of admiration and actions of emulation in the participants' own TPD. As in Haidi's case, she admired some of her former teachers and followed their examples to help change her own students' lives when she became a teacher herself. Haidi did not consider, on the other hand, her classroom teacher of primary school as a role model since the teacher did not seem to deserve her admiration.

Role models seemed to range from new acquaintances to those the participants knew very well, and from colleagues at the same school to someone beyond the school. As in Caiyu's case, Ms L was her school colleague, and Ms C from another school of the same city but Caiyu knew her well, whereas the two inspiring webinar presenters were schoolteachers from other parts of the country (in 7.4.1). Besides, role models for the participants did not seem to be limited within the present timeframe. A role model might be someone in the present context, but also in the participants' past experiences, such as former teachers in Haidi's case, resonating with the notion of 'apprenticeship of observation' (Bailey et al., 1996; Lortie, 1975). The above suggests that in pursuit of professional excellence, the participants seemed to identify role models among people in their TPD ecosystems regardless of place and time. It follows that the participants might take the company of role models as a basic need to help sustain TPD throughout their careers. I will further discuss this in Chapter 8.

7.5 Summary

In this chapter, I have illustrated with six participants' career life stories that Teacher Professional Development (TPD) might be sustained throughout the career by timely

support to engage in progressively more complex professional challenges (in 7.2), efforts to integrate support to fulfil professional potential (in 7.3), and the company of role models in the pursuit of professional excellence (in 7.4). Questions arose in the flow of discussion, suggesting the need for further analysis of the findings. More importantly, how the above three themes might be best interrelated to help sustain TPD throughout the career is as yet unclear. A coherent understanding of these themes as well as the findings presented earlier in Chapters 5 and 6 is needed. To this end, I move forwards to the discussion chapter that follows.

Chapter 8
Discussion

8.1 Introduction

Previously in Chapters 5 through 7, I have illustrated that different forms of professional support and supportive contextual elements existed, jointly influencing the participants and their Teacher Professional Development (TPD) over the course of their careers. Positive feelings and actions for further investment in TPD were engendered by some support forms (e.g. job assignments, seminars, research projects and Master Teacher Studios) and contextual elements (e.g. interpersonal relations with key persons, place change and culture, time change, past experience and perceived career prospects). Besides, the findings also suggest recurrent themes about sustaining TPD throughout the career, indicating the roles of timely support to engage in progressively more complex professional challenges, efforts to integrate support to fulfil professional potential, and role models' company in the pursuit of professional excellence.

In this chapter, I move forward to clarify the theoretical implications offered by the findings. To obtain a coherent understanding of the findings, I keep in mind in the proceeding discussion the subject of this thesis and my research questions (RQs) presented earlier in Chapters 2 and 4, repeated below:

- **The thesis subject:** How might schoolteachers be best supported to sustain TPD throughout their careers?

- **RQ1:** How do Chinese senior high school teachers of English perceive the support provided by the context over their professional lives?

- **RQ2:** What are the features of support that enact engagement in further professional development activities throughout the career?

This chapter is structured as follows. First I examine the interrelations within and between TPD activities to understand the TPD process at the activity level. I then look beyond activities at the wider TPD ecosystem to consider the expanding process of ecosystem consistent with career-long professional growth, followed by a discussion of the schoolteacher as a socially developing person with his/her unique characteristics in the process of pursuing career-long TPD. At the end, I synthesise the discussion to reconceptualise Sustainable Professional Development (SPD) (previously discussed in Chapter 3), and propose SPD as a coherent framework for career-long TPD and its contextual support.

8.2 Interrelations within and between TPD activities

The findings indicate that TPD is a career-long process of change manifested and influenced by a range of activities as discussed in Chapter 3. The forms of support the participants considered beneficial to their TPD were basically activities (in Chapter 5). Among the support forms emerging from the data, some were activities by themselves (e.g. seminars and research projects), and some consisted of activities (e.g. Master Teacher Studios), or implied activities for the participants to engage in (e.g. job assignments). The findings resonate with Bronfenbrenner's (1979) observation that 'activity is at once the source, the process, and the outcome of development' (p. 289). The participants' TPD appeared to be facilitated and manifested by their engagement in activities related to the different forms of support over their professional lives.

In this section, I discuss the findings with a focus on the participants' further actions during an activity (in 8.2.1) and across activities (in 8.2.2). By taking further actions, the participants involved themselves in more interaction with context and gained

TPD (as postulated in 3.4.1). Shuyang, for example, did research projects one after another over the years, which led her to engage in diverse TPD activities and varied teacher-context interaction, contributing to her better development than colleagues as instantiated by her becoming of a master teacher among the very few in the city (in 7.2.1). But what enacted the participants' further actions within and across activities? This relates to Activity Theory (e.g. Engeström, 2015; Vygotsky, 1978) as well as Bronfenbrenner's (1979, 2005) ecological theory. As discussed in Chapter 3, whereas Bronfenbrenner's theory examines development ecologically with activities situated in the ecosystem, Activity Theory investigates from the inside of human activity systems. Both theories are useful to help understand the findings.

8.2.1 Basic interaction between variables of TPD activity

The participants seemed to experience a series of prominent psychological states, from challenge to need, and to preparedness in the process of a TPD activity. Before an open class, for instance, Kexin was first in a challenge state when imagining the target context of teaching an open class, for which she saw introducing new ways of teaching as necessary (in 7.2.2). The challenge led her to the need state of searching for tools to help, resulting in her decision on the tool of round-robin storytelling and applying it to the class. After planning her round-robin storytelling in relation to the target context, Kexin was then in a preparedness state for her actual teaching.

Throughout the activity, Kexin's psychological states of challenge, need and preparedness seemed to be interrelated variables, repeatedly becoming pre-eminent one after another to enact her further actions. These variables emerged in the interaction between three primary variables: Kexin the schoolteacher, the target context of the activity, and tools that mediated between Kexin and the target context. Challenge, need and preparedness took shape respectively, when Kexin and the target context, Kexin and tools, and tools and the target context interacted. The findings suggest that the schoolteacher's further actions in the process of a TPD activity might be engendered by the interaction between activity variables. The basic

interaction involving the primary and psychological variables may be depicted with the help of Figure 8.1. The dotted arrow from preparedness to challenge indicates the transition from a previous to a possible further round of interaction, given that multiple rounds of interaction might occur during a TPD activity.
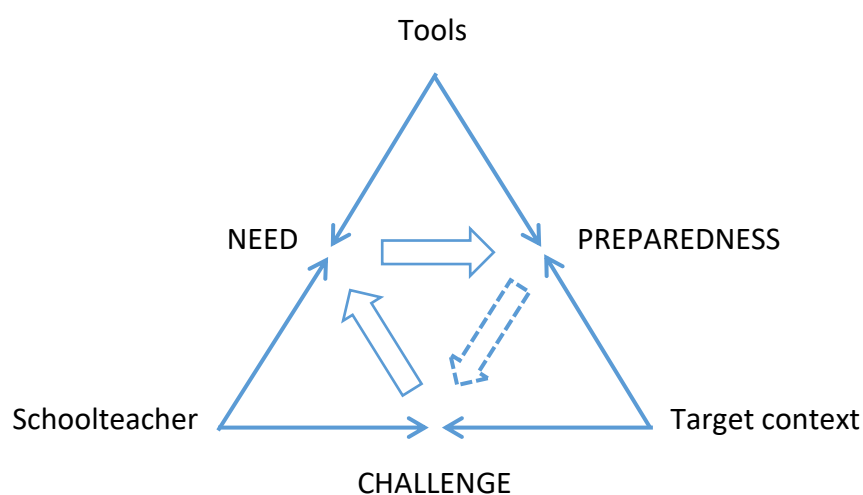
Figure 8.1 Basic interaction between variables of TPD activity
     (adapted from Engeström (2015, p. 63))

Activity theorists postulate that internal tensions constitute 'the driving force of change and development in activity systems' (Engeström, 2015, p. xv). This seems to be supported by the findings. As illustrated above, TPD might be structurally enabled with activity variables interacting with each other and resulting in the schoolteacher's further actions for more teacher-context interaction. The primary variables of schoolteacher, target context and tools emerging from the data correspond respectively with subject, object and tools in the structure of human activity (Engeström, 2015; Vygotsky, 1978). The findings, however, suggest the presence of psychological variables, which are not included in the analysis by Activity Theory. As discussed above, Kexin's further actions seemed to be enacted

by her psychological states. If Kexin did not feel challenged, for instance, she would not have turned to what she learned years before (i.e. round-robin storytelling) and applied it to her teaching (in 7.2.2).

The findings also suggest that rather than a vague concept, the context the schoolteacher directly interacts with in a TPD activity might be manifested by the variables of the target context and tools. Bronfenbrenner (1979, 2005) takes person-context interaction roughly to be with the immediate context. But as in Kexin's case of preparing an open class, there may be interaction with the imagined activity context, not necessarily with the immediate context the schoolteacher is physically in. It follows that the schoolteacher might interact with not just the immediate, but also the imagined target context during a TPD activity. I will discuss the context in TPD further in Section 8.3.1 below. But now I continue to focus on TPD activities and examine the findings with respect to the participants' further actions across activities from Section 8.2.2 through 8.2.4.

8.2.2 The derivational relationship: Structurally generated activities

The participants' further actions in the process of a TPD activity might sometimes lead to a new sub-activity, which formed a derivational relationship with the original central activity. For the central activity of each research project, for example, Caiyu engaged herself in various sub-activities, from reading the literature to trying out new ideas in her classroom, and to teaching open classes and writing for publication (in 5.4.1). Similar to Kexin (in 7.2.2) as discussed above (in 8.2.1), Caiyu seemed to experience the psychological states of challenge and need engendering her search for tools. Whereas Kexin might complete her search by deciding to apply round-robin storytelling to her open class, Caiyu's search became a sub-activity of literature reading, engaging her in more teacher-context interaction for TPD. It seems that interaction between variables of the central activity might constitute a feature to engage schoolteachers in further TPD activities.

Among Caiyu's sub-activities for each project, literature reading seemed to be a tools-preparation activity generated to prepare tools, as well as a needs-inspiration activity inspiring Caiyu's needs for trial teaching by providing new ideas to try out. Trial teaching, open classes and writing for publication might be context-challenge activities, which presented Caiyu part of the target context of doing a project. A sub-activity appears to serve and be pre-eminently linked with a primary variable of the central activity. Specifically, the needs-inspiration activity is connected with the schoolteacher variable, tools-preparation activity with the tools variable, and context-challenge activity with the target context variable, echoing respectively, Engeström's (2015) subject-producing, instrument-producing, and object activities (p. 71) in human activity analysis.

In the participants' career lives, support providers seemed to organise TPD activities as sub-activities, taking career-long TPD as one single central activity. The majority of activities were context-challenge (e.g. open classes, teaching competitions, paper writing, and research projects), or tools-preparation (e.g. classroom observations, training programmes, seminars, and part-time degree study) (in 5.1). A few might be needs-inspiration activities (e.g. Master Teacher Studios). Their derivational relationships with career-long TPD, however, might not exist as expected. With the activities more externally added to than generated within the activity structure of the participants' career-long TPD, the interaction between psychological variables of the central activity of career-long TPD might not be in place. For instance, Haidi noted seminars of in-service training scheme, which were mandatory for all schoolteachers rather than derived from individual schoolteachers' need for tools (in 5.3.1). She therefore considered the seminars time-consuming and used to skip those about general education and psychology. Externally added TPD activities did not seem to contribute much to the participants' professional growth, as Kexin remarks on her training experience, 'So basically I didn't have much change after being trained' (Kexin.W3/01.04.20) (in 7.2.2).

It appears that psychological variables are essential in the structure of TPD activity (as discussed in 8.2.1), and when interaction between variables of the central activity fails to work, there might not be a derivational relationship between activities, let alone its feature of engaging schoolteachers in further TPD activities. Nevertheless, when activity variables interact, TPD might be structurally enabled by enacting the schoolteacher's further interaction with context in the same activity or in derived sub-activities.

8.2.3 The evolutionary relationship: Progressively more complex activities

The evolutionary relationship seemed to be another activity relationship structurally enabling TPD, and potentially, TPD throughout the career. Two activities might form an evolutionary relationship when a previous activity gradually developed into a new activity with increased complexity. In the evolving process, the former activity turned into a sub-activity of the latter one. Caiyu, for example, was involved in three projects in her six years' teaching career (in 7.4.1). Participating in Ms C's project was first a central activity, and then a tools-preparation sub-activity for the city-level project Caiyu led on her own, which in turn changed into a tools-preparation sub-activity of her later provincial-level project. The three projects differed, but from Caiyu's perspective, they were bound by an evolutionary relationship with respect to her understanding of doing projects. A previous project appeared to prepare her for the next, a more complex project.

The complexity seemed to increase progressively from one project to another. The increased complexity of a new project would probably challenge Caiyu to generate the need for tools, but did not discourage her from engaging herself in the project. With preparedness gained from previous projects, Caiyu appeared to perceive the increase of complexity as incremental, and inviting her to meet the challenge in the target context of the new project. So she moved forward from one project to another over the years. It appears that progressively increasing complexity across activities

might be a feature that invites the schoolteacher to engage in further activities for TPD, with former activities serving as stepping stones in the evolving process.

Across TPD activities in evolutionary interrelations, the incremental change of complexity seems to be structurally ensured, with previous activities evolving into new ones within the same activity system at the schoolteacher's own developmental pace. The schoolteacher is allowed to exercise his/her agency (Priestley et al., 2015) to delineate the need for a more complex new activity, and decide whether the complexity is increasing progressively. Informed by Bronfenbrenner (1979, 2005), it can be postulated that to enable TPD throughout the career, teacher-context interaction needs to be progressively more complex over time. But how this might happen is a question (as noted in 3.4.1). The above findings indicate that a series of TPD activities bound by an evolutionary relationship might constitute an activity system, enabling the schoolteacher to base on his/her own developmental pace to engage in more complex TPD activities one after another. In this way, progressively more complex teacher-context interaction might be sustained over time, leading to career-long TPD. Shuyang and Caiyu, who both engaged in research projects evolutionarily, seemed to gain TPD over their career lives this way (in Chapter 7).

The discussion so far has shown that TPD might be enabled through schoolteachers' engagement in a TPD activity, or activities derivationally or evolutionarily related. However, all is based on the presumption that schoolteachers do participate in activities, without considering what if they don't. But how to support schoolteachers to initiate their engagement in a TPD activity? I move on to examine the contextual activity relationship, which might shed light on the question.

8.2.4 The contextual relationship: Positive contextual characteristics

Some TPD activities appeared to be distinct, but were taken as interrelated by some participants in their professional lives. Yangyu, for example, considered a succession of events significant for his TPD, from his being rated high in end-of-year teacher

evaluation, to being assigned to teach a key class, coach top students of the grade for a competition, and write test papers for the municipal testing authority (in 6.4.3). Underlying the events might be Yangyu's consistent hard work across related activities, which seemed to be connected by a contextual relationship, specifically, by their contextual variables with shared characteristics of recognising Yangyu's hard work.

It appears that there are contextual variables at play in the process of a TPD activity, besides the primary (schoolteacher, target context and tools) and psychological variables (challenge, need, and preparedness) identified earlier (in 8.2.1). Whereas the primary variable of target context might be the imagined or immediate context the schoolteacher directly interacts with, the large context beyond the target context seems to be manifested by contextual variables influencing the activity process in the background. In Yangyu's activities noted above, a contextual variable of culture seemed to work closely with another two: the roles and interpersonal relations. For instance, the roles of teaching a key class, coaching top students of the grade, and working for educational authorities might be interpreted as recognition of Yangyu's work in the local culture, and consequently affected his interpersonal relations in the activity process. It seems that contextual variables are dynamically interrelated, influencing behind the scenes the interaction between the primary and psychological variables (as discussed in 8.2.1). This is depicted with the help of Figure 8.2.

Tools

NEED   PREPAREDNESS

Schoolteacher   CHALLENGE   Target context

Culture   Interpersonal   Roles
relations
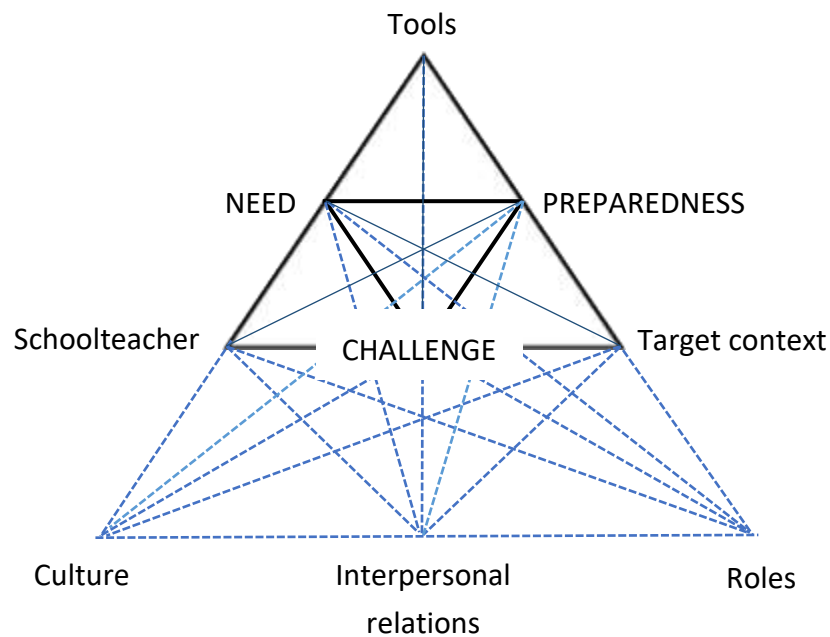
Figure 8.2 A conceptual framework of TPD activity

    (adapted from Engeström (2015, p. 63))

The recognition of Yangyu's hard work seemed to be a contextual characteristic
across activities Yangyu perceived as positive and personally meaningful. The
characteristic not only influenced the process of a particular activity, but also
inspired Yangyu to engage in further activities for TPD. A positive cycle gradually
emerged, from Yangyu's devotion to others' recognition, and to his further
investment and more recognition, leading him to progress from 'one achievement to
another' (Yangyu.W3/09.04.20). It appears that positively meaningful contextual
characteristics across activities not only help facilitate the process of a particular
activity, but also provide the schoolteacher with a reason to constantly initiate
engagement in further TPD activities throughout the career. This might constitute
the engaging feature of contextual relationship between TPD activities.

The feature underlines schoolteachers' initial needs for their engagement in a TPD
activity, and further, in career-long TPD. Without initial needs, the schoolteacher is

unlikely to initiate the interaction between activity variables, or involvement in further activities leading to TPD. Kexin, for example, was first enthusiastic about teaching open classes, but was not later when she found her colleagues lukewarm about their open classes (in 7.2.2). She no longer searched new ideas for an open class as she did for the round-robin storytelling class (discussed above in 8.2.1). The characteristics of Kexin's school culture seemed to impact negatively on her initial needs for further investment in teaching open classes, in contrast with Yangyu's case noted above with his initial needs for further TPD cumulatively reinforced.

As the above discussion has shown, schoolteachers' initial needs for TPD activities and career-long TPD seem to be influenced by the shared contextual characteristics across activities, i.e. the characteristics of the TPD ecosystem in which activities are situated and interrelated with other elements. I move onto the TPD ecosystem to discuss this further in Section 8.3 below.

8.3 The TPD ecosystem

In this section, I discuss the findings about the TPD ecosystem so as to understand the expanding process of the ecosystem along with career-long professional growth. I start with a discussion of the physical and social aspects of TPD context (in 8.3.1), which suggests a need to further analyse the social aspect, i.e. the TPD ecosystem (discussed earlier in Chapter 3). I therefore move on to examine the findings with respect to microsystems and their mutually supportive interrelations (in 8.3.2), and then the expanding TPD ecosystem (in 8.3.3), leading to enriched understanding of Sustainable Professional Development (SPD), conceptualised previously but tentatively in Chapter 3.

8.3.1 Physical and social aspects of TPD context

In Wedell and Malderez's (2013) analysis of context, they differentiate between visible and invisible aspects of place, and note that visible aspects are 'physically possible for an outsider to notice relatively quickly' (p. 16) whereas invisible ones 'are not directly accessible to the senses, and therefore take longer and more effort to understand' (p. 16). As summarised in Table 8.1, the findings (presented in Chapters 5 and 6) indicate that the visible-invisible distinction is manifested not just in the contextual component of place, but also in people and time. Besides, visible elements appear to be physical whereas invisible ones are social. That is, visibility is by definition a feature of the physical and social dimensions of context. As van Lier (2004) notes, the 'ecological context is a physical as well as a social one' (p. 18). It follows that instead of visible and invisible aspects (Wedell & Malderez, 2013), physical and social aspects might be better terms. That said, the visibility feature is important in reminding us not to ignore either aspect, and more importantly, a person-oriented perspective on TPD (as discussed in 3.3.2).

Table 8.1 Physical and social aspects of TPD context

Context	Physical aspect	Social aspect
People	Interactions, activities	Interpersonal relations (e.g. recognition, trust, sincerity), social roles (e.g. students, leaders, colleagues, experts, friends, family members)
Place	Physical features, place change (e.g. school location change, school transfer)	Culture (e.g. collegial atmosphere), place layers (e.g. class, grade, school, city, province, country)
Time	Sudden and gradual time change	Past experience, professional prospects

Given that everyone is an outsider except the schoolteacher himself/herself, the invisible social aspect is particularly worth attention. The social aspect of context is highlighted in the literature, such as Bronfenbrenner's (1979, 2005) theory on the social ecosystem of human development and related empirical studies on TPD (e.g. Fyall et al., 2020; Hwang, 2014; Rose, 2017). The findings of this study also show that although both aspects were mentioned, the social aspect was related more by the participants to their positive feelings and actions about further TPD activities (in Chapter 6). There were positive instances, such as the recognition of Yangyu's work that inspired him to constantly invest in TPD (presented in 6.4.3 and also discussed in 8.2.4). There were also mixed instances as in the case of Dixi, who lost interest in TPD due to a job assignment she perceived as mistrust of her ability, and later gradually recovered after her hard work was recognised by a mid-level school leader (in 6.2.2). The findings show that the social aspect of context was influential on the participants' engagement in further TPD activities, particularly on their career-long TPD. But how did this happen?

I examine microsystems in the participants' TPD ecossytems to discuss the question further in Section 8.3.2 below.

8.3.2 Microsystems and mutually supportive interrelations

As discussed in Chapter 3, a microsystem in TPD is 'a pattern of activities, social roles, and interpersonal relations' (Bronfenbrenner, 1994, p. 1645) experienced or perceived by the schoolteacher in a given setting. Emerging from the data were five participating microsystems. These included the microsystems of school, potentiality, education, friendship, and family. The participants also seemed to notice the policy-making microsystem, a non-participating microsystem they did not participate in personally but was influential in their professional lives (as discussed in 3.3.3).

It appeared that there was a primary social role the participants played in each microsystem, and it was the primary role that grouped activities and associated

social roles and interpersonal relations in the microsystem. This accords with Bronfenbrenner's (1979) observation that a social role is 'a set of activities and relations expected of a person occupying a particular position in society, and of others in relation to that person' (p. 85), suggesting that activities and interpersonal relations are embedded in roles. When the role changed, the participants engaged in different activities and interpersonal relations, and a new microsystem might take shape. The participants were involved, directly or indirectly, in activities with a primary schoolteacher role in the school microsystem and the policy-making microsystem, whereas they were primarily students, friends, and family members respectively in their microsystems of education, friendship and family. Their roles in the potentiality microsystem differed with respect to their different potential to develop, such as a role of teacher researcher for Shuyang in research projects (in 7.2.1), amateur translator for Beibei in translation (in 7.3.1), and amateur coach for Yaya in physical fitness (in 7.3.2).

A microsystem is usually based on a particular setting, i.e. a base setting, such as the campus for the school microsystem. Given a setting being a place where interactions and activities occur, a microsystem might involve more settings than the base setting. For instance, when Shuyang taught at the branch school, there were in her school microsystem at least two settings, the branch and the parent school (in 7.2.1). The parent school gave way to the branch school to be the base setting, but remained an active setting, although it might serve a sub-microsystem of Shyang's school microsystem. Similarly, the school microsystem of a previous school might become a sub-microsystem after a school transfer as experienced by Shuyang, Kexin and Yaya (in Chapter 7). A change of the base setting of a microsystem sometimes can impact greatly on TPD, as in Yaya's case of teaching Chinese in the UK (in 7.3.2). Yaya was still affiliated to her school in China, but the school microsystem in the UK influenced her TPD and professional life a lot. I will return to this point in Section 8.3.3.

I assumed previously (in 3.3.3) that there might be a TPD microsystem in a given TPD setting, but emerging from the data were microsystems of school, potentiality and education, which could be included in the assumed but vague TPD microsystem. The problem seemed to lie in that I did not identify microsystems by the schoolteacher's primary role in the microsystem, but by the setting involved. Specifically, I focused too much on the social aspect of settings, such as the culture enabling TPD, which led to my conception of a vague TPD microsystem. On the other hand, one might overstress the physical aspect of settings, as Bronfenbrenner (1994) seems to do by reformulating the given setting of a microsystem as 'a given face-to-face setting' (p. 1645). Overemphasising the physical aspect of settings could result in a confusing conceptualisation of microsystems, such as a 'teacher-student microsystem' (Cross & Hong, 2012, p. 966), which might just be interactions or activities.

Approaching microsystems from the schoolteacher's primary role also helps understand overlapping microsystems. For example, the participants had to work from home and taught online due to the Covid-19 pandemic. The participants' school and family microsystems might inevitably overlap when they taught or discussed with colleagues online. Even without the pandemic, it happens that a teacher might be writing a lesson plan in a park but with his/her children playing around. In the same setting, the teacher probably engages in the roles and activities both of the school and family microsystems. It might not be a given setting but the schoolteacher's primary role that helps identify a microsystem.

As the overlapping of microsystems indicated, microsystems seemed to be closely interrelated in the participants' TPD ecosystems. In particular, there were signs of mutually supportive interrelations between the school microsystem and the other microsystems. The participants noted instances of positive influence on their TPD and thus school microsystems from the microsystems of education (in 6.4.2), family and friends (in 6.2). The potentiality microsystem was also found to be helpful as in the cases of research projects (in 5.4) and Beibei's efforts to develop her language

potential (in 7.3.1). On the other hand, the school microsystem seemed to support the potentiality, education and friendship microsystems by providing respectively opportunities to do research projects (in 5.4) and further degree study (in 6.4.2), and to further interpersonal relationships with external experts through seminars as in Caiyu's case (in 6.2.4).

School support for the family microsystem, however, seemed to be missing. Instead, the participants noted such needs as reducing workload in the school microsystem to allow time and space for childcare as in Yangyu's case (in 6.4.3), and increasing salaries to give financial flexibility in the family to permit investment in professional potential as in Beibei's case (in 7.3.1). The need for supporting the well-functioning of family microsystems was also made particularly explicit by the Covid-19 pandemic when teaching online from home became a necessity (in 6.4.1). Family-related factors such as workload and remuneration are reported in the literature as influential on teaching effectiveness (Schwartz, Cappella, & Aber, 2019), and more importantly, on schoolteachers' job satisfaction that has consequence on teacher retention (Sargent & Hannum, 2005), i.e. teachers' initial needs for career-long TPD (as noted in 8.2.4). It follows that support from the school microsystem might be best in place for the family microsystem.

Similar to the family microsystem, school support for the friendship microsystem might sound unnecessary, but the findings indicate that such support helped the participants expand their professional networks. Two expert teachers from other parts of the country, for example, became Caiyu's critical friends through seminars and later interactions (in 6.2.4), and Jiemin found research projects beneficial to her TPD by connecting her with learning friends of likeminded fellow schoolteachers (in 5.4.2). Learning friends and critical friends slightly differ. Whereas critical friends 'provide support and challenge within a trusting relationship' (Day, 1999, p. 44), learning friends are more of collaborative nature (Harper & Nicolson, 2013). As Caiyu and Jiemin experienced, a schoolteacher's friendship microsystem might

become more supportive for TPD with more critical friends and learning friends in an expanded TPD ecosystem.

I tentatively conceptualised in Chapter 3 Sustainable Professional Development (SPD) as a well-functioning TPD ecosystem that best enables career-long TPD. The findings discussed above show that a necessary feature of SPD might be the mutually supportive interrelations between microsystems. Besides, such a TPD ecosystem might be expanding over time. I discuss this further below.

8.3.3 The expanding TPD ecosystem

As discussed in Chapter 3, the TPD ecosystem represents a pattern of social roles, interpersonal relations, activities, and microsystems, and interrelations within and between these elements, experienced and perceived by the schoolteacher. The participants' TPD ecosystems were found to be dynamic in that they were affected by the changing shared context, such as the gradual time change of technology development and the sudden change brought by the Covid-19 pandemic (in 6.4). Besides, the changing context might bring about professional challenges manifested in various activities in the participants' professional lives, enacting more teacher-context interaction. Years of teacher-context interaction since the start of teaching career appeared to result in the expansion of the participants' TPD ecosystems, with existing microsystems enlarged or having new ones generated.

A microsystem in the TPD ecosystem might stretch by including new interpersonal relations, which could lead to a shift of roles. For example, two seminar speakers from other parts of the country became Caiyu's critical friends, and her friendship microsystem grew as her audience role changed to a friend's role (presented in 6.2.4 and also discussed above in 8.3.2). Some participants had their school microsystems enlarged by assuming additional roles, as in Yangyu's case of extending his professional network to the city by engaging in additional city-level work (in 6.4.3). Sub-microsystems might also be generated with a change of the microsystem base

setting (as discussed above in 8.3.2). When Shuyang, Kexin and Yaya transferred schools, for instance, the base settings of their school microsystems shifted to their present schools, but the previous school microsystems might remain and serve as a sub-microsystem (in Chapter 7).

The participants' TPD ecosystems were also found to expand with potentiality microsystems generated. Beibei, for example, developed two microsystems for her language potential, one in IELTS (International English Language Testing System) teaching and the other in translation (in 7.3.1). Whereas Beibei's potentiality microsystems existed outside her school, Shuyang's seemed to be derived from her additional roles in the school system (in 7.2.1). As Shuyang moved from working on her own to leading project teams, her additional role of teacher researcher gradually brought her a classroom research microsystem, in which she engaged in activities and interpersonal relations with people (e.g. project administrators, external experts, and likeminded fellow schoolteachers) different from those in her school microsystem. Whilst most potentiality microsystems took time to develop, some were engendered by additional roles in shorter time. For instance, Shuyang's microsystem to develop her potential in leading a TPD community, specifically, a Master Teacher Studio, soon took shape after she was officially appointed to lead the studio, which served schoolteachers from across the city and province (in 5.5 and 7.2.1).

As illustrated above, microsystems might be enlarged or generated, resulting in the expansion of the participants' TPD ecosystems. Despite there being different ways to expand, they all seemed to involve similarly shifts to new roles, settings, or both. Bronfenbrenner (1979) refers to shifts in role or setting as 'ecological transitions' and considers them beneficial to development, which is consistent with the finding that the participants found their ecosystem growth supportive for TPD (in the related sections noted above). Shelton (2019) contends that ecological transitions 'require learning and adaptation to the new role or setting' (p. 52), but does not elaborate what triggers learning and adaptation. As the findings indicate, it is likely that the

professional challenge the schoolteacher experiences triggers learning or search for tools in the adaptation process, a similar psychological process from challenge to need, and to preparedness as in a TPD activity (in 8.2.1). This is exemplified by Shuyang's school transfer (in 6.3.2 and 7.2.1) and transition to the role of a teacher-researcher (in 7.2.1). Professional challenges as well as timely support seemed to facilitate Shuyang's learning and adaptation, and more importantly, encouraged her to constantly invest in TPD as the transition to a teacher-researcher role lasted long over her professional life.

It appears that ecological transitions might engage schoolteachers in further TPD activities, and that ecosystem expansion might be a feature of SPD, i.e. a TPD ecosystem that best enables career-long TPD (as discussed in 3.4), in which the schoolteacher is supported to progressively engage in ecological transitions one after another throughout the career.

To support ecosystem growth, mutually supportive interrelations between microsystems (discussed in 8.3.2) seems to be needed. Yangyu, for instance, once extended his professional network by engaging in city-level work, but retreated and gave up the additional work for childcare at home (in 6.4.3). He had to resolve the conflict between his school and family microsystems before moving forward. The extent to which a schoolteacher's TPD ecosystem might expand appears to be mediated by how its microsystems are interrelated. Whereas dissonance between microsystems might hold back the growth of TPD ecosystem, harmony might be the pre-requisite for further expansion.

The findings also suggest that ecosystem growth was directed by the participants' perceived professional prospects. For example, Shuyang, Caiyu, Beibei and Yaya managed to develop potentiality microsystems (in Chapter 7), which might be most challenging with shifts both in role and setting involved in the ecosystem expansion. Beibei, in particular, overcame many difficulties in the last ten years in order to

develop her translation and IELTS teaching microsystems outside the school system. The prospects of having their professional excellence or potential achieved seemed to give these four participants the impetus to expand their TPD ecosystems over the span of their careers. It is probable that professional prospects have the potential to offer schoolteachers the initial needs for their career-long TPD.

Professional prospects seems to be a 'constructed reality' (Lincoln & Guba, 1985, p. 83) by individual schoolteachers as they experience their TPD ecosystems. The participants appeared to constantly reconstruct their prospects along the changing context, and explored possibilities to work towards their ideal career prospects. Kexin, for instance, tended to accept rather than actively seek TPD opportunities, but it did not mean that she never searched better prospects for her career (in 7.2.2). She extended her school microsystem by transferring to another school that could offer satisfactory pay, although the position was then competitive. It seems that exploration of possibilities for better career prospects might engender efforts to expand the TPD ecosystem and engage in ecological transitions leading to TPD. I will return to this point in Section 8.4.

With empirical findings, the discussion so far has enhanced understanding of SPD that I tentatively conceptualised in Chapter 3. SPD seems to be a well-functioning TPD ecosystem expanding progressively towards the ideal career prospects as perceived by the schoolteacher. In the growing process, constituent microsystems in mutually supportive interrelations work together to provide the pre-requisite for further expansion, and the ideal professional prospects constantly invite the schoolteacher to engage in ecological transitions leading to career-long TPD. But how can such a TPD ecosystem be well-functioning from the schoolteacher's perspective? I move forward to discuss this below in relation to the schoolteacher as a developing person.

8.4 The schoolteacher as a socially developing person

In this section, I focus on the schoolteacher in the career-long process of TPD. In light of the findings, I first take a step further from the earlier discussion about schoolteachers (in Chapter 3) to see the schoolteacher in TPD as a socially developing person in education profession (in 8.4.1). Then I underline the pursuit of ideal professional prospects (in 8.4.2) and the need for role models (in 8.4.3), which seem to characterise the schoolteacher in the process of pursuing career-long TPD over the professional life.

8.4.1 The socially developing person in education profession

As discussed in Chapter 3, I started the project postulating the schoolteacher in TPD being both a professional learner and a developing person. Such an understanding was enriched by the findings. The participants seemed to be developing persons in their own TPD ecosystems, simultaneously playing various social roles and acting as a professional learner. They not only gained TPD in the school microsystem whilst being a schoolteacher, but also learned in the process of serving other social roles, such as the role of a friend or a family member in the friendship and family microsystems (in 6.2). The learner role appeared to be embedded in the participants' performance of different social roles. This is consistent with the observations that schoolteachers are the same individuals developing both in society and education profession, and there are 'unavoidable' (Day et al., 2006, p. 603) interrelationships between their professional and personal identities.

The findings also suggest that the participants did not seem to be professional learners in the first place in their TPD ecosystems. Instead, they were primarily individuals juggling multiple social roles. This is manifested in the participants' primary roles in the five participating microsystems in their professional lives: the school, potentiality, education, friendship, and family microsystems (as discussed in 8.3.2). The first three were where TPD mainly occurred, but the learner role was not

the participants' primary role that grouped activities and interpersonal relations into these microsystems. In the school microsystem, for instance, the participants served primarily their teacher role rather than a learner role. They might, but additionally, be considered as professional learners in such TPD activities as seminars. Even in the education microsystem, the learner role was prominent during the degree programme, but much less afterwards. Besides, not all participants managed to do part-time degree study in their professional lives.

In line with being an individual primarily juggling multiple social roles, the participants seemed to see themselves more as a person developing in society than in education profession. They might leave the profession to better serve their roles as a person in society. Guiyun, for example, made an attempt in the summer holiday of her twelfth year of teaching (in 6.4.2). She tried a job at a company which paid her much higher salaries than her school. She quit, however, as 'there's no way to take care of the family' (Guiyun.W1/29.12.19) working in the company. It is noteworthy that either leaving or remaining in the teaching profession, Guiyun made decisions both for her family responsibilities. Whereas she might give up developing in a profession by changing jobs, she tried to make progress as a developing person in society, which entailed some unchangeable social roles (e.g. family roles) that she must serve well.

The priority the participants gave to their development in society seemed to be manifested by constantly exploring possibilities of better career prospects to ensure 'a satisfying and stimulating personal life' (Joyce, 1980, p. 20). The participants made attempts, for example, to develop professional potential or change schools and even professions. They might do this, out of family reasons as in Guiyun's case, in order to live a satisfying personal life (in 6.4.2), or for a stimulating personal life, as in the case of Yaya, who taught English at the school but never gave up exploring prospects for her potential in the field of biology that excited her (in 7.3.2). The participants seemed to try over the years to integrate the prospects of a satisfying and stimulating personal life into their professional prospects. That is, they needed,

ideally, their prospects in the school microsystem to be aligned with those in other microsystems, hoping the school microsystem to be supportive for their family and other microsystems. Being socially developing persons, they therefore characterised themselves by constant search of ideal professional prospects (henceforth, ideal prospects).

8.4.2 The pursuit of ideal professional prospects

The participants appeared to envisage ideal prospects with respect to their needs. They probably needed prospects that could ensure their wellbeing not just within but beyond the school microsystem. For example, the participants hoped the school leadership to be considerate about their family challenges, such as financial and childcare challenges (in 8.3.2). They appreciated a humanistic collegial atmosphere as well as provision of such TPD opportunities and resources as those following the Covid-19 outbreak (in Chapter 6). These needs resonated with the physiological, safety, and belongingness and love needs identified by Maslow (1943, 1954/1970), but the participants seemed to see them interrelated as wellbeing needs, for example, when considering whether to change professions or not in Guiyun's case (presented in 6.4.2 and discussed in 8.4.1 above). As Dodge, Daly, Huyton, and Sanders (2012) contend, wellbeing is ensured 'when individuals have the psychological, social and physical resources they need to meet a particular psychological, social and/or physical challenge' (p. 230). It follows that a wellbeing-ensuring dimension might be included in the participants' ideal prospects.

Ideal prospects might also involve the needs to be esteemed by others. The findings suggest that the participants wanted to feel valued and respected as a schoolteacher in and out of the school. They placed high importance on the recognition and trust from students and leaders (in 6.2.1). They related, in particular, the meaningfulness of teaching and their sense of achievement to whether their work could be recognised by students. The findings coincided with the esteem needs highlighted early in Maslow's (1943, 1954/1970) analysis and recent studies on schoolteachers'

needs (e.g. Fisher & Royster, 2016; Price & Weatherby, 2018). It is likely that there is an esteem dimension of professional prospects, which the participants hoped to be esteem-building so that they could be held, ideally, in high esteem within and beyond the school microsystem.

The participants might also hope for a self-actualisation dimension of ideal prospects to enable them to actualise their 'ideal-selves' (Higgins, 1987, 1998), i.e. to become who they would like themselves, ideally, to be. The participants' ideal-selves seemed to evolve differently from their past experiences. For example, Shuyang gradually developed her ideal-self of teacher-researcher in her pursuit of teaching excellence, whilst Yaya's aspirations to fulfil her potential in biology could trace back to her primary education (in Chapter 7). Despite their differences, they both consciously developed their professional potential to be a unique schoolteacher ideal as they envisaged, just as Maslow (1943) notes, 'What a man *can* be, he *must* be' (p. 382, emphasis in original). Yaya coincidentally paraphrased this in her remark on her ideal prospects of researching into physical fitness, 'I'm actually returning to who I am' (Yaya.W2/17.02.20). The remark indicates her conscious needs for self-actualisation, although she was probably 'returning' to an updated ideal-self rather than the one in her young age.

Over the years, the participants seemed to be in quest of the meaningfulness of work, teaching excellence and professional potential respectively for the ideal-selves as a schoolteacher, an excellent schoolteacher, and a unique excellent schoolteacher. Besides professional potential noted above, the participants sought meaningfulness of work and professional excellence in their self-actualisation process within the school microsystem. Jiemin, for example, considered teaching worth career-long devotion partly because her students recognised her good work (in 6.2.1), and Caiyu noted her ideal of becoming an excellent teacher as the fundament force driving her to invest in TPD continuously (in 7.4.1).

The participants' ideal-selves in the profession, though different, constantly inspired the internal desire to teach, i.e. 'to educate people, to impart knowledge and values, and to advance a community or a whole nation' (Dörnyei & Ushioda, 2011, p. 161), and thereby to invest further in TPD. A discrepancy between the ideal and the actual real-life self would spur the desire for action towards reducing the gap (Dörnyei & Ushioda, 2021, p. 61). Caiyu, for instance, would tell herself to 'speed up' and take actions when she found herself slacking (in 7.4.1). It appeared that self-actualisation not only served the participants as a way to pursue ideal prospects, but also an engaging process for career-long TPD.

Having wellbeing and esteem needs met, however, seemed to be a prerequisite for the participants' engagement in their career-long TPD through conscious self-actualisation. Dixi, for example, lost all interest in TPD when she was pulled to the lowest point of her career by the school's job decision hurting her self-esteem (in 6.5). She began to recover and pursue TPD consciously three years later when her work was recognised by a mid-level leader. On the other hand, self-actualisation might enhance the likelihood for wellbeing and esteem needs to be satisfied. Shuyang, for example, persisted in actualising her ideal-self of becoming a teacher-researcher and thereby she gained better wellbeing and increased respect in and out of the school as she gradually developed into a full senior teacher and master teacher in the last 26 years (in 7.2.1).

Central to ideal prospects appeared to be the participants' ideal-selves in teaching profession. When in place, the ideal-selves guided the participants' actions of self-actualisation heading towards their ideal prospects, as in Caiyu's case with an excellent schoolteacher ideal-self and Shuyang's case with an ideal-self of unique excellent schoolteacher. When their ideal-selves in the profession became blurred, however, the participants might lose interest in further development, as in Kexin's case at her late career stage (in 7.2.2), or consider leaving the profession, as Guiyun did when trying a company job, i.e. making an attempt to search for ideal prospects in other professions as a socially developing person (in 6.4.2 and 8.4.1). The

findings underline the importance of nourishing individual schoolteachers' ideal-selves in the profession, resonating with research insights in teacher motivation (e.g. Dörnyei & Kubanyiova, 2014; Dörnyei & Ushioda, 2011, 2021).

As the findings suggest, schoolteachers can be best supported to develop their ideal-selves in the profession to guide self-actualisation leading to career-long TPD, given that ideal-self evolution is a 'process of identity formation […] throughout life' (Fabian, 2020, p. 1491). Shuyang, for example, benefited from the support in her TPD ecosystem and managed to constantly evolve her ideal-self and obtain TPD, leaving a relentlessly upward career trajectory in the last 26 years as illustrated by her life map of past experience (in 7.2.1). Shuyang's ideal-self was not ready-made, but took shape and evolved over time as she experienced her dynamic TPD ecosystem. She explored ten years or so to reach her life decision of becoming a teacher-researcher. Her ideal-self continued to evolve along her self-actualisation process. She was inspired by a seminar speaker and added the attribute of producing written works to her ideal-self, for instance. She was then doing her first research project and pondering future development in her new school, to which she transferred two years ago to pursue her ideal prospects.

To sum up, the ideal prospects inviting the participants' sustained investment in career-long TPD seemed to involve the dimensions of wellbeing-ensuring, esteem-building and (self-)actualisation-enabling, which were expected to be in mutually reinforcing interrelations and jointly nourish the participants' ideal-selves in the TPD ecosystem. This may be illustrated by Figure 8.3 below. Ideal-self is cuddled at the centre by the three dynamically interrelated dimensions. The wellbeing-ensuring dimension is basic at the bottom joining (with its arrow pointing to) the esteem-building dimension, and then together acting as the prerequisite for and joining the (self-)actualisation-enabling dimension, to nourish the schoolteacher's ideal-self in teaching profession (e.g. as a teacher, excellent teacher or unique excellent teacher). Self-actualisation is thereby enabled, inviting and sustaining the schoolteacher's engagement in TPD throughout the career.
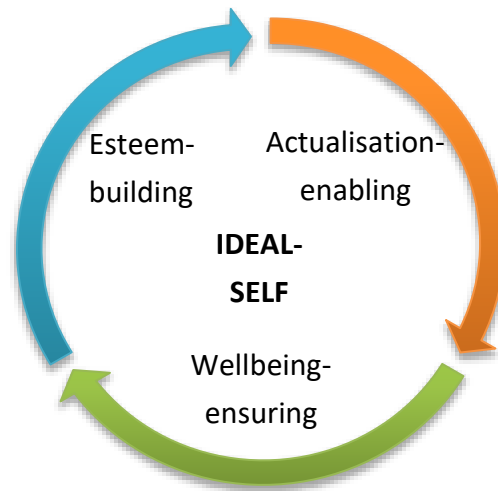
Figure 8.3 Ideal prospects inviting sustained engagement in career-long TPD

8.4.3 The need for role models

Besides the wellbeing, esteem and self-actualisation needs, the company of role models also seemed be a basic need for the participants as socially developing persons in education profession. As previously discussed (in 7.4), in pursuit of their ideal prospects, the participants identified role models among people in their TPD ecosystems regardless of time and place, ranging from new to old acquaintances and from colleagues to experts in other parts of the country. The participants did not limit their role models to the microsystems directly relevant to their TPD (school, potentiality and education microsystems), as in the cases of Kexin noting her friends (in 6.2.5) and Jiemin her mother as role models (in 6.2.6), suggesting the need for role models who might offer them inspiration from a perspective of seeing them not just as developing persons in teaching profession but also in society. It appears that schoolteachers' need for role models might be born out of their socially developing person identity, besides a manifestation of 'universalised human capacity' (Bandura, 2006, 2018) of social modelling, and functioning of the mirror neuron system embedded deep within human brains (Murden, 2020) as the literature suggests.

Whereas schoolteachers are expected to be role models for their students (in 3.3.1), schoolteachers themselves, as the findings indicate, also need role models' company along their self-actualisation process. The participants sought inspiration from their role models to (re)construct ideal prospects, as in Shuyang's case of seeing Ms H, a seminar speaker as her role model who started from the same place as an ordinary schoolteacher and showed her attainable career prospects (in 7.2.1). The participants also seemed to seek role models' company throughout their careers. For example, Caiyu and Haidi identified role models before the start of their teaching careers at the very early stage of constructing their ideal professional prospects (in 7.4). They also kept noticing whoever might be role models in their TPD ecosystems over the years of their professional lives.

Like the top motivational strategy for language learners (set a personal example with your behaviour) (Lamb, 2017), role models' company seemed to be a factor constantly inviting the participants to engage in TPD. Caiyu, for example, sustained her investment in TPD with her role model Ms C in the process, who exemplified professional excellence, inspired her enthusiasm and guided her to progressively engage in more complex professional challenges (in 7.4.1). Ms C gradually formed a dyadic relation with Caiyu and positively influenced Caiyu's TPD as predicted by Bronfenbrenner (1979). Caiyu benefited from the evolutionary process of her dyadic relationship with Ms C, from an observational relationship as Caiyu emulated Ms C to read widely, to a joint activity relationship when Caiyu joined a project team led by Ms C. They gradually developed into a primary dyad with 'more differentiated and enduring feelings toward one another' (Bronfenbrenner, 1979, p. 59). Bronfenbrenner postulates:

> Learning and development are facilitated by the participation of the developing person in progressively more complex patterns of reciprocal activity with someone with whom that person has developed a strong and enduring emotional attachment and when the balance of power gradually shifts in favour of the developing person.
>
> (Bronfenbrenner, 1979, p. 60)

The dyadic relationship between Caiyu and Ms C seemed to exhibit the properties of reciprocity, progressively increasing complexity and mutuality of positive feelings as Bronfenbrenner (1979) highlights above. Despite that a gradual shift in balance of power might be absent, the relationship contributed to Caiyu's steady TPD progress and her becoming of a promising young schoolteacher in the city within six years of teaching. The findings suggest that schoolteachers and their role models might not necessarily be 'developmental dyads' (Bronfenbrenner, 1979, p. 60), i.e. in a dyadic relationship with all the properties included. A relationship evolving towards a developmental dyad also benefits the schoolteacher and his/her career-long TPD.

To sum up, the findings indicate that schoolteachers need to be accompanied by role models to actualise their ideal-selves as socially developing persons in teaching profession, and a dyadic relationship evolving into a developmental dyad with the role model is particularly beneficial to the schoolteacher's career-long TPD.

8.5 A conceptual model of SPD

In this section I synthesise the findings and insights of this study to reconceptualise Sustainable Professional Development (SPD). I first reflect on the person-oriented ecological sustainable perspective that has been enriched by the empirical findings, and then consider engaging factors and processes involved in career-long Teacher Professional Development (TPD) leading to a conceptual model of SPD, followed by a discussion of what the model can offer as a coherent framework to understand TPD, especially schoolteachers' career-long TPD and contextual support.

8.5.1 A person-oriented ecological sustainable perspective

The discussion of the empirical findings so far has taken understandings further from the literature. In Chapter 3, I reviewed the literature and identified a person-oriented ecological sustainable perspective, a unified whole of perspective with a

person-oriented, an ecological and a sustainable perspective integrated to understand TPD. Basically, a person-oriented ecological sustainable perspective is a point of view from the schoolteacher as a developing person and professional learner embedded in the centre of his/her dynamic ecosystem with all elements interrelated, wondering about things external and relevant to him/her and hoping to have his/her current needs met without compromising future developmental potential. The perspective has now been enriched by the findings, particularly with respect to the key aspects involved in TPD as briefly summarised below:

- The schoolteacher is not a mere professional learner, but a socially developing person in education profession with his/her own needs to meet, from wellbeing, esteem and self-actualisation needs to the need for the company of role models, in his/her pursuit of ideal professional prospects for 'a satisfying and stimulating personal life' (Joyce, 1980, p. 20) (as discussed in 8.3 and mainly in 8.4).

- The TPD process is, essentially, a process of teacher-context interaction leading to the teacher's change as a socially developing person in teaching profession over time (in Chapter 3 and 8.4). It is a career-long process manifested and influenced by a range of activities, formal or informal, social or individual, interrelated with other elements in the teacher's TPD ecosystem (in 8.2, 8.3).

- Context is everything external and relevant to the schoolteacher, interconnected as a dynamic ecosystem unique to the schoolteacher in his/her TPD process (Bronfenbrenner, 1979, 2005; van Lier, 2004, 2010; Wedell & Malderez, 2013) as discussed in Chapter 3. The findings indicate that in a TPD activity, context is manifested by tools and target context (either immediate or imagined), i.e. the primary variables the schoolteacher (also a primary variable) directly interacts with, as well as the contextual variables (culture, interpersonal relations and roles) that influence the activity process behind the scenes (cf. Engeström, 2015; Vygotsky, 1978) (in 8.2). Meanwhile, context is manifested in the career-long

TPD process by the unique, dynamic TPD ecosystem cumulatively expanding towards the schoolteacher's ideal professional prospects (in 8.3).

- Contextual support (in short, support) is the influence from context an individual schoolteacher experiences and perceives as positive on him/her as a socially developing person in teaching profession and his/her TPD. (in 3.5, 8.3).

Building on the literature, I conceptualised Sustainable Professional Development (SPD), tentatively, in Chapter 3. In the proceeding sections, I move forward to synthesise the findings and reconceptualise SPD from an enriched person-oriented ecological sustainable perspective.

8.5.2 Engaging factors and processes involved, and SPD aspects

The discussion of findings has underlined a number of factors likely to engage schoolteachers in further TPD activities leading to sustained professional growth throughout their careers. The engaging factors are as follows:

- **The interrelations between TPD activities** (8.2.2 through 8.2.4): The derivational, evolutionary and contextual relationships were found to possess features engaging the participants in TPD activities from one to another. Such features included interaction between variables of the central activity, progressively increasing complexity across activities, and shared contextual characteristics positively meaningful for the schoolteacher.

- **The expansion of TPD ecosystem** (in 8.3.3): A cumulatively growing TPD ecosystem seemed to provide opportunities for shifts in role or setting, or both, i.e. 'ecological transitions' (Bronfenbrenner, 1979) to engage the participants in professional challenges that invited further investment in TPD.

- **The pursuit of ideal professional prospects** (in 8.4.2): Self-actualisation in the pursuit of ideal prospects appeared to be an inviting process for the participants' investment in career-long TPD.

- **The company of role models** (in 8.4.3): Role models were found to accompany and constantly invite the participants to engage in further TPD activities. The process of evolving into 'developmental dyads' (Bronfenbrenner, 1979) with role models, in particular, helped sustain and facilitate the participants' TPD over their professional lives.

The above engaging factors foreground a number of processes over the course of a schoolteacher's career. Respectively, the interrelations between TPD activities, the expansion of TPD ecosystem and the company of role models involve the processes of (career-long) TPD, ecosystem expansion and evolution of dyadic relationships with role models, and the pursuit of ideal prospects concerns the processes of self-actualisation and ideal prospects evolution. I summarise the engaging factors and their related processes in Table 8.2 below.

Table 8.2 Engaging factors and processes involved, and SPD aspects

Factor	Process involved	SPD aspect
interrelations between TPD activities	(career-long) TPD	structural
expansion of TPD ecosystem	ecosystem expansion	ecological
pursuit of ideal prospects	self-actualisation, ideal prospects evolution	teacher
company of role models	evolution of dyadic relationships	ecological

As previously discussed (in 3.4, 8.2), teacher-context interaction is the primary engine for TPD to occur. Whereas a single activity with teacher-context interaction enacts TPD, activities structurally interrelated offer a series of opportunities for the schoolteacher to interact with context and sustain TPD across activities, potentially throughout the career. In other words, there is a structural mechanism built within and between activities to ensure the occurrence of a distinct type of TPD, i.e. ongoing, sustained professional growth, which has been advocated in the literature since the early 1980s when TPD was acknowledged as a process (e.g. Williams, 1982) and teachers' longer-term concerns were underlined (e.g. Freeman, 1982) (in Chapter 3). It follows that there are two types of TPD, one with the mechanism triggered, and the other without. I call the former type SPD and the latter non-SPD.

SPD as a distinct type of TPD emerging from the analysis surprised me as I hesitated before to acknowledge it. The rationale for my hesitation was twofold. Approaching the notion of sustainable professional development from TPD types, one might focus only on TPD sustainability and come to a narrow interpretation of SPD without the essence of harmony and balance (in 3.4.2), such as whether the outcomes of a TPD activity could be maintained over a period of time (e.g. Mak & Pun, 2015; Sandholtz & Ringstaff, 2016). Besides, to my knowledge then, there was no empirical evidence to prove SPD as a type of TPD in its own right. The term of TPD seemed to suffice given TPD including, rather than excluding, the potential for a sustainable developmental process.

SPD as a distinct type of TPD suggests a structural SPD aspect that concerns SPD at the activity level, i.e. whether TPD activities in the schoolteacher's particular TPD ecosystem are interrelated with engaging features (e.g. interaction between central activity variables, progressively increasing complexity across activities, and positively meaningful contextual characteristics) (in 8.2), and whether the structural mechanism built within and between activities is triggered to engender sustained professional growth over time.

The processes of career-long TPD, self-actualisation, ecosystem expansion, and evolution of ideal prospects and dyadic relationships with role models (in Table 8.2) are likely to overlap and interweave when TPD is sustained throughout the career, as in the case of Shuyang, who developed and actualised her ideal-self of becoming a teacher-researcher in her 26 years of teaching (in 7.2.1). Over the years, Shuyang was constantly invited to engage in her career-long TPD process by the research projects (i.e. evolutionarily interrelated activities) that she situated in her self-actualisation process. As she proceeded along her interwoven self-actualisation and career-long TPD processes, her TPD ecosystem expanded gradually, and her ideal prospects and dyadic relationships with role models evolved accordingly,

To enable career-long TPD, as Shuyang's story illustrates, the processes involved need to be consistent with each other. Above all is the consistency in direction, i.e. whether all the processes are heading towards the schoolteacher's ideal prospects. When Guiyun considered a company job, for instance, the processes of her self-actualisation and ideal prospects evolution were about to divert from their joint direction with the other processes leading to ideal prospects in teaching profession (in 6.4.2 and 8.4). Had Guiyun not decided to remain in the profession, her career-long TPD would no longer be sustained. Another necessary consistency is that in pace, i.e. whether the processes are consistently paced by the schoolteacher. For example, when leaving his city-level work for family responsibilities, Yangyu self-paced his process of ecosystem expansion and remained enthusiastic about career-long TPD despite the retreat (in 6.4.3). In contrast, with little interest in writing, Kexin, did not write a second paper after the one mandatory for her promotion application (in 7.2.2). The push on her TPD process through writing imposed by the authority failed to support her to sustain investment in writing or career-long TPD.

The consistency in direction and pace both point to the schoolteacher as an SPD aspect concerning the schoolteacher's characteristics as a socially developing person in education profession. In other words, the teacher aspect of SPD focuses on how individual schoolteachers' ideal prospects can best direct their investment in career-

long TPD through self-actualisation, and how they can best pace themselves with all the processes involved consistently heading towards their ideal prospects to realise career-long TPD in their particular TPD ecosystems with respect to their unique characteristics (in 8.3 and 8.4).

The ecological SPD aspect is another aspect of SPD underlined by the findings, in particular, the engaging factors of ecosystem expansion and role models' company as well as their related processes. The ecological SPD aspect concerns support in the TPD ecosystem for individual schoolteachers as socially developing persons. In other words, the ecological aspect deals with whether contextual support is available and appropriately provided in the ecosystem (e.g. provision of TPD activities not only having the structural mechanism built within and between activities triggered, but also consistent with the schoolteacher's developmental pace along the processes involved in career-long TPD (in 8.2)), and whether the prerequisite for the teacher's engagement in career-long TPD is in place, such as whether the ecosystem functions in a way permitting and supporting, rather than inhibiting, the operation of engaging factors for career-long TPD (in Table 8.2), and evolves towards the TPD ecosystem in the schoolteacher's ideal prospects he/she constantly reconstructs (in 8.3, 8.4).

The TPD ecosystem in individual schoolteachers' ideal prospects may be taken as SPD ecosystem, which is consistent with my earlier thinking about SPD. I first saw SPD roughly as the best scenario for schoolteachers' professional development before commencing this doctoral project (Zhang, 2017), and then I built on further literature and conceptualised SPD, tentatively, as a well-functioning TPD ecosystem that could best enable sustained TPD throughout the career (in Chapter 3). With the empirical findings, it has now become clear that:

- The TPD (Teacher Professional Development) ecosystem is, essentially, a pattern of social roles, interpersonal relations, activities and microsystems, and the interrelations within and between these elements, experienced and perceived

by the schoolteacher as a socially developing person in education profession, who is embedded in the centre of and in mutually influential relations with the pattern (in Chapter 3 and Sections 8.3 and 8.4).

- The SPD (Sustainable Professional Development) ecosystem is, essentially, the TPD ecosystem in a schoolteacher's ideal professional prospects as he/she constantly reconstructs as a socially developing person in education profession (in 3.3, 8.3 and 8.4). In general, it is a wellbeing-ensuring, esteem-building and (self)actualisation-enabling TPD ecosystem, with all elements (especially the microsystems) mutually reinforcing and jointly supporting the schoolteacher to actualise his/her ideal-self in education profession, and thereby realise his/her career-long TPD and 'a satisfying and stimulating personal life' (Joyce, 1980, p. 20) as a socially developing person in the profession. It is also a cumulatively expanding TPD ecosystem consistent with the schoolteacher's self-actualisation process, evolving into the schoolteacher's further ideal prospects he/she constantly reconstructs over the course of his/her career.

The findings as analysed above have suggested three SPD aspects, the teacher, the ecological and the structural aspect, which respectively correspond with the three key TPD aspects of teacher, context and TPD process. The three SPD aspects are interlocked to make a unified whole of SPD. They are more inseparable than clear-cut. For instance, though categorised in the structural aspect, the contextual relationship between TPD activities concerns shared contextual characteristics (in 8.2), which are of interest for the ecological aspect. Similarly, ecosystem expansion and pursuit of ideal prospects (in 8.3, 8.4) are considered respectively in the ecological and the teacher aspect, but they are realised through TPD activities with which the structural aspect is concerned. Given that TPD is a process of teacher change manifested and influenced by activities over the professional life (in 3.2), the structural aspect concerning the career-long TPD process integrates efforts from the teacher and ecological aspects to make career-long TPD likely by serving as the interface of the two SPD aspects.

Based on the above discussion, SPD may be depicted by Figure 8.4 below. In the figure, the horizontal axis indicates the time course of career, and the vertical axis the extent to which the TPD ecosystem expands. As the schoolteacher's unfolds his/her career (from left to right along the time axis), TPD occurs through teacher-context interaction along the career-long TPD process (indicated by the solid arrowed line from the bottom-left corner to top right). Intertwined with the career-long TPD process are the processes of self-actualisation and role models' company, as illustrated by the two dotted arrowed lines next to the solid one of TPD process. Together the three arrowed lines sharing a dotted arrow head indicate the focused area of the structural SPD aspect, i.e. the interface between teacher and ecological aspects (respectively, the area above and below the arrowed lines). The interwoven processes of self-actualisation, career-long TPD and company of role models are invited by the ideal prospects in the teacher aspect and supported by the ecological aspect to move upwards over the course of career. Accordingly, the TPD ecosystem (green-shaded area) expands (upwards to top right) and evolves cumulatively, and the ideal prospects also change with some earlier ideal prospects realised ('included' in the figure) in current TPD ecosystem.
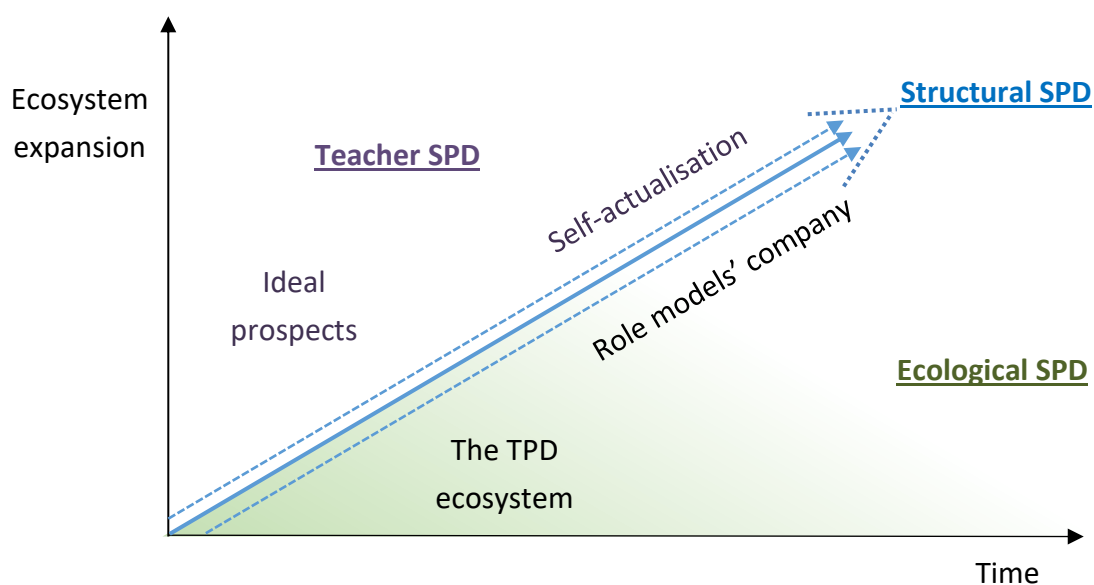

Figure 8.4 A conceptual model of SPD

The discussion so far has generated a conceptual model of SPD as depicted in Figure 8.4 above. But what does the model tell us and how can we use it? I consider these questions in the section that follows.

8.5.3 SPD as a coherent framework for career-long TPD and support

In this section, I consider the conceptual model of SPD with respect to how career-long TPD may be realised by individual schoolteachers and how they may be best supported to do so, and then close the section with a discussion of the SPD model as a coherent framework for career-long TPD and its contextual support.

The SPD model offers insights into how individual schoolteachers may realise sustained professional growth throughout their careers. As discussed in Chapter 3, attention has long been given in the literature to TPD as a process (e.g. Williams, 1982) and a career-long process in general TPD research (e.g. Day, 1999; Day & Sachs, 2004; Padwad & Dixit, 2011) and language teacher education (Hayes, 2019; Mann, 2005; Richards & Farrell, 2005). But as far I know, how career-long TPD may be realised by schoolteachers was still unclear before this study. There have been some empirical studies in relation to the notion of sustainable professional development but without an explicit definition (e.g. Mak & Pun, 2015; Sandholtz & Ringstaff, 2016). The SPD model as outlined above fills the gap by an attempt to pin down the concept of SPD, which illumines how career-long TPD may be achieved:

- Individual schoolteachers realise career-long TPD in the process of self-actualisation guided by their ideal professional prospects to seek 'a satisfying and stimulating personal life' (Joyce, 1980, p. 20) as a socially developing person in education profession. In the process, the schoolteacher engages in a series of activities with the structural mechanism built within and between activities triggered to engender sustained professional growth, and emulates role models identified in his/her TPD ecosystem regardless time and place, with the dyadic relationships evolving towards 'developmental dyads' (Bronfenbrenner,

1979). Consistent with his/her characteristics as a socially developing person, the schoolteacher's TPD ecosystem expands and ideal prospects evolve over time, leading him/her to engage constantly in further TPD activities throughout his/her career.

Caiyu and Shuyang may serve as examples (in 7.2.1 and 7.4.1). When interviewed, Caiyu and Shuyang were respectively in their 6th and 26th year of teaching, but both articulated sustained professional growth throughout their careers, as illustrated by the relentlessly upward career trajectories they drew on their life maps. As socially developing persons, they pursued ideal prospects. After her MA, Caiyu crossed half of the country to teach in China's most developed province where Z City is located, and Shuyang transferred herself to the city's leading school from an ordinary one in her 9th year of teaching. They both had ideal-selves in the profession, an excellent teacher for Caiyu and a teacher-researcher for Shuyang. Guided by ideal-selves, Caiyu and Shuyang engaged in a series of activities with the structural mechanism built within and between activities triggered, such as research projects (in 5.4, 8.2, 8.5.2). Their career-long TPD thereby intertwined with self-actualisation process. In the interviews, they both acknowledged their role models. Caiyu particularly noted her relationship with Ms C evolving to be a developmental dyad (Bronfenbrenner, 1979) (in 7.4.1 and 8.4.3). Over time, their TPD ecosystems expanded. They met challenges but gained TPD in the process, especially Shuyang, as illustrated by her experience after her school transfer (in 7.2.1 and 8.3.3). Shuyang also articulated evolution of her ideal prospects, from how her teacher-researcher ideal-self formed, to her ideal prospects before retirement to 'strive hard to learn about theories and enhance theoretical understanding' (Shuyang, MF/17.02.20) (in 7.2.1 and 8.4.2).

The conceptual model of SPD also provides an answer to the question: How might schoolteachers be best supported to sustain TPD throughout their careers in their particular TPD ecosystems? As discussed in Chapter 3, studies on schoolteachers' TPD ecosystems existed before this one, but mainly researched into 'context without development' (Bronfenbrenner, 1986, p. 288) and focused only on the

school and policy-making microsystems with the whole TPD ecosystem unattended (e.g. Cross & Hong, 2012; Fyall et al., 2020; Rose, 2017). Little attention was given to SPD support before this study. There were a few studies examining particular tools as intended support, but not on why given tools were considered as support or constraints by schoolteachers (e.g. Ciampa & Gallagher, 2015; Luehmann, 2008). As the above discussion has shown, the SPD model illumines how individual schoolteachers may realise career-long TPD in their particular TPD ecosystems. It follows that the model offers a blueprint for SPD support, i.e. contextual influence the schoolteacher experiences and perceives as positive on him/her and career-long professional growth as a socially developing person in education profession (in 3.5). Simply reframing the three interrelated aspects (teacher, ecological and structural) in the SPD model can lead to three aspects of SPD support as follows:

- **Teacher SPD support**: Support for the schoolteacher to develop himself/herself with respect to his/her unique characteristics as a socially developing person in education profession, specifically, to best direct his/her investment in career-long TPD through self-actualisation in the pursuit of ideal prospects, and best pace himself/herself with all the processes involved consistently towards his/her ideal prospects to realise career-long TPD in his/her particular TPD ecosystem (in 8.3 and 8.4).

- **Ecological SPD support:** Support for the schoolteacher at the ecosystem level by transforming his/her current TPD ecosystem into an SPD ecosystem (i.e. the TPD ecosystem in his/her ideal prospects) to provide the prerequisite for his/her engagement in career-long TPD, and ensuring that support is available and appropriately provided in the TPD ecosystem, especially whether the structural mechanism built within and between TPD activities is triggered to enable career-long TPD, and whether the processes involved are consistent with the schoolteacher's developmental pace and the direction as directed by his/her ideal prospects (in 8.3, 8.4).

- **Structural SPD support:** Support for the schoolteacher at the activity level by providing TPD activities interrelated with engaging features and ensuring that the structural mechanism built within and between TPD activities is triggered to engender sustained professional growth, i.e. SPD type of TPD (in 8.2).

The above three aspects of SPD support should not be taken separately but as a unified whole of SPD support, given their corresponding SPD aspects being inseparable as previously discussed (in 8.5.2). In other words, to best enable career-long TPD, the three aspects of SPD support should not only be all in place but also considered together, so that individual schoolteachers can personally experience and perceive, as socially developing persons in education profession, that they are being well supported from a person-oriented ecological sustainable perspective in their TPD ecosystems at whichever point of time over the course of their careers.

A further examination against SPD support as outlined above indicated that existing support in the participants' TPD ecosystems was distant from SPD support. I focus below on Beibei's and Kexin's cases but relate to other participants' experiences when appropriate. Beibei and Kexin were respectively in their 8th and 26th year of teaching when interviewed (in 7.3.1 and 7.2.2). Teacher SPD support appeared to be missing in their school microsystems. Beibei did acknowledge support for her ideal-self of becoming a person with her language potential fulfilled, but from her senior high school teacher of English. Her ideal-self further evolved mainly through her translator experience before teaching and later, interaction with friends as she turned to external support for self-actualisation. Unlike Beibei, Kexin experienced support in her school microsystem (especially in her first five years of teaching), but did not manage by herself, nor was she supported, to develop an ideal-self in the profession consistent with her unique characteristics (e.g. little interest in writing). Looking ahead, Kexin expected nothing more than retirement, in contrast to Shuyang, who started teaching in the same year but constantly invested in actualising her teacher-researcher ideal-self and envisaged her future TPD enthusiastically (in 7.2.1). The findings underline teacher SPD support, especially for schoolteachers like Kexin,

who tended to accept rather than actively seek TPD opportunities, and Beibei, whose ideal-self was not recognised in her school microsystem as relevant to her teaching.

In the area of ecological SPD support, Beibei highlighted her financial concerns and her difficulties in obtaining TPD through self-actualisation without support from her school microsystem. In other words, she did not find her school microsystem as wellbeing-ensuring, esteem-building, or (self-)actualisation-enabling (in 8.4.2). Different from Beibei, Kexin found her pay satisfactory and herself being esteemed at her school. She was offered, either mandatory or through a selection process, to take part in many TPD activities, but her interaction as a primary variable with other variables did not seem to go across activities, i.e. the structural mechanism between activities was not triggered, though it did sometimes within one activity, as in her application of round-robin story-telling to teaching an open class (in 8.2). Moreover, in-service training intended to support her career-long TPD process seemed to be inconsistent with her unique characteristics, such as her developmental pace as discussed above (in 8.5.2).

Unlike Beibei, Caiyu at a similar age (in her 6th year of teaching) actualised her ideal self of becoming an excellent teacher in her school microsystem (in 7.4.1). She was recognised as a promising young teacher in and out of her school as she constantly achieved TPD. Among different support, Caiyu particularly highlighted the support from her role models, especially the evolving relationship with and timely support from Ms C. In contrast, Beibei and Kexin did not mention any role models in their school microsystems, although Kexin acknowledged role models in her friendship microsystem (in 6.2.5). Had Beibei and Kexin been accompanied by role models as a source of timely support, Beibei might find her school microsystem more positive, and Kexin might find a way out for her career-long TPD consistent with her unique characteristics and be more enthusiastic about her future TPD. The findings indicate that role models' company and timely support are essential in schoolteachers' career-long TPD process, as previously discussed in Chapter 7 and Section 8.4. It follows that ecological SPD support cannot be ignored, if schoolteachers are expected to

realise career-long TPD, or 'lifelong learning' as advocated by education authorities (in Chapter 2).

With respect to structural SPD support, Beibei did not acknowledge any activities in her school microsystem as supportive, and for Kexin, as noted above, the structural mechanism was not at play across the TPD activities she was involved in. Structural SPD support was missing in Beibei's and Kexin's school microsystems, although the other participants acknowledged a number of activities as supportive (in Chapter 5), including those found interrelated with engaging features, such as research projects for Caiyu (in 8.2). The findings indicate that the structural mechanism within and between activities may fail to be triggered for some schoolteachers, despite that the mechanism of the same activity type may work for some others, or the activities are designed with engaging features, in other words, taken to be consistent with research insights (e.g. Bates & Morgan, 2018; Darling-Hammond, Hyler, & Gardner, 2017; Farrell, 2019; Richards & Farrell, 2005). The findings reinforce the call for a person-oriented ecological sustainable perspective on supporting schoolteachers, especially their career-long TPD, i.e. taking teacher, ecological and structural SPD support as a unified whole of SPD support as noted earlier above.

As illustrated above, the SPD model is useful to understand contextual support for individual schoolteachers in their particular TPD ecosystems. The discussion also shows that contextual support has been integrated into the SPD model given that the aspects of SPD support are a simple reframing of those in the SPD model (i.e. the aspects overlap), suggesting that SPD support does not constitute a stand-alone aspect in SPD. That is, SPD support is implicit in SPD as set out above (in 8.5.2). Figure 8.5 below illustrates this. Essentially, SPD is a growing '*organic* framework' (Hanks, 2017, p. 82, italics in original), in which the schoolteacher is like a seedling with his/her own ideal-self, being ecologically and structurally nourished to thrive ideally and uniquely as he/she envisages in his/her ideal prospects.
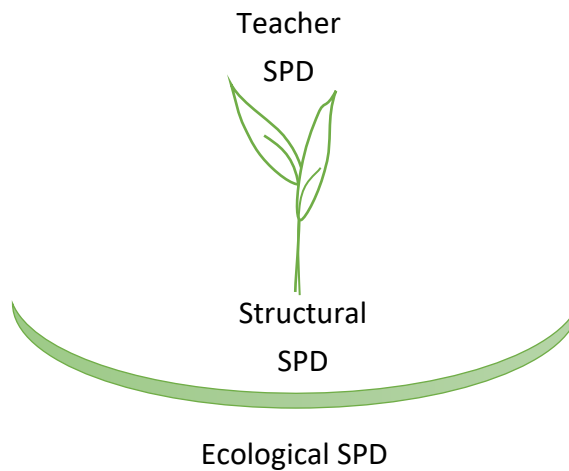
Teacher
SPD

Structural
SPD

Ecological SPD

Figure 8.5 The schoolteacher being nourished like a seedling in SPD

Synthesising the findings and insights of this case study, Sustainable Professional Development (SPD) is now reconceptualised, essentially, as follows:

- Supported by the joint pattern of all elements mutually supportive in the TPD ecosystem that expands and evolves progressively towards his/her ideal prospects, the schoolteacher is enabled to sustain professional development over the course of career through his/her interaction with context in a series of structurally interrelated activities, situated in his/her self-actualisation process paced by himself/herself with respect to his/her unique characteristics as a socially developing person in education profession.

From a person-oriented ecological sustainable perspective, SPD reconceptualised above integrates considerations of the key aspects involved in schoolteachers' TPD: the schoolteacher, career-long TPD process, TPD ecosystem and contextual support. It follows that SPD represents 'a comprehensive model' (Joyce, 1980) to coherently

understand TPD, and more importantly, career-long TPD and its support (as noted earlier in Chapter 3).

8.6 Summary

In summary, within the field of Teacher Professional Development (TPD), there is a question of how schoolteachers might be best supported to sustain TPD throughout their careers, to which the answer has been in quest of since the start of this thesis. In this chapter, I have discussed the question, moving the discussion from the interrelations within and between TPD activities, to the cumulatively growing TPD ecosystem over time and the schoolteacher as a socially developing person in education profession, and at the end to reconceptualising Sustainable Professional Development (SPD). SPD is now not only my answer to the above question this thesis has inquired into, but also a coherent framework to understand TPD in general as well as career-long TPD and its contextual support.

Chapter 9
Conclusions

9.1 Reflections

The writing-up of this thesis took me to reflect on my doctoral journey in quest of how schoolteachers might be best supported to sustain Teacher Professional Development (TPD) throughout their careers. I started with a 'naive' idea of taking into consideration a schoolteacher's perspective in TPD research and practice. The idea led me into this study as outlined in Chapters 1 and 2. I noticed from my early school teaching and mentoring experiences the problems with top-down mandatory TPD in the Chinese context. Since the start of my PhD study, I further analysed the problems and integrated the questions I previously wondered about into the above question as the focus of this doctoral research.

The critical reading and thinking during the many times of drafting and redrafting Chapter 3 of literature review enabled me to build on the literature to arrive at my TPD definition and a person-oriented ecological sustainable perspective on schoolteachers' professional development. From that perspective, I conceptualised, tentatively, Sustainable Professional Development (SPD) and SPD support. The conceptualisations, however, related to more unanswered questions in the literature. A critical examination of previous empirical studies also brought to light unattended problems. As a whole, the questions and problems offered me the rationale for the study, and helped specify my research purpose, from a general question (how to best support schoolteachers to sustain professional development throughout their careers) to focusing on SPD support with the hope to enhance understanding of SPD *per se*.

I evolved my research questions as I had my research purpose clarified and became consciously aware of my philosophical stance as a researcher, as noted in Chapter 4. To address my research questions, I made methodological decisions on my research design consistent with my paradigmatic assumptions. Then I collected and analysed

my data, making adjustments in response to arising challenges in the processes as described in Chapter 4. My data collection and initial data analysis intertwined, and the writing-up was also a continuation of analysis. (Re)drafting Chapters 5 through 7 to present the findings, I examined emerging forms of professional support and roles of contextual elements, and followed individual participants' professional highs and lows with respect to support that helped sustain TPD throughout their careers. As I did so, I noted down various points of theoretical implications that invited in-depth, coherent discussion, which I later did in Chapter 8.

As discussed in Chapter 8, I found that when triggered, a structural mechanism built within and between activities would engage schoolteachers in TPD activities from one to another, enabling professional development to be sustained. I hesitated before, but was convinced by the findings to acknowledge a distinct type of TPD, i.e. sustained professional growth structurally enabled by the activity mechanism, with which the structural aspect of SPD was concerned. The findings also enriched understanding of the ecological SPD aspect. Besides mutually supportive relations between microsystems I noticed earlier (in Chapter 3), SPD was found to involve the operation of engaging factors, particularly the cumulative ecosystem expansion and the company of role models evolving into developmental dyadic relationships. Also emerging from the analysis was the teacher aspect as suggested by the engaging factor of the pursuit of ideal prospects through self-actualisation. SPD turned out to consist of three inseparable aspects, the teacher, ecological and structural aspects, which were interwoven into a unified whole of SPD, enabling professional growth to be sustained over the course of career.

As expected, the case study offered empirical findings to enhance understanding of SPD support and SPD *per se*. Although I had anticipated SPD to integrate into 'a comprehensive model' (Joyce, 1980) the key aspects involved in schoolteachers' professional development, I was taken by surprise that SPD and SPD support were much more interlocked than expected. SPD was found to be a coherent framework not only for teacher professional development in general, but also for career-long

development and contextual support. SPD support was part of rather than an adjunct to SPD, and the process I came to fully understand this was long and cumulative. I did not, for instance, start with the intention to depict SPD and SPD support in one diagram as Figure 8.4, but I failed after many attempts to illustrate SPD and SPD support separately. I was then convinced that it was impossible and actually wrong to draw a line between the two.

This thesis has so far examined the concept of sustainable professional development and shown that SPD is indeed necessary to understand and support schoolteachers' career-long professional growth. Before commencing my doctoral study, I sensed from a teacher's perspective the need for Sustainable Professional Development in order to best support schoolteachers (Zhang, 2017). As my doctoral path rolled out, I built on the literature to tentatively conceptualise SPD and describe it in technical words mainly informed by Bronfenbrenner (1979, 2005). With the empirical data and findings from the case study, I then managed to understand that SPD not only involved an ecological aspect that I had focused on earlier (in Chapter 3), but also a structural aspect that I previously hesitated to acknowledge as well as a teacher aspect emerging from the discussion of empirical findings.

9.2 Contributions of the study

Looking back at the process of completing this doctoral work, I reflect on the contribution I have made to the field. As far as I am aware, this study is a first attempt to pin down SPD in the field (as discussed in Chapter 3). This thesis is also made distinctive by its exploration of contextual support for schoolteachers' career-long professional growth, and a coherent framework to understand teacher professional development. To my knowledge, this is the only study from a person-oriented ecological sustainable perspective to inquire in depth into schoolteachers' experiences and perceptions with respect to contextual support over the course of their careers.

This research has revealed the following that is not known before:

- A person-oriented ecological sustainable perspective is necessary to understand teacher professional development. It is a unified whole, rather than a simple combination, of a person-oriented, an ecological and a sustainable perspective.

- SPD is not a vague notion about sustainability of the outcome of a particular TPD activity, but a coherent framework to understand teacher professional development from a person-oriented ecological sustainable perspective, especially schoolteachers' career-long professional growth and contextual support. SPD makes transparent how individual schoolteachers are able to and may be best enabled to sustain professional growth throughout their careers in their particular developmental ecosystems. With respect to the key aspects involved in schoolteachers' professional development, SPD acknowledges that:

    ◦ the schoolteacher is not a mere professional learner, but a socially developing person in education profession with his/her own needs to meet for the pursuit of ideal career prospects, from wellbeing, esteem and self-actualisation needs to the need for the company of role models;

    ◦ sustained professional growth (i.e. SPD type of professional development) occurs when the structural mechanism built within and between TPD activities is triggered;

    ◦ the ecosystem which best enables career-long professional development is essentially, a dynamic, joint pattern of all elements mutually supportive expanding and evolving progressively towards the schoolteacher's ideal professional prospects as a socially developing person in education profession; and

- the contextual support which best enables career-long professional growth (i.e. SPD support) is influence from context the schoolteacher experiences and perceives as positive on him/her and his/her career-long professional growth as a socially developing person.

- SPD is a unified whole of three interrelated aspects, respectively:

  - the teacher aspect concerns the schoolteacher's characteristics as a socially developing person, focusing on how his/her ideal prospects can best direct investment in career-long professional growth through self-actualisation, and how to best pace himself/herself with all the processes involved heading consistently towards his/her ideal prospects;

  - the ecological aspect concerns supporting the schoolteacher as a socially developing person at the ecosystem level, focusing on whether contextual support is available and appropriately provided and whether the prerequisite for the teacher's engagement in career-long TPD is in place; and

  - the structural aspect concerns supporting the schoolteacher at the activity level, focusing on whether professional development activities in the ecosystem are interrelated with engaging features and whether the structural mechanism built within and between activities is triggered.

- SPD support is part of rather than an adjunct to SPD. Figuratively, SPD is what ecologically and structurally nourishes the schoolteacher like a seedling to thrive ideally and uniquely as he/she sees in his/her ideal career prospects.

Overall, this research has offered findings and insights to enhance understanding of schoolteachers' professional development, in particular, SPD and SPD support. Put

another way, this study contributes its answers to two interrelated questions: how individual schoolteachers may realise career-long professional development in their particular contexts, and how they may be best supported to do so.

9.3 Implications for TPD practice

The contributions of this study have clear implications for future practice in teacher professional development. In this section, I first discuss the implications in general, and then consider how the findings of this study might be operationalised in the Chinese school context.

9.3.1 General practical implications

This study has shown that SPD is needed in order to best enable schoolteachers' sustained professional growth throughout their careers. The conceptual model of SPD set out in this thesis provides a coherent framework, based on which schoolteachers can well navigate their professional development over the course of their careers, and support providers, particularly policy-makers and teacher trainers, can manage their work best and make it more accepted as support by schoolteachers as intended rather than constraints.

Above all, this study carries the implication that there is a need for a conceptual shift towards SPD, given that the SPD model implies a departure from the understanding with which stakeholders in the field are currently familiar. A conceptual shift may start by referring to schoolteachers as 'socially developing persons' rather than mere 'teacher-learners', and using the term 'Sustainable Professional Development' rather than just 'lifelong learning', and the acronym 'SPD' rather than 'CPD' (Continuing /Continuous Professional Development). A further step is to adopt a person-oriented ecological sustainable perspective in practice. Before this thesis, a person-oriented, an ecological or a sustainable perspective may sound familiar respectively, but the person-oriented ecological sustainable perspective advanced here is not a simple

combination of them. Instead, it is a unified whole as a perspective to understand teacher professional development coherently. Further in order is to know SPD better. Although this study is among the very first attempts, if any others, to pin down SPD, it is built on previous literature that can help better understand SPD and make the conceptual shift easier.

Besides a conceptual shift towards SPD, this study has more specific implications for schoolteachers and support providers. Schoolteachers can take the SPD model set out in thesis as a roadmap to navigate their own professional development, as the model has outlined how individual schoolteachers may sustain professional growth throughout their careers. In particular, for schoolteachers who want to make their professional development activities inviting and constantly producing professional growth over the course of their careers. the following actions are worth taking:

- **Develop an ideal-self in the profession and go for it.** An ideal-self is what a schoolteacher would like himself/herself, ideally, to be (Higgins, 1987, 1998). A schoolteacher can form an ideal-self in teaching profession based on what he/she is interested or considers to be likely to excel in. As Lamb and Wyatt (2019) note, 'the more vivid, accessible and realistic the vision, the more likely it is to regulate people's behaviour' (p. 527), i.e. the more likely to make professional development activities engaging as well as productive over time.

- **Engage in interrelated activities in the area of the ideal-self.** A good starting point may be a question or problem the schoolteacher considers as challenging and wants to find out more. The schoolteacher can then choose and participate in various activities to search for an answer or solution. Through the activities, it is good to become 'learning friends' (Harper & Nicolson, 2013) with some like-minded colleagues, in or out of the school, and connect with professors and researchers who may become 'critical friends' (Day, 1999). When feeling right,

it is also beneficial to get involved in action research (Nunan, 1990; Richards & Farrell, 2005) or other projects, such as Exploratory Practice (Hanks, 2017).

- **Develop the dyadic relationships with role models in education profession.** Role models are people with qualities or experiences a schoolteacher admires and emulates. The schoolteacher observes and learns from the role model when the dyadic relationship is 'observational' (Bronfenbrenner, 1979). The relationship can be taken further when the schoolteacher and role model work together to do something. Over time, the relationship may further when the two 'appear in each other's thoughts […] and continue to influence one another's behaviour even when apart' (ibid, p. 58). Finally the schoolteacher may be related with one or more role models as developmental dyads when 'the balance of power gradually shifts in favour of the developing person [i.e. the schoolteacher]' (ibid, p. 60) as he/she has professionally developed.

- **Take a step further to try a new role and/or teaching in new settings.** A schoolteacher can professionally benefit from the process of overcoming challenges that arise from a shift in role and/or setting. The challenges can help decide what professional development activities are needed, what people to connect with, and what places to see. As a schoolteacher expands his/her roles and responsibilities over time, he/she will continue to find teaching 'rewarding' (Richards, 2005, p. vii) and professional development activities inviting.

- **Enjoy personal developmental pace with a focus on the ideal-self.** Each schoolteacher is unique with particular characteristics, including likes and dislikes, strengths and weaknesses, past experience and present circumstances, current needs and future ideal-self, and developmental pace and direction of professional development. Constant investment, though at a different speed from others, can take the schoolteacher progressively approaching his/her own ideal-self. Over time, the ideal-self may evolve as the schoolteacher becomes

more experienced in teaching, connects more closely with role models, and knows more people in education profession from further beyond the school. The evolution of ideal-self is a manifestation of professional growth and predicts future success over the course of career.

On the other hand, the SPD model can be used by support providers as a blueprint to manage their intended support for schoolteachers, as the model provides a coherent framework to understand how individual schoolteachers may be best supported to realise career-long professional development. The teacher, ecological and structural SPD aspects, respectively, concern support for schoolteachers to develop themselves with respect to their unique characteristics as socially developing persons, support at the ecosystem level focusing on the prerequisite for career-long professional growth and the availability and delivery of support, and support at the activity level to enact sustained professional growth. The three aspects interweave and work together as a unified whole of SPD support to nourish the schoolteacher to thrive ideally and uniquely as he/she envisages. SPD support implies that for support providers (e.g. policy-makers and administrators, and teacher mentors and trainers) who hope to best support schoolteachers' career-long professional growth so that student and school needs and national priorities are satisfied, they should integrate the following elements into their work:

- **Respect each schoolteacher as a unique socially developing person**. Schoolteachers should not be treated as mere lifelong learners in the profession. Each of them is a person developing in society and the only one of his/her kind. Schoolteachers pursue 'a satisfying and stimulating personal life' (Joyce, 1980, p. 20), and individually, they have their own needs to meet for professional growth and fulfilment of potential, as well as family and other responsibilities in their particular circumstances.

- **Keep the work environment as one with schoolteachers' needs met.** A supportive work environment is the prerequisite for career-long professional growth. Schoolteachers decide, through their individual experiences, whether the environment is supportive. To be supportive, the environment needs to be wellbeing-ensuring, esteem-building and (self)actualisation-enabling. That is, the school should meet, at present and in prospect, each schoolteacher's basic needs that his/her wellbeing is ensured, he/she feels valued and respected, and he/she is permitted and supported, rather than inhibited, to actualise his/her ideal-self in education profession. Besides, school and education leaders are expected to be considerate of individual schoolteachers' other responsibilities outside the school, especially their family responsibilities.

- **Nourish schoolteachers' ideal-selves and support their self-actualisation.** Teacher professional development is a career-long, arduous process of change. Career-long professional development is only realised through the actualisation process of ideal-self. Schoolteachers' ideal-selves constantly engage them in activities that help them become what they would like themselves, ideally, to be. To enable schoolteachers' career-long professional growth, it is essential for the school system to encourage and support, rather than inhibit, schoolteachers to form, develop and pursue their own ideal-selves in the profession. Role models play an important part in schoolteachers' self-actualisation process. The school should therefore ensure that the company of role models, who are identified by schoolteachers themselves, is in place, and support individual schoolteachers to develop their dyadic relationships with their role models.

- **Make support consistent with individual schoolteachers' characteristics.** Inconsistency may arise when support providers think they know schoolteachers and make decisions for them. Direction inconsistency exists, for instance, when professional development activities provided do not fall in the area around the schoolteacher's ideal-self, but point to a direction different from his/her self-actualisation. In other words, the activities are not what he/she wants. There is

also inconsistency between intended support and schoolteachers' developmental paces, for example, when a schoolteacher is not yet interested in writing but required to write a mandatory paper. Schoolteachers' enthusiasm may fade out if inconsistency persists in their professional development contexts. It follows that support providers should try to understand schoolteachers' ideal-selves (e.g. through support for their ideal-selves), and rather than making decisions for them, help them situate activities along their self-actualisation process, so that professional development activities are interconnected and consistent with their individual characteristics and make career-long professional growth likely.

- **Offer interrelated activities progressively leading to shifts in role or setting.** Besides situating activities along self-actualisation process, to enable career-long professional development, it is also vital for activities to be structurally interrelated and progressively more complex. Activities can be derivationally bound with new activities derived from a central one (e.g. reading and testing new ideas generated from the central activity of solving a puzzling problem), or in an evolutionary relationship with a previous activity evolving into a more complex activity (e.g. from solving a problem to writing a short essay about it). Further to making activities structurally interrelated, support providers should also support individual schoolteachers to evolve their activities, progressively leading them to shifts in role and/or setting to expand their professional circles over time. When a schoolteacher is ready, he/she should receive timely advice to move forward. For example, when a schoolteacher with a teacher-researcher ideal-self is curious about research after writing a number of short essays on his/her puzzling problems in teaching, support providers may advise him/her to get involved in a project, through which he/she can experience shifts in role and/or setting whilst observing like-minded people in different settings.

I have outlined above the general implications this study provides, from those for all stakeholders, to respectively schoolteachers and support providers in the field of teacher professional development. To set the discussion in context, I focus on the

implications for schoolteachers' professional development in China in the section that follows.

9.3.2 Operationalising SPD in China

Whereas the general implications set out above (in 9.3.1) still apply, contextual considerations need to be taken when putting SPD into practice. As discussed in Chapter 2, China is a developing country with a 1.4 billion population and a general picture of reform and opening-up to the outside world since 1978. In the last four decades, China has achieved rapid, continuous economic growth. Currently, three contextual features are prominent in schoolteachers' professional development: rapid but unbalanced development in social change, continuous curriculum reform in school education, and top-down mandatory teacher professional development. Against the above backdrop I consider below the implications this study carries for the practice of schoolteachers' professional development in China.

Above all, it is worth noting again that a conceptual shift towards SPD is needed, especially for support providers in China. As discussed earlier (in Chapter 2), the top-down mandatory approach manifested by the elaborate continuing education system is problematic in that intended support does not turn out to be as supportive (Gao, 2015; Li, 2019). Many schoolteachers, for instance, feel being pushed to learn (Li, 2009; Yuan, 2014) and become lukewarm about their professional development, i.e. career-long professional growth becomes unlikely. This study approached from the positive side by asking what support Chinese schoolteachers experienced and perceived. The findings indicate that a number of support forms (in Chapter 5) and supportive contextual elements (in Chapter 6) exist, but appear by chance, i.e. support is not coherently provided for individual schoolteachers. Therefore, SPD is particularly needed in China, given that SPD is a coherent framework to understand how individual schoolteachers is able, and enabled, to sustain professional growth throughout their careers.

To operationalise SPD in China, it is vital to understand schoolteachers from a person-oriented ecological sustainable perspective, given that 'Chinese education system is a highly centralised one' (Liu, 2017, p. 2). In particular, schoolteachers' difficulties should be acknowledged. More often than not, schoolteachers in the developed areas of the country have many resources and opportunities available, but little time to invest on their own in professional development due to their heavy workload, whereas schoolteachers in less developed regions may have more time, but have to struggle for resources and opportunities, despite that the situation is improving in recent years.

Given the particular school context in China, I underline the following implications of this study, specifically for Chinese schoolteachers so that they may be able to realise career-long professional growth step by step:

- **Enjoy interaction with people and things around.** Professional development is a career-long process of an individual schoolteacher's change. The change takes place cumulatively as the schoolteacher interacts with the world beyond himself/herself. Whereas formal activities can benefit professional development, informal activities also help, especially informal discussions with colleagues or like-minded friends. Informal discussions and teaching experiences are inspiring resources for thinking and questions, which can lead to professional growth. Similarly, real life experience is also a resource that a schoolteacher as a person developing in society can easily and actively gain, and use to inspire thinking and questions about teaching and professional development.

- **Keep a record of past experience in a portfolio.** Over time, a schoolteacher's world expands, as manifested by new activities, roles, teaching settings, and people (students and parents, leaders and colleagues, acquaintances and friends, academics and researchers) continuously added to professional life world, and those similar (e.g. new roles, people, activities and places visited) to personal

life world. The expansion indicates a schoolteacher's professional growth. A schoolteacher can therefore monitor and reflect on his/her own professional development process by keeping a record of his/her expansion process. The record is likely to result in a 'portfolio' (Farrell, 2019) of the schoolteacher's past teaching and life experiences with photos and documents categorised into different file folders, named by, for instance, 'new activities', 'new roles', 'new teaching settings', and 'new people'.

- **Identify professional potential or interest to form an ideal-self.** An ideal-self based on professional potential or interest helps make professional development activities inviting, and keep the schoolteacher on track to realise career-long professional growth. It is therefore important for a schoolteacher to identify the area he/she is likely to excel in (i.e. professional potential) or finds interesting (professional interest) to form an ideal-self in the profession. The schoolteacher can use his/her portfolio of past experience to help identify his/her professional potential or interest if he/she is unclear. With an ideal-self, the schoolteacher can further expand his/her professional world by engaging in activities in the ideal-self area and meeting like-minded people. In the process, he/she can identify and develop relationships with role models, who inspire enthusiasm, exemplify professional excellence, and guide the way progressively to actualise the ideal-self and achieve career-long professional development.

The above steps make transparent how a schoolteacher can start from every day interaction to form his/her ideal-self, so that he/she can be on track to pursue career-long professional development. These steps are generated from the SPD model but with special consideration given to the Chinese school context, in particular, Chinese schoolteachers' difficulty in finding time and resources for their professional growth. These steps complement with the general implications for schoolteachers (in 9.3.1), and together they shed light on how Chinese schoolteachers may realise career-long professional growth. In accordance with the above steps, support providers in China should offer the following support to schoolteachers:

- support for schoolteachers to interact with people and things around to gain professional growth,

- support for schoolteachers to keep a record of past experience in a portfolio to monitor and reflect on their developmental process, and

- support for schoolteachers to identify their professional potential or interest to form an ideal-self in teaching profession.

The above support mainly concerns the teacher aspect of the SPD model set out in this thesis, i.e. teacher SPD support. To best enable Chinese schoolteachers' career-long professional development, support providers, especially policy-makers and administrators, should consider replacing the current continuing education system (as discussed in Chapter 2) by an SPD support system with four interconnected sub-systems (teams) as follows:

- **Teacher SPD support team:** A sub-system responsible for supporting individual schoolteachers to develop themselves with respect to their unique characteristics as socially developing persons in education profession. Related administration management involves ensuring that the support is in place, supporting schoolteachers to progressively expand their professional worlds and record and manage their portfolios of professional development experiences (for instance, on an online platform), and managing an SPD promotion system to support individual schoolteachers to realise 'a satisfying and stimulating personal life' (Joyce, 1980, p. 20) by providing salaries and benefits along with a series of professional levels based on: minimum subject-teaching competency consistent with research insights (e.g. British Council, 2019), schoolteachers' expansion of professional worlds documented in their portfolios, and their achievements in the ideal-self areas (i.e. professional potential or interest).

- **Role models SPD support team:** A sub-system responsible for satisfying individual schoolteachers' need for the company of role models along their career-long developmental process. Administration work involves ensuring that the support is in place, for instance, providing opportunities for schoolteachers to identify by themselves their role models, and supporting schoolteachers and their role models to evolve dyadic relationships towards 'developmental dyads' (Bronfenbrenner, 1979).

- **School improvement SPD support team:** A sub-system responsible for improving the school environment to provide the prerequisite for individual schoolteachers' engagement in career-long professional growth, and ensuring that related support is in place for each schoolteacher. Administration work involves transforming the work environment as expected by schoolteachers in their ideal prospects, basically, a wellbeing-ensuring, esteem-building and (self)actualisation-enabling school environment, as well as managing the availability and delivery of support for each schoolteacher so that sustained professional growth is realised throughout the career.

- **Activity SPD support team:** A sub-system responsible for supporting individual schoolteachers at the activity level, in particular, ensuring sustained professional growth structurally engendered through a series of activities situated along the schoolteacher's self-actualisation process. Administration work involves ensuring that the support is in place, and supporting and working with teacher mentors and trainers to provide professional development activities best for individual schoolteachers to realise career-long professional growth.

The teacher, role models and school improvement, and activity SPD support teams (sub-systems) correspond respectively to the schoolteacher, ecological and structural aspects in the SPD model set out in Chapter 8. The above SPD support system is the architecture proposed to operationalise SPD support in the 'highly centralised' (Liu,

2017, p. 2) Chinese school context, with particular consideration given to existing top-down mandatory approach and its related continuing education and professional promotion systems (in Chapter 2). Currently, the promotion system is influential to schoolteachers' professional development but standing aside from supporting schoolteachers, whereas in the SPD support system outlined above, the promotion system is included as part of the teacher SPD support team to support individual schoolteachers' career-long professional growth through self-actualisation.

I have underlined above the implications of this study both for schoolteachers and support providers, first in general and then with a focus on the Chinese context. It is likely that the implications will take the practice further in the field of teacher professional development. I move forward to discuss future research in the section that follows.

9.4 Suggestions for future research

This study has yielded important insights into understanding of teacher professional development, particularly SPD support and SPD *per se*, with practical implications both for schoolteachers and support providers regarding how schoolteachers may be able, and enabled, to achieve career-long professional growth. This study also has its limitations, which need to be considered when reading the contributions and implications outlined above. In this section, I reflect on the limitations and suggest areas for future research.

9.4.1 The participants, and data collection and analysis

This study has a limitation that its participants were self-selected. As reported in Chapter 4, the participants volunteered to participate in the study after reading the recruitment message with the title of the study. The participants might naturally be interested in the topic about contextual support and the notion of sustainable professional development. In other words, I might get a particular point of view.

With that in mind, I recruited self-selected participants given that I needed data for my focus on contextual support. They were more likely to have experiences to contribute and wish to say something about the topic than those who did not volunteer to take part in the study. Besides, I was then unable to collect data for the focus of SPD as the term was not yet pinned down at the start of this study.

Now with SPD conceptualised, further research from this study may consider recruiting a wider range of participants for the application and improvement of the SPD model. Moreover, this study focused primarily on the data of semi-structured interviews and an open-ended questionnaire reported by the participants themselves. I also collected observation data and documentary data for triangulation (Denzin, 1970/2009, 1978), but future research may include data from more sources other than schoolteachers themselves, for example, the key persons in the participants' ecosystems of professional development as noted in Chapter 6.

It is also noteworthy that as a doctoral researcher, I was the only researcher who collected, collated and analysed the data of this study. I employed strategies such as member checking and peer debriefing as outlined in Chapter 4, but it is best that a research team, rather than a lone researcher, can work together in future research so as to overcome the lack of a second opinion in the process of working with data.

9.4.2 The conceptual model of SPD

Guided by my data, I have reached a conceptual model of Sustainable Professional Development (SPD) at the end of this doctoral project (in Chapter 8). SPD research, however, is just at the very beginning. The SPD model not only provides answers to questions, but also brings up questions for future research. On top of the list are the following questions:

- **What is a person-oriented ecological sustainable perspective?** The question is worth further exploration, given SPD being conceptualised from the perspective, which integrates three constituent perspectives (a person-oriented, an ecological and a sustainable perspective) into a unified whole. This study has illustrated that the perspective is useful, but there are still unanswered questions about the perspective *per se* (in 3.3, 3.4 and 8.5). For instance, how do the three constituent perspectives interact with each other? What change can the unified whole of the three (i.e. the person-oriented ecological sustainable perspective) bring to researchers and practitioners, and teacher professional development?

- **How do the SPD aspects interact and contribute to career-long professional development?** The findings of this study indicate that the three SPD aspects (teacher, ecological and structural aspects) are interrelated and work together to make career-long professional development likely. However, the contribution of each aspect and the interaction of the three are still unclear. For instance, which aspect is most essential? In what context? In one or more contexts? Put another way, what is the consequence if one SPD aspect is prioritised? Research into the aspects is likely to illumine SPD both in theory and practice, particularly how SPD may be best implemented in low-resourced schools and areas.

- **How do the processes involved in SPD interact with each other?** This study has revealed that mediated by the schoolteacher's characteristics, interrelated processes (professional development, self-actualisation, role models' company, ecosystem expansion and ideal prospects evolution) work together to enable career-long professional growth. But the interaction between these processes is not yet clear. From this study, for instance, we know that these processes should be consistently managed in SPD practice, but how to achieve the consistency is still far from transparent. Further research into these processes involved can help answer practical questions, and enhance understanding of SPD.

- **How to operationalise the SPD model with various schoolteachers in varied contexts?** Whilst discussing the implications of this study (in 9.3.2), I outlined my conceptions of implementing SPD in the Chinese school context. Obviously research is needed in order to find out whether my conceptions are feasible and how they work in practice to help schoolteachers' career-long professional development. Besides, research into SPD practice in different contexts is likely to generate findings and insights to enrich the SPD model and shed light on such questions as those raised above asking directly about SPD *per se*.

- **How to research into SPD?** Given then the concept of SPD being unavailable in the literature, I started this research with a focus on contextual support for schoolteachers rather than directly on SPD (in Chapter 3). Future studies from this one, however, can build on the SPD model set out in this thesis and research further into SPD, such as the questions listed above. SPD studies are conducive to qualitative research (Denzin & Lincoln, 2018b; Hammersley, 2013; Snape & Spencer, 2003), which is consistent with the person-oriented ecological perspective as SPD is conceptualised. Are there alternatives? I conducted this research as a qualitative multiple-case study (in Chapter 4). I considered, though gave up, doing it as longitudinal (Neale, 2019) and with various schoolteachers in varied contexts, which may be suitable for future research, but was not for this study given the time and manpower limit of a doctoral project. In a word, work also needs to be done with respect to how to research into SPD in future.

How schoolteachers might be best supported to sustain professional development throughout their careers is the subject question of this thesis. It is central to future SPD research as well, although in future a modification of changing 'schoolteachers' into 'teachers' in the question may be needed, i.e. expanding the research focus from schoolteachers' to teachers' career-long professional development in general.

9.5 Final thoughts

As I reflect on the process of completing this doctoral study, I find a conceptual change process of my own. It was a deepening process of my understanding from general teacher professional development to Sustainable Professional Development (SPD), and from a naive hunch to a conceptual model of SPD. Reaching the end of this process, I am a researcher as well as a teacher mentor who firmly believes in a person-oriented ecological sustainable perspective on professional development and contextual support for schoolteachers. I have also been convinced over my doctoral years that researching into education and society is a process of trying to understand, rather than explain, so as to return to serve the younger generation and society with enhanced understanding. I have presented this thesis as an attempt to this end.

In this research, I have seen my past experiences in language learning and teaching, teacher mentoring, and academic training and research brought together to help me understand schoolteachers and their professional development. Whereas the fields of language development and professional development may differ, they are both about human development, better understanding of which is likely to help make the world a better place for everyone to enjoy 'a satisfying and stimulating personal life' (Joyce, 1980, p. 20).

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Appendix 1 Participant recruitment message

English version:

Mr Ronggan Zhang is a PhD student from the University of Leeds, the United Kingdom. He is planning to carry out in Z City the fieldwork of his doctoral research project, *Contextual support for Sustainable Professional Development: A case study of Chinese senior high school EFL teachers' perceptions* (Ethics reference: AREA 18-186). Mr Zhang wishes to visit and interview teachers in order to better understand how Chinese senior high school teachers of English perceive their experiences of being supported in their own contexts over their professional lives. If you are 1) a senior high school teacher of English teaching in Z City's urban districts, and 2) interested and volunteer to take part in the research, please directly email Mr. Zhang at edu3rgz@leeds.ac.uk. You are also welcome to contact Mr. Zhang if you have a question or need more information.

Chinese version:

张荣干老师是英国利兹大学（University of Leeds）博士研究生，他的研究项目是"可持续专业发展环境支持的个案研究：中国高中英语教师的理解"（学术道德审核号：AREA 18-186）。张老师拟在 Z 市开展实地研究，并和老师们访谈，以更好了解中国高中英语教师对各自环境各自职业生涯中所得支持的认识。如果您是 1）Z 市城区的在职高中英语教师，2）有兴趣并自愿参与该研究，请直接联系张荣干老师。张老师的电子邮箱如下：edu3rgz@leeds.ac.uk。若有疑问或希望了解更多，也欢迎联系。

Appendix 2 Participant information sheet

You are being invited to take part in Mr. Ronggan Zhang's PhD research project, *Contextual support for Sustainable Professional Development: A case study of Chinese senior high school EFL teachers' perceptions*. Before you decide whether to participate, please take time to read the following carefully. If there is anything unclear or if you would like more information, please contact the researcher.

What is the purpose of the study?

◦   To increase understanding of how Chinese senior high school teachers of English perceive their experiences of being supported in their own contexts over their professional lives, and how professional development may sustain over the school teacher's professional life.

Do I have to take part?

◦   It is up to you to decide whether or not to take part. You are also free to withdraw at any time until <u>30 September, 2020</u> by contacting the researcher.

What will it involve?

◦   There will be five visits to you. First, the researcher will visit you at your school to get to know your workplace context. Next, you will be asked to complete a questionnaire about your career experiences. The last three visits will be interviews, which will invite you to reflect back on your experiences of professional development and look into the future of your career.

◦   The time for completing a questionnaire is around 30 minutes, and each interview 60 minutes. You can choose to use English or Chinese to respond. <u>The interviews will be audio recorded</u>.

What are the possible risks and benefits of taking part?

◦   While there are no immediate benefits of participating, it is hoped that the opportunity to reflect on your professional life in the research would have a positive effect on your professional development. There is, however, a possibility that talking about your life experiences may be an unpleasant experience. If this is the case, you are free to withdraw from the study or discuss with the researcher any issues that you might have.

Will the information I provide be kept confidential?

◦   All the contact information will be kept strictly confidential and stored separately from the research data. Steps will be taken wherever possible to anonymise the research data so that you will not be identified in any report or publication.

What will happen to the results of the study?

◦   The findings of the study will form part of the researcher's PhD thesis at the University of Leeds. The results may also be used in relevant publications and/or presentations. You will be consulted at various stages of the research in order to verify the researcher's interpretations of the data, and suggest changes, if necessary.

If you have any questions about the study, please do not hesitate to contact the researcher, Ronggan Zhang, who can be reached at: <u>edu3rgz@leeds.ac.uk</u>.

Thank you for taking the time to read through this information sheet. If you would like to participate in the study, please read and sign the following Consent Form.

Appendix 3 Participant consent form

UNIVERSITY OF LEEDS
SCHOOL OF EDUCATION

Consent to take part in the research project of

Contextual support for Sustainable Professional Development: A case study of Chinese senior high school EFL teachers' perceptions	Add a tick (✓) next to the statement if you agree
I confirm that I have read and understand the information sheet dated (___/___/_____) explaining the above research project and I have had the opportunity to ask questions about the project.	
I understand that my participation is voluntary and that I am free to withdraw at any time until 30th September, 2020 without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline.	
I understand that each interview will be audio-recorded.	
I agree for the data collected to be held and processed for the purposes of being used anonymously in the researcher's PhD thesis as well as in relevant publications and/or presentations. I understand that quotations from my responses may be used in reporting the results of the research and that these will always be anonymous and not attributed to me in any way.	
I agree for the data collected to be stored and used in relevant future research in an anonymised form.	
I agree to take part in the above research project and will inform the researcher should my contact details change during the project and, if necessary, afterwards.	

_____   _____

Name of Participant   Date   Signature

RONGGAN ZHANG   _____

Name of Researcher   Date   Signature

Appendix 4 School observation protocol

School Observation Protocol

Participant(s):   School: City: Date: Time:

	Descriptive notes					Reflective notes
	(Prompts: PP social roles? Interpersonal relations? Activities? Microsystems (TPD? family? Policy? Potential…?)					
I. General						
Time Place	Descriptive notes					Reflective notes
	(Prompts: PP social roles? Interpersonal relations? Activities? Microsystems (TPD? family? Policy? Potential…?)					
	People	PP + People Interaction	Facilities	PP + Facilities Interaction	Activities/Policies mentioned	

Appendix 5 Open-ended questionnaire

Dear participant

Thank you again for your participation. Please help me by reflecting back on your professional life and completing the table below. Your responses will be kept confidential and used for research purposes only. Please note:

a) You can write in English or Chinese, or both.   b) If there is anything unclear, please ask me.
c) A sample is given on a separate sheet.

Vincent

My Professional Life Overview

Preferred name: _____   Age: ____   Date: _____

Key event that has taken place in my professional life			*Was the event* **a turning point** *in your professional life?*
When	Where	What	If yes, tick the box and add notes.
			☐
			☐

Sample: My Professional life overview

Key event that has taken place in my professional life			*Was the event* **a turning point** *in your professional life?* If yes, tick the box and add notes.
When	Where	What	
July 1973	*Qingyuan*	**Born** *in Qingyuan City, Guangdong Province*	☐
1988-1993	*Guangzhou*	*Studied at Guangdong Foreign Languages Normal School（广东外语师范）*	☑ *Prepared me to be an English teacher*
1993-1997	*Guangzhou*	*Taught English at No. 61 Middle School (junior high, Grades 7-9 and 9)*	☐
September 1994	*Guangzhou*	*Frist paper in life won 1ˢᵗ prize in school competition for young teachers*	☑ *Encouraging. Began to write papers every year ever since.*
1994-1997	*Guangzhou*	*Part-time study in South China Normal University, BA degree*	☐
1997 to present	*Guangzhou*	*Teaching senior high school English at No. 61 Middle School*	☐
December 2000	*Guangzhou*	*Promoted to Level 1 Teacher (*一级教师*)*	☐
August 2001	*Guangzhou*	*Marriage*	☐
2003-2004	*Guangzhou*	*MA joint programme by University of Leeds and Guangdong University of Foreign Studies （广东外语外贸大学）*	☑ *'Upgraded'. Began to write papers and do presentations in English.*
2004	*Guangzhou*	*April, new policy: promotion application can be made three years after being promoted to Level 1. December, promoted to Senior Teacher （高级教师）*	☑ *Felt being recognised. Became youngest Senior Teacher at school*
July 2005	*Guangzhou*	**Daughter born**	☑ **Sunshine everywhere.** *Speak English to daughter ever since.*
2011 to present	*Guangzhou*	*Head of English department, No. 61 Middle School*	☑ *More responsibility. Began to write about department management*

Appendix 6 Semi-structured interview prompts

Note: This is a provisional version. The prompts were finalised based on the analysis of the data collected before the particular wave of interviews.

<u>Semi-structured interview - Wave 1</u>

- Purposes

    ◦ To generate data about the participants' career experiences and perceived support for professional development up to the present time.

- Key tasks

    ◦ To invite the participant to
        - reflect back on his/her career experiences and draw a life map and
        - reconstruct the details of career experiences about the critical events and persons over his/her professional life, with particular reference to professional development support.

- Stimulus materials

    ◦ A sample life map of career experiences

- Prompts

    ◦ *I would like you to tell me your life story, all the events and experiences that were important for your professional development.*
        - *Start wherever you like. Please take the time you need.*
        - *I'll listen first; I won't interrupt. I'll just take some notes for afterwards.*

    ◦ *When people talk about their life experiences, sometimes they use a life map to help and show the highs and lows they have experienced.*
        - *Could you draw a life map of your own career experiences?* [Present the template] *Here's a template. But you can draw in the way you think that can best show the highs and lows in your own situation.*
        - *While you are drawing, please feel free to say whatever you feel like saying, or whatever comes to your mind.*
        - *I'll listen first; I won't interrupt. I'll just take some notes for afterwards.*
        - *This is a high point …. Could you tell me in more detail about it?*

    ◦ *When you look back on your professional life so far, can you remember any occasion on which you felt being particularly well supported?*
        - *You said…. Can you remember how that came about?*
        - *What happened after that or because of that?*
        - *Can you remember anything in particular that you felt about the support? Anything or any person in particular that contribute to this feeling?*
        - *Can you remember anything you did in particular because you received the support?*

Anything or any person in particular that contribute to what you did?

- ◦ *Let's focus on now. I would like you to tell me about your professional life at present, the events and experience that you find important for your professional development.*
  - *Are there any ways that you currently feel professionally supported? Could you tell me about these in more detail?*
  - *Anything or any person in particular that you would like to mention in relation to this?*
  - *As a result of this, how are you affected now? What about the future?*
  - *Any particular feelings influenced by this?*
  - *Anything in particular you want to do as a result of this?*

Semi-structured interview - Wave 2

- Purposes
  - ◦ To generate data of the participants' accounts of future professional life and possible support for professional development.

- Key tasks
  - ◦ To invite the participant to
    - look forwards into the future and draw a life map of his/her imagined future professional life, and
    - elaborate possible critical events and persons that might support his/her professional development.

- Prompts
  - ◦ *I would like you to look forwards and tell me your ideas about your future life, all the events that you think will be important for your professional development.*
    - *Start wherever you like. Please take the time you need.*
    - *I'll listen first; I won't interrupt. I'll just take some notes for afterwards.*
  - ◦ *Could you imagine and draw a life map of your future professional life? While you are drawing, please feel free to say whatever you feel like saying, or whatever comes to your mind.*
    - *I'll listen first; I won't interrupt. I'll just take some notes for afterwards.*
    - *You said ... Could you tell me in more detail how it will go about?*
    - *This is a high point .... Could you tell me in more detail about it?*
  - ◦ *When you look forwards into your future professional life, is there any occasion on which you need to be particularly supported?*
    - *You said .... Could you tell me in more detail?*
    - *Anything or any person in particular that you think will be critical?*
    - *As a result of this, how will your professional life be different?*
    - *Anything in particular that you will be able to do if you receive the support?*

<u>Semi-structured interview - Wave 3</u>

- Purposes
  - To generate data of the participants' in-depth perceptions of contextual support for professional development.

- Key tasks
  - To invite the participant to
    - look forwards and backwards about his/her professional life, and
    - elaborate their in-depth perceptions of professional development support.

- Stimulus materials
  - The completed table of career experiences from the open-ended questionnaire
  - The life maps of the past and the future the participant drew in the last two interviews

- Prompts
  - *I would like you to tell me your ideas about the support you have so far received over your professional life.*
    - *Start with whatever you like. Please take the time you need.*
    - *Here's the table and the life map you completed earlier about your career experiences. You may start with an example in there or not.*

  - *What particular forms of support have you found most important for your professional development in your past and present professional life?*
    - *Why do you find it important?*
    - *How do you find yourself influenced by the support?*
    - *How do you find the support affecting your feelings and decisions about your professional development?*

  - *I would like you to tell me, ideally how you would like to be supported when you look into your future professional life.*
    - *What would be the ideal forms of support for you?*
    - *How do you expect yourself to be ideally affected by the support?*
    - *What would happen to your professional life if you do not have such support?*

  - *I would like you to tell me your ideas: why do some teachers continue to develop professionally all through their professional lives?*
    - *Why do you think so?*
    - *Could you give examples from your own experiences or those working in your context?*

Appendix 7 Semi-structured interview protocols

Date	/ /	, am/pm	Starting time	:	End time	:	Place	

A	Audio recording	
B	Language choices	(V) English / Chinese	(P) English / Chinese (Mandarin/Cantonese) / both
C	Any questions?	
D	Last meeting: Table	Overview, listing events
E	Today: more details	life story: past & present

Q1. *… tell me your **<u>life story</u>**, all the events and experiences that were **<u>important for your PD</u>**?*
- **Start** *wherever you like. Please take the time you need.*
- I'll listen first; I won't interrupt. I'll just take some notes for afterwards.
  (Important? → Mentioned? → Life map (high point)**)**

	Prepared prompts	Ad hoc prompts / notes
General	*Anything that happened and influenced…?*	
Previous: (OeQ)	*You ticked…turning point* 1. 2. 3. 4.	*More details? How did that come about?* **[CIT][Feeling? Actions?]**
Life map-(A)	People use...highs & lows *Take a look… template Draw your own. Take your time.* I won't interrupt.	*This is a **<u>high point.</u>** More detail?* **[CIT]**

Q2. *…look back on <u>professional life</u> **<u>so far</u>**, any **<u>occasion</u>**… felt being particularly **<u>well supported</u>**?*
(Past support? → Mentioned? → Life map (circle support)**)**

	Prepared prompts	Ad hoc prompts / notes
General	*Wished to… and were supported to do …* a) What **happened** after or because of that? b) Any particular **feeling**? Anything/person to mention? c) Anything particular **did**? Anything/person to mention?	*… how that came about? More detail?*
Previous (OeQ)	*You mentioned…* 1. 2.	*… how that came about? More detail?*
Life map (B)	**CIRCLE** *on life map where supported*	

Q3. *Focus on* **NOW**.… *professional life at present, all events & experiences important for PD?*

(Important → Mentioned → Support?)

	Prepared prompts	Ad hoc prompts / notes
General	*Anything happening / has just happened?* a) Any ways/things **feel** being supported? b) Anything/person to mention? c) As **a result**, how affected now? future? d) Particular **feelings** because of this? e) Anything particular **want to do**?	*More detail about it? How did that come about?*
Previous: (OeQ)	*You mentioned…* **Support?** 1. 2.	*More detail about it? How did that come about?* **[CIT]**

Wave 2: **Future**

Date	/ / , am/pm	Starting time	:	End time	:	Place	

A	Audio recording	
B	Language choices	(V) English / Chinese	(P) English / Chinese (Mandarin/Cantonese) / both
C	Any questions?	
D	Last meeting: Wave 1	Past & Present
E	Today: Future	Imagine

Q1. … *ideas about **future life**, all the events that you think will be **important for your PD**?*

- **Start** *wherever you like. Please take the time you need.*
- I'll listen first; I won't interrupt. I'll just take some notes for afterwards.

	Prepared prompts	Ad hoc prompts / notes
General	*Anything ... wish to happen*	*You said… how will it go about?*
Life map	Imagine & draw ~ of future *Free to say ... drawing* In the map you drew / noted: 1. 2. 3. 4.	*You said… how it will go about?* *-You drew .... More detail?* *- High point? More detail?*

Q2. …*look forward into __future__ professional life, any __occasion__… __need__ to be particularly __supported__?*

What occasion … What support… What result?
*As a result: how will your professional life be **different**?*
*Anything in particular that you will be **able to do**? Any particular **feelings** you may have?*
Anything … Any person in particular?
Anything similar in the past?

	Prepared prompts	Ad hoc prompts / notes
What occasions?	*~ particularly needs support?* 1. 2. 3. 4.	*You said … More detail? What support needed?*
What result?	*As a result, what different it'll make?* *Anything able to do?* *Any particular feelings?* 1. 2.	
Anything particular needed?		
Any person in particular to mention?		
Anything similar in the past?		

Wave 3: **In-depth**

Date	/ / , am/pm	Starting time	:	End time	:	Place	

A	Audio recording	
B	Language choices	(V) English / Chinese	(P) English / Chinese (Mandarin/Cantonese) / both
C	Any questions?	
D	Waves 1 & 2	Experiences: past, present, future
E	Today: Everything	Experiences and opinions: **PD support**

Q1. …*your __ideas about the support__ you have so far __received__ over your professional life?*

【纵观你至今的职业生涯，你怎么看曾经得到的专业发展上的支持或帮助？】

[WHAT received? | HOW influential to life and future? | Why?]

	Prepared prompts	Ad hoc prompts / notes

General:	*Impression about support* ***received / needed but not*** a) ***Table*** *of overview,* b) ***Life map*** *of highs & lows* c) ***Life map of future***	WHAT? (Forms?) HOW? (Feelings)(Actions)(Life) WHAT IF without? WHY?
Previous: (OeQ, Waves 1 & 2)	*You mentioned…* 1. 2. 3.	***Why*** *mentioned? Anything more to say about it?*

Q2. *What particular forms of* **support** *have you found* **most important** */ influential…* **prof life***?*

[最重要 / 最有影响 / 最值得提的 / 最有启发意义的]

	Prepared prompts	Ad hoc prompts / notes
	Support received / ***Most needed but not***	WHAT? (Forms?) HOW? (Feelings)(Actions)(Life: decision / future) WHAT IF without? WHY?
Previous (OeQ, Waves 1& 2)	*You mentioned…* [best supported; high points] 1. 2.	*More detail? Why mentioned? Any implications for others?*

Q3. *Any experiences of* **being supported** *which led to your* **further involvement** *in PD activities?*

【有没有得到过一些支持或帮助，激发你在自己的专业发展上投入更多呢？】

	Prepared prompts	Ad hoc prompts / notes
General	*Influence:* ***future actions*** *or* ***future professional life***	WHAT? (Forms?) HOW? (Feelings)(Actions)(Life: decision / future) WHAT IF without? WHY?
Previous (OeQ, Waves 1& 2)	*You mentioned…* 1. 2.	*More detail? Why mentioned? Any implications for others?*

Q4. … *your idea:* *some teachers* **continue to develop** *professionally* **all through** *professional lives?*

[What 'continuously' | How to support? | Why? | Examples?]

	Prepared prompts	Ad hoc prompts / notes
General	Any examples of your own? Or someone you know?	

Q5. **Anything else** *to say about professional development and* **support***?*

Appendix 8 Life map template sheets and sample

- Template sheet of past life map: 'My professional highs and lows'

Professional
Highs and Lows

19___ : Born in _____   Time

Life map: My professional highs and lows

Preferred name: _____   Date: _____

- Template sheet of future life map: 'My future career prospects'

Professional
Highs and Lows

2019/20 - Now: _____   Time

Life map: My future career prospects

Preferred name: _____   Date: _____

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- <u>Life map sample</u>

Life map: My professional highs and lows*
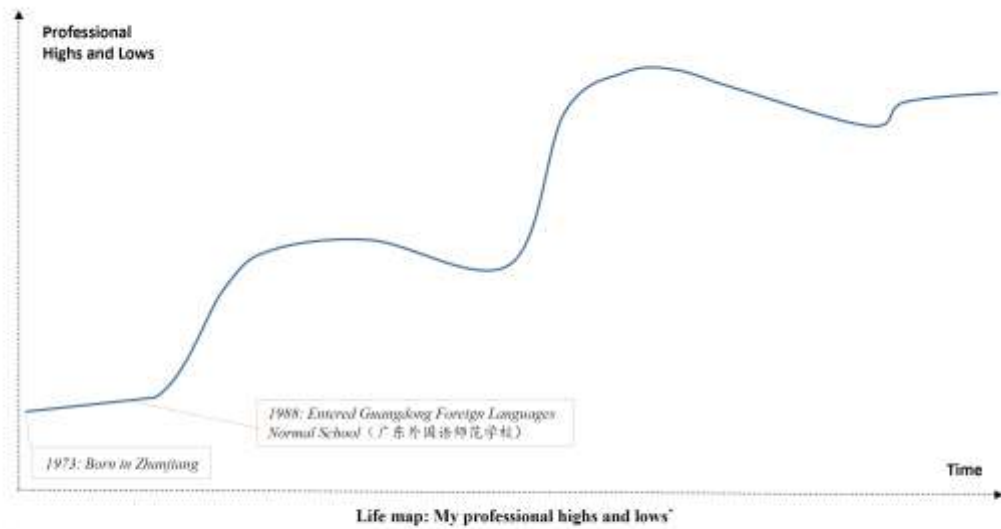
*This is a sample for your reference.
Please draw in your own way to show the highs and lows in your professional life.

Appendix 9 Interview dates for each participant

Interview dates: Three waves with each participant

Participant	Wave 1	Wave 2	Wave 3
Shuyang	20.12.2019	17.02.2020	17.04.2020
Beibei	06.01.2020	18.02.2020	02.04.2020
Caiyu	08.01.2020	14.02.2020	03.04.2020
Dixi	27.12.2019	23.02.2020	13.04.2020
Yaya	09.01.2020	17.02.2020	11.04.2020
Songrong	25.12.2019	19.02.2020	30.03.2020
Guiyun	29.12.2019	16.02.2020	07.04.2020
Haidi	25.12.2019	21.02.2020	12.04.2020
Yangyu	30.12.2019	17.03.2020	09.04.2020
Jiemin	30.12.2019	26.02.2020	10.04.2020
Kexin	05.01.2020	20.02.2020	01.04.2020

Appendix 10 Online interview information text

The Chinese version sent to my participants via WeChat:

……老师好。经慎重考虑并请示我导师同意，鉴于当前疫情，我们第二次访谈我想改用微信线上进行，但仍和之前一样，只用我的索尼录音笔录音，不录像。（1）由于之前商定的是面对面访谈，故我需要您补充授权同意。（2）微信访谈涉及互联网隐私保护问题，所以我想和您直接通话，说明可能风险和商量如何尽最大可能保护您的个人隐私。（3）您看可否在一周内（即 2 月 19 日前）回复是否同意？（4）若有疑问，烦请随时联系。您回复同意后，仍可在访谈开始前随时更改你的意见。谢谢并顺致祝福。

A translated English version:

Dear …. Given the outbreak of the epidemic, I am thinking about, after careful considerations and obtaining my supervisors' permission, doing our second interview online by WeChat, but only audio-recorded using my Sony voice recorder, the same as last time. The interview will NOT be video recorded. 1) I need your consent to this as what we agreed on before was face-to-face interviews. 2) Using WeChat for our interview concerns online privacy. I therefore wish to explain to you on the phone and discuss how to best protect your privacy. 3) Could you reply to tell if you agree in a week by 19th February? 4) If you have any questions, please don't hesitate to contact me. After your positive reply, you can still change your decision at any time before the interview. Thank you and very best wishes.

Appendix 11 Online interview consent form

UNIVERSITY OF LEEDS
SCHOOL OF EDUCATION

Consent to take part in the synchronous online interviews of

Contextual support for Sustainable Professional Development: A case study of Chinese senior high school EFL teachers' perceptions	Add a tick (✓) next to the statement if you agree
I confirm that I have read and understand the Information Text dated (___/___/_____) explaining the synchronous online interviews of the above research project and I have had the opportunity to ask questions about the interviews and the project.	
I understand that my participation is voluntary and that I am free to withdraw at any time before each interview without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline.	
I understand that each interview will be audio-recorded with an off-line recorder.	
I agree to take part in the synchronous online interviews in addition to the signed consent dated (___/___/_____) to participate in the above research project.	

_____   _____
Name of Participant   Date   Signature

  RONGGAN ZHANG   _____
Name of Researcher   Date   Signature

Appendix 12 Ethics committee approvals

(A) Ethical approval for the study

The Secretariat
University of Leeds
Leeds, LS2 9JT
Tel: 0113 343 4873
Email: ResearchEthics@leeds.ac.uk

UNIVERSITY OF LEEDS

Mr Ronggan Zhang
School of Education
University of Leeds
Leeds, LS2 9JT

**Social Sciences, Environment and LUBS (AREA) Faculty Research Ethics
Committee
University of Leeds**

22 July 2019

Dear Ronggan,

Title of study:	**Contextual support for Sustainable Professional Development: A case study of Chinese senior high school EFL teachers' perceptions**
Ethics reference:	**AREA 18-186**
Grant reference:	**200094247**

I am pleased to inform you that the above research application has been reviewed by the Social Sciences, Environment and LUBS (AREA) Faculty Research Ethics Committee and I can confirm a favourable ethical opinion as of the date of this letter. The following documentation was considered:

Document	Version	Date
AREA 18-186 1.Zhang200094247Ethical_Review_Form1907f.doc	1	08/07/2019
AREA 18-186 4.Zhang200094247Recruitment message1907f.doc	1	08/07/2019
AREA 18-186 2.Zhang200094247Participant_Info_Sheet1907f.doc	1	08/07/2019
AREA 18-186 3.Zhang200094247participant_consent_form1907f.doc	1	08/07/2019
AREA 18-186 6.Zhang200094247Open-ended questionnaire.docx	1	08/07/2019
AREA 18-186 7.Zhang200094247Interview prompts.docx	1	08/07/2019
AREA 18-186 5.Zhang200094247Fieldwork Assessment1907f.doc	1	08/07/2019

Committee members made the following comments about your application:

- This a very clear, succinct and well-articulated research proposal that covers all key ethical issues. The supporting documents are very detailed, comprehensive and provide transparency as to the consultancy process with

research participants, along with a full risk assessment in carrying out the research project.

Please notify the committee if you intend to make any amendments to the information in your ethics application as submitted at date of this approval as all changes must receive ethical approval prior to implementation. The amendment form is available at http://ris.leeds.ac.uk/EthicsAmendment.

Please note: You are expected to keep a record of all your approved documentation and other documents relating to the study, including any risk assessments. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited. There is a checklist listing examples of documents to be kept which is available at http://ris.leeds.ac.uk/EthicsAudits.

We welcome feedback on your experience of the ethical review process and suggestions for improvement. Please email any comments to ResearchEthics@leeds.ac.uk.

Yours sincerely

Jennifer Blaikie
Senior Research Ethics Administrator, the Secretariat
On behalf of Dr Kahryn Hughes, Chair, AREA Faculty Research Ethics Committee

CC: Student's supervisor(s)

(B) Ethical approval for the online interviews

John Hardy on behalf of ResearchEthics <researchethics@leeds.ac.uk>
Thu 24/09/2020 16:14
To: Ronggan Zhang; ResearchEthics <researchethics@leeds.ac.uk>
Cc: Judith Hanks [EDU]; Harry Kuchah
Subject: AREA 18-186 - Retrospective Conditional Ethical Approval

Hi Ronggan,

AREA 18-186 (Retrospective Amendment – Sept 2020) - Contextual support for Sustainable Professional Development: A case study of Chinese senior high school EFL teachers' perceptions

NB: All approvals/comments are subject to compliance with current University of Leeds and UK Government advice regarding the Covid-19 pandemic, as well as any local restrictions where the study is being carried out regarding in-person data collection and travel.

I am pleased to inform you that the above research ethics application has been retrospectively reviewed by the AREA FREC Committee and on behalf of the Chair, I can confirm a conditional favourable ethical opinion based on the documentation received at

date of this email and subject to the following condition/s which were fulfilled prior to the study commencing:

1.   **Interviews and/or or focus groups should be undertaken by secure electronic means**
2   **The verbal consenting protocol should be implemented – see Verbal_Consent_Protocol.pdf It is suggested that the participant should be informed the recording will commence with obtaining verbal consent via the participant reading out each consent statement and state 'I agree' after each one and this part of the recording should be stored separately to other study files**
3   **The interviews and /or focus groups should be recorded using an encrypted device and uploaded to a secure University of Leeds server as soon as practical to do so and deleted from the recording device**
4   **The Participant Information Sheet should be updated to reflect the change in how the interviews and/or focus groups will be undertaken**

The study documentation had been amended where required to meet the above conditions and was submitted for file and possible future audit.

Please retain this email as evidence of conditional approval in your study file.

Please notify the committee if you intend to make any amendments to the original research as submitted and approved to date. This includes recruitment methodology; all changes must receive ethical approval prior to implementation. Please see https://leeds365.sharepoint.com/sites/ResearchandInnovationService/SitePages/Amendments.aspx or contact the Research Ethics & Governance Administrator for further information.

Ethics approval does not infer you have the right of access to any member of staff or student or documents and the premises of the University of Leeds. Nor does it imply any right of access to the premises of any other organisation, including clinical areas. The committee takes no responsibility for you gaining access to staff, students and/or premises prior to, during or following your research activities.

Please note: You are expected to keep a record of all your approved documentation, as well as documents such as sample consent forms, risk assessments and other documents relating to the study. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited.

It is our policy to remind everyone that it is your responsibility to comply with Health and Safety, Data Protection and any other legal and/or professional guidelines there may be.

I hope the study goes well.

Best regards
John Hardy
On behalf of Matthew Campbell, (Chair) AREA FREC

John Hardy
Research Ethics & Governance Administrator
The Secretariat,
University of Leeds, LS2 9LT

From: Ronggan Zhang
Sent: 19 September 2020 10:03
To: ResearchEthics <researchethics@leeds.ac.uk>
Cc: Judith Hanks [EDU]; Harry Kuchah
Subject: Re: AREA 18-186 Retrospective Amendment submission: Revised data collection plan due to COVID-19

Dear John

Thanks so much for this. Yes, I have broadly followed the conditions. I give my brief answers below after each condition:

1   **Interviews and/or or focus groups should be undertaken by secure electronic means**

Yes.

2   **The verbal consenting protocol should be implemented – see**[**https://leeds365.sharepoint.com/sites/ResearchandInnovationService/ethicsandintegrity/Shared%20Documents/Verbal_Consent_Protocol.pdf**](https://leeds365.sharepoint.com/sites/ResearchandInnovationService/ethicsandintegrity/Shared%20Documents/Verbal_Consent_Protocol.pdf) **It is suggested that the participant should be informed the recording will commence with obtaining verbal consent via the participant reading out each consent statement and state 'I agree' after each one and this part of the recording should be stored separately to other study files**

Yes.

3   **The interviews and /or focus groups should be recorded using an encrypted device and uploaded to a secure University of Leeds server as soon as practical to do so and deleted from the recording device**

Yes.

4   **The Participant Information Sheet should be updated to reflect the change in how the interviews and/or focus groups will be undertaken**

Please find the updated Participant Information Sheet enclosed ('Zhang200094247Information Sheet Updated').

I attach again my revised data collection plan ('Zhang200094247Revised data collection plan-f'), which hopefully would give you more details.

Best wishes
Ronggan

Mr ZHANG Ronggan
PhD Student in Education, MA with Distinction in TESOL (Leeds)
M Phil in English & Applied Linguistics (Cambridge)

School of Education, University of Leeds, Leeds LS2 9JT, United Kingdom

Appendix 13 Transcription conventions used

Code and explanation	Examples
• My prompts are marked in 【 】and introduced by 'v:' (the initial of my English name). The interviewee's talk is not marked. • A comma is used to indicate a pause and a full stop is applied at the end of a long utterance in Chinese, as is acceptable in Chinese grammar.	【**v:** 举个例子？】 就是最好每年让我出去一些比较高高档次的培训，每年一次以上吧，这是我最需要的，其他都好像，没有什么别的特别，对，就是高水平的培训，那个我还是特别喜欢。
For utterances in English, punctuation and new sentences are applied based on the intonation, the content and the pauses heard.	Actually, education gave me a chance to move from a poor village to a rich city. Education changed my life.
Square brackets are used to indicate my commentary or notes on the non-verbal features, such as a pause, a laugh, or the approximate point of time in the recording.	每种形式都有每种形式的这种作用吧，应该 **[pause]**是吧，嗯，放弃，也没有说哪个最怎么样，我就觉得应该，就像吃饭一样，啊，各种菜有各种菜的功能和作用嘛 **[laughs]** **[8'17"]**
An unintelligible word or short phrase is indicated by [x], and more x's are added for a longer phrase.	呃，对，当时就是，也不是说都搞得 **[xxx]**，看你重不重视啰，啊，如果大家都重视的话，啊，那就上得有意思点啰。
• Hesitation noises are transcribed as er, mm, um, and uh if in English, and their equivalents in Chinese. • False starts and stammers are indicated by a dash.	**Mm,** I will **search-search the-the** information from the internet and make it easy by myself if **the-the vi-,** the video from WeChat is **er** good enough, I will use it directly.
The overlapping talk is marked in (( )) and the preceding section of interrupted utterance ends three dots in English and six dots in Chinese.	【**v:** 所以这个**......**】**((不切实际的想法))** [laughs]

Appendix 14 Illustrations for the process of forming templates

(A) Screenshot of the 'messy' spreadsheet with initial codes for support forms first put together
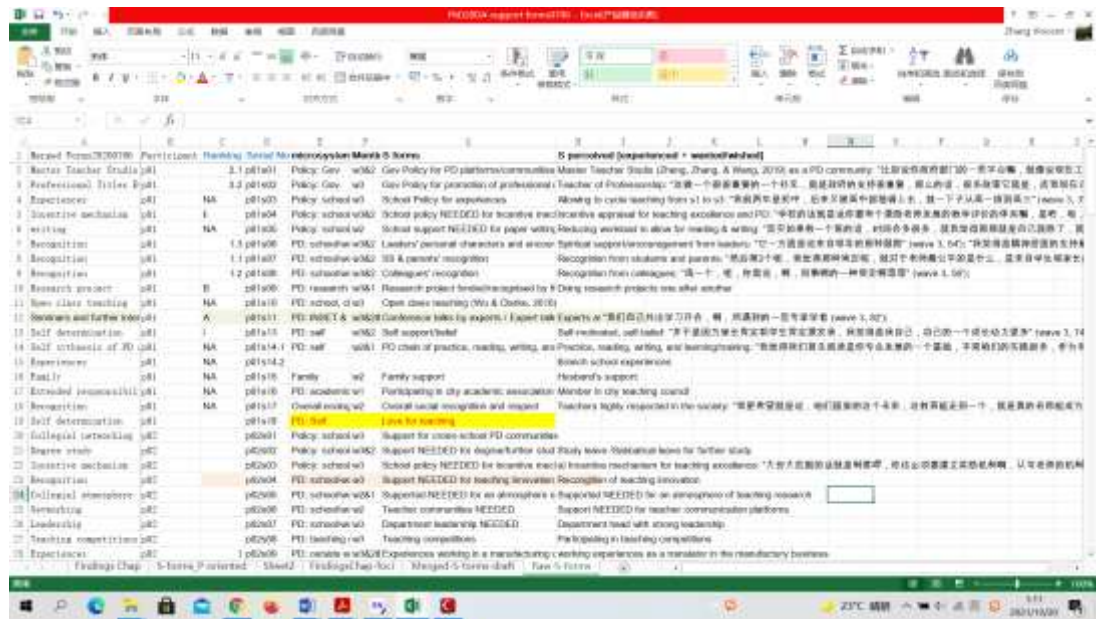
(B) Discarded attempt of coding support forms by the participants' freedom of control

Categories	Perceived forms of professional support
Authority	job assignments, professional ranking, in-service training schemes
Classroom	classroom observations, open class teaching, teaching competitions, seminars,
Classroom extension	paper writing, research projects
Platforms	online chatting groups, teacher communities, Master Teacher Studios, academic associations, overseas exchange programme
Further education	degree study

(C) Screenshot of discarded attempt to code the forms of professional support by microsystems