Teacher Wellbeing in Rural China:

An Appreciative Mixed-Methods Study in Jilin Province

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Abstract

Retaining quality teachers in rural areas is a global and growing concern. Teacher wellbeing plays a crucial role in teacher quality because quality teachers require optimal functioning and wellbeing to teach well. Teachers in rural China are disadvantaged compared to their urban counterparts in relation to working conditions, remuneration and access to professional development opportunities. Yet, many rural teachers excel in the teaching profession.

This study serves to contribute to an in-depth understanding of rural teacher wellbeing in China. This is the first study of its kind that investigates rural Chinese teachers' subjective, psychological and professional wellbeing, characterized from the views of eastern Confucian cultural values, which supplements the applicability of western theory and makes a significant and original contribution to knowledge.

The purpose of this study is to identify the factors that contribute to rural teachers' optimal wellbeing, and discern what wellbeing means to rural teachers in China. This study uses an Appreciative Inquiry (AI) approach which deviates from a traditional focus on remediating stress and incorporates a Chinese Confucian cultural context to examine teachers' wellbeing through a self-determination theoretical lens.

The present study was undertaken in the rural province of Jilin and adopts an exploratory sequential mixed-methods design. The initial qualitative phase includes ten semi-structured interviews. The subsequent quantitative phase is via online survey with 1198 participants. The findings from these two phases will conceptualize teachers' wellbeing based on Self-Determination Theory's (SDT) basic psychological needs. Furthermore, rural Chinese teachers' wellbeing will be conceptualized based on Confucianism, to reveal that Confucian culture is compatible with SDT psychological needs theory. This thesis will argue that SDT can be utilized within the Chinese cultural context, and thus can assist in developing deeper understandings about rural teachers' wellbeing in China.

This study will advance the knowledge on teacher wellbeing in rural China. It will enable policy makers and subsequently school systems to refocus strategies, actions and interventions in order to address teachers' wellbeing that will in turn lead to positive educational outcomes for students. This study will also contribute to the international literature on schools and their effectiveness, and importantly will highlight that further research on culturally integrated teacher wellbeing is needed.

Declarations

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint-award of this degree.

I give permission for the digital version of my thesis to be made available on the web, via the University's digital research repository, the Library Search and also through web search engines, unless permission has been granted by the University to restrict access for a period of time.

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Signatur

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List of Abbreviations

AI	Appreciative Inquiry
ANOVA	Analysis of Variance
CFA	Confirmative factor analysis
CFI	Comparative fit index
GDP	Gross Domestic Product
MANOVA	Multivariate analysis of variance
MDS	Multidimensional Scaling
PSW	Psychological wellbeing
RMSEA	Root mean-square error of approximation
SDT	Self-Determination Theory
SWB	Subjective wellbeing
TALIS	Teaching and Learning International Survey
USA	United States of America

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Chapter 1: Introduction

1.1 Introduction

This chapter introduces the study and provides the background context of this thesis, which will lead to the formulation of research objectives and questions. Teachers are key actors who shape our children's learning environment (Hornstra, Mansfield, van Der Veen, Peetsma, & Volman, 2015). However, there is a global shortage of teachers prepared to work in rural areas across the world, and as a result there is a teacher quality crisis in both developing and developed countries and regions (Azano & Stewart, 2015; Lam, 2019; Roberts & Hannum, 2018), including in the United States of America (USA), Australia, Canada and many African States. This thesis is particularly concerned with the claim that "the quality of education is significantly lower in many areas of rural China" (Ben, 2017, p. 20). Closely associated with these two issues (quality education and rural teaching) is teachers' wellbeing (Beltman, 2015; Beltman & Mansfield, 2017; Mansfield & Beltman, 2019; Song, Gu, & Zhang, 2020). This thesis will argue that rural teachers' wellbeing is a critical factor in China influencing teacher quality. Therefore, this introductory chapter provides an overview of the main issues affecting teacher wellbeing in rural China.

1.2 Teacher quality in rural areas

"Teaching is a multifaceted profession" (Lam, 2019, p. 242), and the "roles of teachers in rural China are complex" (Wu, 2018, p. 12). Rural teachers play a crucial role in transforming knowledge to the local community by addressing both modernization and local culture (Mingren & Shiquan, 2018). Quality teachers are not only a precious asset to schools (Flores, 2019), but they are also an asset to the rural education system and the communities in which they exist (Mingren & Shiquan, 2018). Attrition and retention of

quality teachers in rural areas is a pressing issue for policy makers around the world (Tang, 2018).

The projected demands for school teachers between 2016-2030 are demonstrated in Table 1.1, which shows an estimated 100% growth in demand for school teachers in both China and India. This is followed by 50-99% growth in Germany, and 25-49% growth in Mexico. According to Guo, Huang, and Zhang (2019), between 2004 and 2015, the student-teacher ratio is gradually decreasing for both primary and secondary schools of China. Furthermore, according to OECD (2019) there is an ongoing difficulty in attracting new recruits and keeping quality teachers in the teaching profession. This supports the claim that there is an underlying phenomenon of widespread teacher shortages in the 21st Century (Manyika et al., 2017).

Table 1.1

Employment growth and decline for school teachers globally (selected countries)

Occupation labour demand for school teachers, 2016-2030, % Change (in colours)						
School teachers	%Change:	within ±5	5 to 24	25 to 49	50 to 99	100 or more
	United States	**Germany**	**Japan**	**China**	**Mexico**	**India**

Source: Retrieved from McKinsey & Company. Copyright 2017 by Manyika et al.

In general terms, teacher quality is the most critical factor contributing to overall school quality, and is thus the main driver affecting the variations in student learning at schools (Australian Government, 2018; Harding et al., 2019). Low performing teachers exert a significant negative impact on student learning; thus, the quality of school systems is determined by the quality of teachers, and attention should be paid to the retention of quality teachers (Dunn, Hattie, & Bowles, 2019; Gomba, 2015). One issue related to teacher quality in rural communities is vulnerability to 'public finance rearrangements' (Kelly, Steiner, Mazzei, & Baker, 2019). In China, the decentralization of school finances has led to the inequality in the allocation of economic resources in rural areas (Mingren &

Shiquan, 2018; Sargent & Hannum, 2005). However, because teachers have the flexibility to move to jobs with better conditions in China, retaining quality teachers in the rural areas of China is a growing concern (Mingren & Shiquan, 2018; Tang, He, Liu, & Li, 2018).

According to UNESCO, primary and secondary teacher shortages are severe in many education systems around the world (United Nations Educational, Scientific and Cultural Organization [UNESCO] Institute for Statistics, 2016). Table 1.2 below illustrates the percentage of 'total recruitment needed' (TRN) based on the difference between TRN and Replace for Attrition (RFA) figures. It can be seen that teacher attrition is a growing concern, as the percentage of replacement for teacher attrition is expected to increase by 18% globally over the next decade.

Table 1.2

Prediction of worldwide teacher shortages (selected countries/regions)

Regions	Primary and secondary education					
	By 2020			By 2030		
	Total recruitment needed (TRN)	Of which: Replacement for attrition (RFA)	% of total recruitment needed (%)	TRN	RFA	% of total recruitment needed (%)
Northern African	1051	608	57.8%	2689	1781	66.2%
Eastern Asia	2596	2276	87.7%	6557	5822	88.8%
Developed regions	3871	3311	85.5%	10710	9750	91.0%
World	32118	16927	52.7%	68830	48681	70.7%

Source: Retrieved from United Nations Educational, Scientific and Cultural Organization [UNESCO]. Copyright 2016 by UNESCO.

Although there is a global teacher shortage, the mechanisms behind the shortages are not the same across all nations. For example, there are differences in the reasons for these shortages in studies undertaken in the United States of America (USA), Australia, Canada

and across African states. These differences will be discussed in the following sections (1.3 and 1.4) and compared to the situation in China.

1.3 Global teacher shortages

It is a global issue that quality teachers are not distributed fairly (Liao & Yuan, 2017). In developing countries, the causes of teacher shortages are mainly due to the lack of financial resources, whereas in developed countries, isolation and ineffective leadership are the major causes of teacher shortages (Gu, 2014; Handal, Watson, Petocz, & Maher, 2013). The common issues that lead to teacher attrition in both developed and developing countries are the 'performativity culture' which determines educational success is based on bureaucratic monitoring with increased accountability measures, and which thus lowers teachers' wellbeing (Gu, 2014; Mansfield, Beltman, Broadley, & Weatherby-Fell, 2016).

According to Omar, Self, Cole, Rashid, and Puad (2018), the motivation to teach reflects intrinsic factors that lead to positive outcomes for teachers' wellbeing. Adverse teacher wellbeing outcomes are related to extrinsic factors such as salary and employment conditions, which are contributing factors to job dissatisfaction and attrition (Wolf, Torrente, McCoy, Rasheed, & Aber, 2015). In the USA, for example, the challenge to attract and retain high-quality teachers in rural areas has resulted in teacher shortages across all subject areas, and this is seen most acutely in mathematics, science and special education (Heineke, Mazza, & Tichnor-Wagner, 2014; Tracy & Tracie McLemore, 2018).

Australia and the USA have similar teacher retention rates. For example, around half of teachers leave the teaching profession in their first few years of teaching (Parker, Martin, Colmar, & Liem, 2012). Rural schools in Australia are also facing teacher shortages (Hudson & Hudson, 2019), because teachers are inexperienced resulting in a high turnover. Furthermore, rural disadvantage in educational outcomes is of great concern in Australia, more so than other developed countries, according to the Programme for International Student Assessment (PISA) data (Sullivan, McConney, & Perry, 2018). This is especially the case for indigenous communities which have higher teacher attrition rates (Kline,

White, & Lock, 2013). Paradoxically, Cui and Richardson's (2016) study which adopts a positivism theoretical perspective through Australian national data modelling, contends that indigenous teachers have a strong motivation to stay at rural schools to help children who are in a disadvantaged situation.

Other developed countries also experience teacher shortages in rural areas. For example, recent research comparing rural educational disadvantage in Canada and New Zealand by using the OECD's PISA data, revealed rurality in terms of distances between rural and urban, contributes to inequality (Sullivan et al., 2018). In addition, it has been estimated that overall teacher shortages in Canada are also due to the accelerated retirement rate of teachers (Kitchenham & Chasteauneuf, 2010). Despite Canada having abundant teacher graduates, shortages are a lasting issue in rural and indigenous communities and students in rural schools are more than twice as likely to be taught by an inexperienced teacher (Berger, 2018; Kitchenham & Chasteauneuf, 2010). In the rural areas of Canada, in particular there are teacher shortages in the high school subject areas of science, mathematics, special education and second languages (Berger, 2018), which results in many teachers teaching outside their subject areas. Teacher shortage in rural areas remains an ongoing issue for developed countries despite various policy initiatives.

African countries are progressing significantly on primary education students' participation, but due to unequal development between rural and urban areas, there are serious teacher shortages across rural African regions (Weda & de Villiers, 2019). Evidence from Abdul-Rahaman et al. (2018) shows that across African states, children in rural areas are leaving school at younger age, because of teacher shortages occurring in various phases of the school systems (Abdul-Rahaman et al., 2018). According to Brown (2010), Gomba (2015) and Weda and de Villiers (2019), even by using certain strategies such as multigrade teaching and employing migrant teachers, but the situation has not eased. These studies found that teachers are less motivated to teach in rural schools and prefer to teach in urban areas, because living in rural areas is perceived to have a higher risk of disease with worse housing conditions, and teaching in rural schools has less support and professional

development opportunities than teaching in urban schools (Weda & de Villiers, 2019). Another factor contributing to the demotivation for teaching in rural schools is the teachers' own social background. For instance, in Ghana, teachers generally come from a higher socio-economic background in urban areas and are reluctant to accept a rural teaching position (Akyeampong & Stephens, 2002; Olatunji & Ajayi, 2016).

Results from the *Teaching and Learning International Survey* (TALIS) (2014), an ongoing large-scale survey of teachers and school leaders focusing on schools' learning environments since 2008, claim that more than 70 % of teachers agree that if they were to choose a profession again, they would still be willing to be a teacher, suggesting many of them have strong self-interest and motivation for being a teacher (OECD, 2014). Although teachers are self-motivated to stay teaching in rural areas, they eventually leave. This is because rural teachers may have feelings of loneliness, homesickness and cultural differences (Hudson & Hudson, 2019). This is adverse to teachers' wellbeing. As such, it is crucial to sustain teacher wellbeing to attract and retain quality teachers in rural areas.

1.4 Education in rural China

Teacher shortages exist in rural schools in China as well (Xuehui, 2018). In China, there are around 5.8 million teachers, and approximately 65% of these teachers work in rural areas. Among them, 88% are officially certified (*gong ban*) teachers, and 12% are substitute (*dai ke*) teachers who reside in the same village, and often also work as farmers (Sargent & Hannum, 2005; Tang, 2018). The most recent figures from the Chinese Ministry of Education shows the total number of rural teachers is 2.9 million (Chinese News Network, 2019).

Despite the Marxist education system in China, rural societies across China are generally traditional and made up of intimate social groups, deeply influenced by Confucius values (Fei, Hamilton, & Zheng, 1992; Mohanty, 2017, p. 67). However, China has been experiencing unprecedented modernization and urbanization, since the introduction of the open-door policy in 1978 and the rise of the neoliberal market era, however China remains

a developing country (Xiaoying, Xinhua, Shan, Chao, & Biao, 2019). Consequently, as argued by Mingren and Shiquan (2018), the more traditional agricultural societies are moving towards industrial based societies, whereby the legal contract is replacing human feelings. The values of traditional rural societies are changing, whereby material possession and public power are increasingly becoming the criterion to gauge social status. As a result, social-relations are gradually transforming to become more utilitarian-oriented. Rural teachers therefore, are juggling the "organic relationship between transformation and continuing with the traditions" (Mingren & Shiquan, 2018, p. 101). Being a rural teacher is no longer regarded as a divine occupation in China, and the reverence towards rural teachers and their former high social status is vanishing. They are increasingly being marginalized in rural areas, and are gradually losing their intrinsic connections with the rural community (Mingren & Shiquan, 2018). These social transformations are affecting rural teachers' wellbeing.

With the fast pace of urbanization in China over the past decade, the proportion of urban dwellers has increased from 37.7% in 2001 to 57.4% in 2016 (National Bureau of Statistics China, 2002 and 2017). Due to the declining number of rural dwellers, the class sizes in rural schools are getting smaller, and almost all of the rural teachers under 50 years of age are now settled in urban cities or towns (Mingren & Shiquan, 2018). Li (2012) highlights there are generally two types of rural schools in China: suburban rural schools which are in the rural regions with close proximity to a large or medium size city; and remote rural schools which are at least ten kilometres away from a large or medium size city. The poverty incidence rate in the rural regions of China has decreased from 97.5% to 4.5% from 1978 to 2016 (Xiaoying et al., 2019). Significant inequalities between urban and rural teaching exists in China; these include teachers' conditions of salary, pensions, workload and living/working conditions. These are reflected in educational funding, resources and teachers' educational attainment, salary and medical care. There is less funding and professional development for rural teachers, but more decentralized funding compared to the urban counterparts (Kim, 2019; Wu, 2007; Yang, 2006).

There is a large gap in conditions between rural and urban teachers. Rural teachers do not have a pension compared to urban teachers, and rural teachers work much longer hours than urban teachers (Li, 2012). Furthermore, the teacher recruitment policy has shifted from a system of a guaranteed placement of teaching graduates ("Tongyi Fenpei") to the free employment under contract ("Jiaoshi Pinren Zhi"). All of these unique factors appear to be contributing to the rural teacher shortages, and thus also the lower quality of teachers willing to teach in rural areas (Sargent & Hannum, 2005; Xuehui, 2018).

There have been deep structural, cultural and curriculum reforms in the field of education in China over the past two decades, which is affecting teachers' pedagogical roles (Chen, Brown, Hattie, & Millward, 2012), and also their social status and wellbeing (Peng et al., 2014). For example, these educational reforms are striving to shift to learner centered approaches (Mu et al., 2013), and to focus on students' all-around development (Chen et al., 2012). However, traditionally the Chinese education system has had an emphasis solely on students' exam marks. Therefore, these reforms are having a profound effect on teachers' motivations, and as this thesis will demonstrate on their wellbeing.

According to Liu and Onwuegbuzie's (2012) study, around 40% of teachers were intending to leave the teaching profession in China. Xiao and Wu (2018) conducted a meta-analysis of Chinese teachers' mental health data from 1991 to 2014. It revealed that the level of mental wellbeing was on a downward trend for rural teachers, and there were more serious mental health concerns for rural teachers than urban teachers.

These negative trends could be due to the socioeconomic changes witnessed across China leading to the conflict of different cultures and values? Could it be a result of the rapid change of information technology and mass media, higher expectations on teachers and competition in teaching? It is clear that teacher wellbeing has emerged as an important issue and needs to be addressed (Beltman & Mansfield, 2017), and thus it is timely to conduct research on teachers' wellbeing in rural China. Fernandes, Peixoto, Gouveia, Silva, and Wosnitza (2019) stress the importance of incorporating local contextual factors when studying teacher wellbeing. However, despite the dearth of literature on the topic of teacher

wellbeing in rural China, the few studies that have been conducted (i.e., Kim, 2019; Tang, 2018; Tang et al., 2018) only applied western theories to interrogate rural Chinese teachers' wellbeing without considering the local cultural context of rural China.

Specific social and cultural values and contexts may influence teachers' wellbeing. For example, although teaching in the USA is traditionally regarded as a low social status and low pay profession, whereas teachers have the autonomy to decide how and what to teach. In contrast, teachers in China are relatively more respected with stable remuneration, but they are constrained to defined standards in teaching (Lin, Shi, Wang, Zhang, & Hui, 2012). The present study aims to investigate rural Chinese teachers' wellbeing within their local cultural context, and in terms of Confucian cultural values. A significant cultural issue affecting rural teachers' wellbeing in China, is the issue of the 'left-behind children'.

1.4.1 Left-behind children

There are 61 million "left-behind children" in rural China which according to Kim (2019) is projected to increase. This is a unique phenomenon influencing teacher wellbeing in rural schools of China. Due to the liberal economic reforms based on the open-door policy to global economic opportunities that have occurred in China since 1978, 220 million migrants from rural villages have moved to 'urban cities' of China (National Bureau of statistics of China, 2015), and the rate of such migration is expected to continue (Li, Jia, Wu, Yan, & Liu, 2018). An increasing number of migrants choose to move to urban cities for better paid jobs and leave their children behind in the rural areas (Kim, 2019). These children are called the "left-behind children" and are normally cared for by their grandparents or relatives. As such, there are concerns for these children's psychological health, and they are often described as undisciplined and unruly (Kim, 2019).

While these migrant workers are often marginalized within urban communities, of even greater concern are their children, as they are considered the most disadvantaged group of children in China (Kim, 2019; Song, Zhu, Xia, & Wu, 2014). For example, some of these

children can only see their parents once a year during the Spring festival. An absence of parental guardianship and high-quality teachers in rural schools is a serious concern for these children, impacting their ability to grow up as well-developed and well-educated citizens (Song et al., 2014). These children's mental and physical health is worse than their urban counterparts as they suffer from low self-esteem and developmental stunting (Dai et al., 2017; Zhang, Li, & Xie, 2007). Therefore, rural teachers are vital for the success of these disadvantaged children at school (Reddy, Fabiano, & Jimerson, 2013).

However, it is concerning that the lack of quality teachers in rural China could amplify the situation. Disadvantaged children need quality teachers, and in certain ways, these low performing children add stress on rural teachers, which may adversely affect teachers' wellbeing. There are two kinds of teaching positions in schools of rural China; one is teacher in charge of a class who is responsible for almost all aspects of students' life at school; the other is the subject matter teacher who is only responsible for teaching a particular subject (Zhong, 2017). The teacher in charge of a class takes the main responsibility of looking after these "left-behind children".

In China, students' academic achievements continue to be a determinant for their life paths, their reputations of themselves and their school's reputation (Liu, Li, & Li, 2019). Teachers usually are under excessive pressure from both parents and schools to focus on children's academic performance (Gu & Li, 2013). However, the "left-behind" children's parents are not accessible; and furthermore, school education is not considered important in rural China because it does not prepare rural students for the future job market (Zhou & Shang, 2011). Although rural society does not care about school education, rural teachers are energized towards ethically and morally appropriate behaviour (Arvanitis, 2017). As such rural teachers have a strong sense of responsibility to improve rural students' outcomes. Teaching in rural China is not an easy task. However, teacher education programs have an unbalanced focus on subject matter expertise, such as mathematics, overlooking wellbeing for teachers themselves (White & Murray, 2015). So, it is important to focus on teachers' wellbeing in rural China. The disparities in urban and rural lives and

school education, as well as unique issues such as ‘left-behind children’ in rural China, results in rural teacher’s wellbeing being an area of concern.

1.4.2 Teachers’ wellbeing in rural China

Teachers’ wellbeing is important because teaching is often considered a caring profession and requires emotional work. Therefore, teachers need to provide emotional and social support to their students (Lam, 2019). Rural teachers in China are also viewed as moral agents under the influence of Confucianism, and they shoulder collective responsibilities for their students (Kim, 2019; Mingren & Shiquan, 2018). However, this has become challenging in concurrent China, as society is changing, because the students’ social and emotional needs have become more complex (Peng et al., 2014).

Rural teachers are poorly trained and have limited professional development opportunities which contributes to teacher attrition and teacher shortages (Zheng, Liu, Lin, & Li, 2018). As a result, teaching subjects for many rural teachers are not in line with their major studied at colleges or universities (Mingren & Shiquan, 2018). There is a growing concern about the decline of students’ performance due to the shortages of quality rural teachers. This is partially caused by demotivation found in teachers in lower income rural regions (Wolf et al., 2015). To explore and understand this phenomenon, Wolf et al.’s (2015) study embraces three dimensions of wellbeing to conceptualize teachers’ professional wellbeing under a deficit model which emphasizes risk factors that contribute to teachers’ turnover. The first dimension is *motivation* which refers to the underlying mental processes that affect individual behaviour in regards to workplace tasks (Pinder, 2014). The second dimension *burnout* is characterized as a negative psychological status in response to work-related stress, and the third dimension, *job dissatisfaction* is primarily related to teacher attrition (Wolf et al., 2015).

Although rural teachers are often not as well trained as urban teachers in China, the wellbeing of rural teachers can play a key role in the success of rural students in China, despite the limited education resources compared to the urban counterpart. Therefore, rural

teacher quality is essential for a successful school education. Rural teachers play a key role in students' learning (Hazel & McCallum, 2016). Yet, the importance of teacher-related research has not come to the local government leaders' attention for various reasons such as the limitation of resources (Li, 2012). The challenging circumstances for rural Chinese teachers causes veteran rural teachers to outflow to urban schools (Li, 2012). The shortages of quality teachers in rural areas have a profound negative impact on student achievement, as access to highly effective teachers has become a serious equity issue (Behrstock-Sherratt, 2016). Surprisingly, some rural high school graduates achieve better academic results and secure a place in the top-tier universities in China (Postiglione, Ailei, Jung, & Yanbi, 2017).

A recurring reason for rural teacher shortages among developed countries is the feeling of isolation (Collins, 1999; Kitchenham & Chasteauneuf, 2010; Lomas, 2015). However, there is no clear acknowledgement whether isolation is the prominent factor that 'demotivates' teachers in the rural areas of China. On the contrary, it seems that an abundance of 'social capital' is the cause of less satisfaction as a rural teacher (Mingren & Shiquan, 2018; Sargent & Hannum, 2005). Could this phenomenon be caused by the pay and working conditions in rural China? Or is it due to the possibility that teachers with more 'social capital' will be more tempted or lured into other better paying jobs with better working conditions? Is it the case that social isolation is a double-edged sword? Is loneliness detrimental to teachers' wellbeing, and does rich social capital lead to job dissatisfaction and teacher attrition?

There are a limited number of studies on rural teacher wellbeing in China, and they yield contradictory results. For instance, a study on rural Chinese teachers' subjective wellbeing by Tang (2018) indicated that salary and school facilities were not significant indicators of teacher wellbeing. However, Xuehui (2018) pointed out that a rural region's income per capita and the presence of a village enterprise were negatively correlated with teacher satisfaction. Chen and Yang (2009) found that rural teachers in China have a lower level

of job satisfaction, whereas Liu and Teddlie (2009) contended that rural teachers possess higher job satisfaction than their urban counterparts.

A possible explanation for these contradictions in the literature is the definition of 'teachers' wellbeing' based on different wellbeing conceptualizations. To be specific, one aspect that impacts on teachers' wellbeing is job satisfaction (McCallum, Price, Graham, & Morrison, 2017). However, viewed from the perspective of the Eudaimonic wellbeing, rural teachers show high level of job satisfaction, because they believe their work is meaningful and crucial to help rural children to grow up as well-educated citizens. However, from a Hedonic wellbeing perspective, different results are reported in relation to job satisfaction. Thus, the difference between Eudaimonic and Hedonic wellbeing may account for the inconsistency in these research results (Huppert, 2014).

Furthermore, it can be argued that teacher wellbeing is related to how well teachers teach (McCallum & Price, 2016). This has emerged as an important issue across various countries because teachers are part of the 'civic soil' whose jobs are to cultivate the functional and healthy next generation of global citizenry. The literature has reflected that the genuine care of children, strong community and colleague support, and the capacity to function independently in the classroom, all contribute to teachers staying and thriving in the teaching profession (Gomba, 2015; Marston, Courtney, & Brunetti, 2006). This reveals a close link between needs fulfilment and teacher wellbeing, which rationalizes the use of Self-Determination Theory (SDT) as a theoretical lens for the study. SDT and conceptualizations of wellbeing and teacher wellbeing will be further discussed in Chapter 2 and 3.

According to Gu (2014, p. 506) addressing enabling factors of teachers' optimal wellbeing "would be more fruitful and educationally more meaningful". However, there is an imbalance of factors, such as lack of social support, high job demands, and poor teacher autonomy (Heineke et al., 2014), which contributes to the ill-being of teachers. Little research has been done to explore and evaluate what factors contribute to wellbeing and the optimal functioning to teach in rural China. The literature on teacher quality and teacher

shortages has acknowledged that school teaching is one of the most highly stressed professions (McCallum et al., 2017), however, there is a scarcity of both theoretical and empirical research on teacher wellbeing for developed countries and especially developing countries like China. This highlights the need for research that explores factors that motivate rural teachers to teach in rural areas, to thrive to achieve their optimal wellbeing, and scaffolds the understanding of the meaning of rural Chinese teachers' wellbeing.

1.5 Initiatives that address rural teacher shortages

Globally, policy makers have endeavoured to address teacher shortages in rural areas. In the USA, policy makers have acknowledged pressing issues such as how the lack of support from school and district leaders exacerbates teacher shortages in rural areas; they have tried to attract rural teachers by emphasizing the benefits of teaching in a rural school, including increased opportunities for leadership, smaller class sizes, and a greater teacher impact on decision making, offering rural-specific administrative support to rural teachers, and attracting potential candidates with rural backgrounds to teach in rural areas (Podolsky, Kini, Darling-Hammond, & Bishop, 2019; Tran, Smith, & Fox, 2018). In Canada, salary incentives have been provided to address teacher retention to avoid teachers feeling inclined to move to urban areas where they can earn higher salaries (Berger, 2018). Besides the salary incentive strategy, Canada also offers rural teachers professional development opportunities (Kitchenham & Chasteauneuf, 2010; Sullivan et al., 2018). These strategies highlight the importance of ensuring equality of pay and career advancement in rural teaching communities, compared to urban settings.

In the Australian context, for example teacher shortages are a persistent problem for rural schools. Cuervo and Acquaro (2018) highlighted that teachers feel professionally and personally isolated, which is a prominent factor in rural teacher shortages across Australia. Both the State and Federal governments in Australia have offered 'isolated teacher allowances', reduced rents, the inclusion of rural components in pre-service student teachers' courses, subsidised travel to big city centres (during time-off), in-service remote

school professional development, and rural teacher compensation packages (Cuervo & Acquaro, 2018). These aim to address the professional, organizational and personal factors that contribute to rural teacher attrition (Handal et al., 2013).

Across Africa seventy percent of the population live in rural areas (Olatunji & Ajayi, 2016), and there are poorer facilities and conditions in these rural schools. There has been a focus on recruiting teachers who are from rural backgrounds to counter this negative, however, this strategy has not been as effective as expected (Gomba, 2015). Apparently, it is unrealistic to suppose teachers with a rural background can guarantee their commitment to rural schools (Reid et al., 2010). Abdul-Rahaman et al. (2018) have suggested that social amenities need to be improved in the rural areas across Africa in order to attract more and better rural teachers. Other strategies used to ensure rural teachers stay rural, have been to emphasize they can work and live close to their spouses and families, and they have also offered monetary incentives (Gomba, 2015). Offering salary incentives appears to be a common strategy to retain quality rural teachers worldwide. This is because salary is one of the most important factors in teacher retention (Kavenuke, 2013), with unsatisfactory salaries being the major cause of teacher attrition (Gomba, 2015).

In rural China a number of initiatives have been in place to retain quality rural teachers (Tang, 2018; Xue & Li, 2015). For example, the Free Teacher Education Policy (State Council, 2010) was introduced to attract university graduates to serve in impoverished rural schools. This scheme offered students an exemption to paying university tuition fees. However, the policy initiative has locked extrinsically motivated teachers in rural schools, and thus has been proved ineffective as a policy to retain quality teachers (Liao & Yuan, 2017). To ease the teacher shortage problem in rural China, a strategy of recruiting short-term volunteer teachers was adopted. However, the effectiveness of this initiative has been concerning because the volunteer teachers lacked training, supervision and cultural competency (Zhou & Shang, 2011).

The Special Post Teacher Plan is another Chinese government initiative to close the gap between rural and urban school education. The aim is to encourage and recruit qualified

university graduates to teach in rural schools for a period of three years to enhance rural school teacher quality. From 2007 to 2009 around 104,621 teachers were recruited to teach in central and western rural China (State Council, 2010). However, this initiative is facing a number of challenges: First, the majority of the special post teachers are using rural school teaching as a spring board for better job (Yi & Liu, 2010), and they do not want to stay in rural schools after the completion of the three year post. Second, for those special post teachers who want to stay because their families are in these rural areas, there are no permanent teaching positions available; third, some of the special post teachers do not know how to adapt their teaching to rural students' special needs (Wang & Liu, 2013). This shares some similarities with the challenges faced by Australian rural teachers and the initiatives to retain them. According to Cuervo and Acquaro (2018, p. 395), the rural teaching experience "was used by the majority of participants as a stepping stone or learning experience to return fully-trained teachers to an urban school". Therefore, given that there have been a number of various initiatives across the world to encourage and retain good teachers in rural areas, but these are mostly ineffective, this present study offers a timely focus on the issues affecting teacher wellbeing in rural China.

1.6 The present study

It is clear that research attention is needed to focus on rural teachers' wellbeing in China. Ensuring teachers' wellbeing is an important avenue to ease the teacher shortage problems across rural China. Teacher quantities are also connected to teacher quality, which in turn is key to the issue of disadvantaged rural education (Yin, Dooley, & Mu, 2019b). Research shows that teacher quality is the crux for positive student outcomes and school effectiveness (Dunn et al., 2019; Harding et al., 2019). Teacher wellbeing affects the quality of teaching (Mingren & Shiquan, 2018), thus teacher wellbeing is closely related to teacher quality and wellbeing can be regarded as one of the key aspects of rural teacher quality.

The purpose of the study is to develop a deeper understanding of teacher wellbeing by exploring how socio-demographic and cultural factors contribute to teachers' wellbeing.

The specific focus here is on the conceptualization of rural Chinese teachers' wellbeing based on Confucian values. The present study aims to provide more insight into rural teachers' interpretation of wellbeing, and identify the most promising levers of change to enhance teachers' wellbeing. Furthermore, this study will provide a meaningful contribution to teacher education programs.

This study uses Self-Determination Theory (SDT) to explore the factors that contribute to the optimal wellbeing for teachers, and to those factors that foster quality teachers in a rural Chinese cultural context. SDT basic psychological needs of relatedness, competency and autonomy offers a useful perspective to explore teachers' work-related wellbeing (Blustein, 2008; Deci & Ryan, 1985). SDT connotes the feeling of authenticity on the fulfilment of the three basic psychological needs which enables individuals to have a sense of control of their own lives (Deci & Ryan, 1985). However, few studies have adopted SDT to investigate teachers' wellbeing (Collie, Shapka, Perry, & Martin, 2016).

Previous literature has focused on teacher attrition and retention, however, the teachers who stay 'especially the best' are overlooked (Gomba, 2015, p. 56). Teachers' wellbeing has not been considered as crucial to teacher retention, this is because rural teacher retention has a lower profile than rural teacher attraction (Handal et al., 2013). As such, previous studies accentuated the aspects of school infrastructure, human capital and economic resources. As stated above, there is a dearth of studies focusing on the 'soft' aspects of teacher retention, such as teacher wellbeing (An, Hannum, & Sargent, 2007; Harding et al., 2019). Flores (2019) argued that the narrow conceptualization of teacher quality has been specifically linked and constrained to easy-to-measure factors (e.g. years of teaching experience), standards, performativity and managerialism, which overlooks the contextual aspects, such as, teachers' wellbeing, which is important to teacher quality. According to Paterson and Grantham (2016) to foster teachers' wellbeing, schools must establish the meaning of wellbeing under the cultural context that the meaning is derived. Also, Fernandes et al. (2019, p. 694) addressed the importance of studying teacher wellbeing and related factors within a particular context by avoiding "hyper-individualisation" in terms

of solely focusing on individual characteristics (e.g. self-efficacy). The present study addresses this gap in the literature to focus on teacher wellbeing, and contextualize and operationalize rural teachers' wellbeing in China founded on Confucian culture.

1.6.1 Research questions

The present study examines the emerging field of teachers' wellbeing based on exploratory sequential mixed-methods methodology to inform the overarching research question: *What is the nature of rural teacher wellbeing within the Confucian cultural contexts of China?*

Two sub-questions assist the answering of the overarching research question:

1. What multiple factors contribute to teachers' optimal functioning and wellbeing in rural China?
2. To what extent does SDT prescribe psychological needs fulfilment and how does Confucian cultural factors contribute to teachers' wellbeing in rural China?

1.6.2 Objectives

The overarching aims of this study is to: 1) provide a Chinese cultural context to the specific understandings of teacher wellbeing from the perspective of SDT to explore what factors contribute to teachers' optimal functioning and wellbeing; and 2) explore the relationship between teacher wellbeing, basic psychological needs satisfaction, and rural Chinese culture. Western notions of wellbeing support Hedonia and Eudaimonia philosophical traditions founded by Aristotle (Shin & Lyubomirsky, 2017). This study will contextualize and operationalize rural Chinese teachers' wellbeing according to the core concepts of Confucianism. The present study will expand existing wellbeing models, based on SDT through a re-contextualization of these models within a Confucian cultural context to understand the unique circumstances and issues facing the teaching profession in rural China.

This study aims to provide research that will assist teachers to understand what factors contribute to their own flourishing within the profession, and it will also provide empirical evidence for educators, social activists and government officials to develop the best supports or interventions necessary. To enhance the quality of teachers in rural China, and specifically to close the gap between urban and rural teacher quality and quantity. This study aims to provide an in-depth analysis of the dynamics of teacher wellbeing in rural China, which will be of interest to teachers and educators around the world and in China. This may match the unique needs of rural Chinese teachers and be beneficial for easing rural teacher shortages and the overall quality of rural school education. This research has the following specific objectives:

1. To identify the specific Confucian cultural factors that positively affect teachers' wellbeing in rural China.
2. To examine the multiple factors that positively affect teachers' wellbeing in rural China and interrogate the effects of the factors on multi-dimensions of teacher wellbeing.
3. To elucidate the meaning of wellbeing for rural Chinese teachers.

The significance regarding the theoretical contributions of the present study will be further discussed in Chapter 3.

1.7 Summary

This introductory chapter has outlined the major issues that arise from teacher shortages in rural areas both globally and specifically in China. The concerning issue of left-behind children and rural teachers being less paid and with heavier workloads has implications for the education and schooling of children, also affecting overall rural teacher quality.

Teacher shortages in rural areas are a global problem. Numerous causation factors have been identified, including six overarching themes. They are job (dis)satisfaction, leadership behaviour, workload stressors, voluntary turnover, teacher wellbeing and self-motivation (Olatunji & Ajayi, 2016). Table 1.3 compares teacher shortage phenomenon between China and western countries in terms of teacher shortage subject areas, factors contributing to the

shortages, the impact of the teacher shortages and the subsequent interventions being trialled by governments and educators to lure better teachers into the profession or at least retain those teachers already there.

Table 1.3

Comparison of China and Western countries' rural teacher shortage

	China	Western countries
Teacher shortage subject areas	Physical Education, Arts and Music	Mathematics, science and special education
Factors contribute to the shortage	Lower salary, unsatisfactory medical care, working environments and professional development; heavy workload, rich social capital may potentially lure rural teachers to higher paid job	Isolation, dis-satisfied with school administrators; Negative working conditions; Low salary; Emotional burnout;
Impact	High attrition rate, inexperienced and lower quality teachers	
Interventions	Amalgamation of rural schools; special *Post Teacher Plan*	Professional development, Leadership opportunities, smaller class size, higher pay

Source: Author's synthesis of data and discussion above

Teaching is emotionally demanding, enhancing teachers' wellbeing by making teaching a more attractive career is essential to attract quality teachers (Gu, 2014). Teachers' wellbeing plays a crucial role in teacher quality, and this is closely related to teacher shortages. Teachers need to own and enhance their own wellbeing, and this would be beneficial to the teaching and learning (Margolis, Hodge, & Alexandrou, 2014). Fundamentally, it is imperative to gain an in-depth understanding of rural teachers' wellbeing within the Chinese social and cultural context. The present study will develop this understanding through an appreciative inquiry (AI) informed mixed-methods approach to discern what wellbeing means to rural Chinese teachers.

1.8 Structure of the thesis

This introductory chapter has introduced the topic of the thesis and the background to the study, including a rationale for the study on rural teachers' wellbeing. Chapter 2 will critique relevant literature on the topic of rurality, wellbeing, teachers' wellbeing and their relations with eastern Confucian culture. Chapter 3 will develop the theoretical framework, identify the research gaps and theoretical significance of the present study. Chapter 4 will focus on the research methodology and design, which uses a mixed-methods approach combining AI, based on semi-structured interviews and a large-scale survey. Chapter 5 and 6 will provide qualitative and quantitative data analysis of phase one and two of the study. Chapter 7 will discuss the findings in response to the research questions introduced here in the introduction. This discussion chapter will thus be divided into three parts: Part 1 identifies the multiple factors that contribute to teachers' wellbeing in rural China; Part 2 finds out to what extent psychological needs fulfilment and Confucian cultural factors contribute to teacher wellbeing; and, Part 3 answers the overarching question of the present study by elucidating the meaning of rural teachers' wellbeing within the Confucian cultural context of China. Chapter 8 will conclude the study and highlight the implications of this research, contributions to the field, the limitations to this research, and suggest future research directions. Figure 1.1 visualizes the overall structure of the present study.

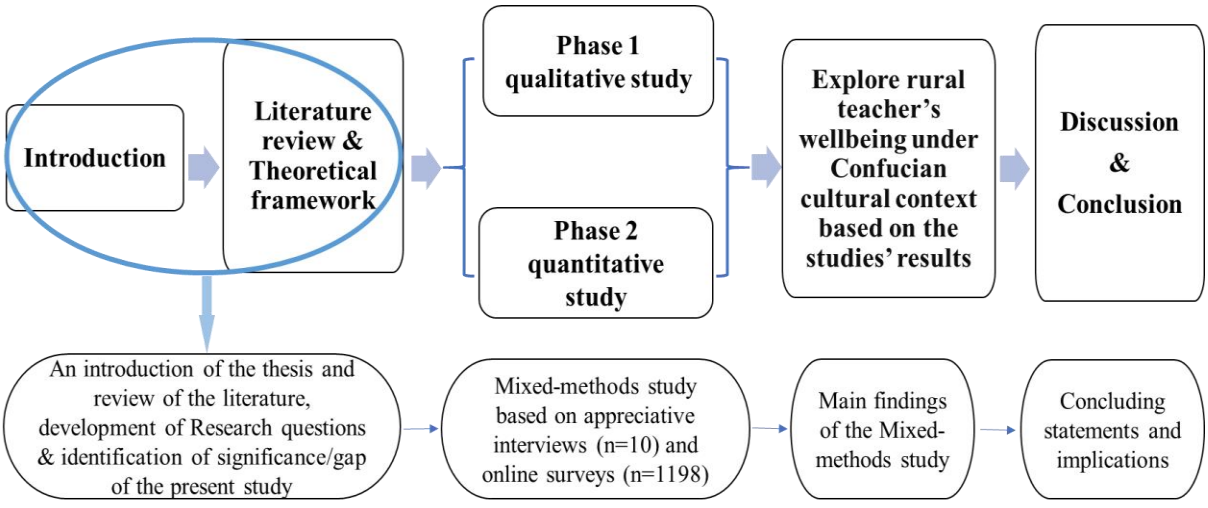

Figure 1.1. Summary of the thesis' structure

Chapter 2: Literature Review

2.1 Introduction

Teacher wellbeing has a direct influence on teacher quality and student outcomes. Therefore, fostering teacher wellbeing is crucial to ease teacher attrition and to benefit the future of education (Huang, Yin, & Lv, 2019; Roy, 2019). However, to date, little attention has been paid to rural teachers' wellbeing in a Chinese cultural context. To obtain an in-depth understanding of wellbeing and teacher wellbeing in the cultural context of rural China, a comprehensive search of literature through main electronic academic databases was conducted. Using a thematic approach (Figure 2.1) based on the research questions and objectives outlined in the introduction chapter, the literature being reviewed here is restricted to peer-reviewed studies mainly published in the English language, however, a few studies in the Chinese language have also been included to ensure an adequate coverage of the relevant literature on relevant research.

There is a significant amount of literature focusing on student wellbeing (Acton & Glasgow, 2015, p. 100), but to ensure the relevancy to the wellbeing of rural teachers in China. This literature review focuses on rurality, wellbeing, teacher wellbeing (Figure 2.1). Student wellbeing is not included in this literature review unless the literature focuses on the relationship between teachers' and students' wellbeing.

Keyword searches were undertaken in databases including ERIC, A+Education, EBSCOhost, Proquest, SAGE journals, Education Research Complete, China National Knowledge Infrastructure (CNKI) and Google Scholar by using the following terms: wellbeing, rurality, rural China, teacher wellbeing, culture, Confucianism, Eudaimonic and Hedonic. Also due to the different spellings of wellbeing, the searches used well*being to ensure the coverage of related literature. This literature review aims to elucidate the meaning of rurality, wellbeing and teacher wellbeing. This review also places great

significance on culture in the complex theoretical landscape of wellbeing and highlights the differences in wellbeing between eastern and western cultural contexts.

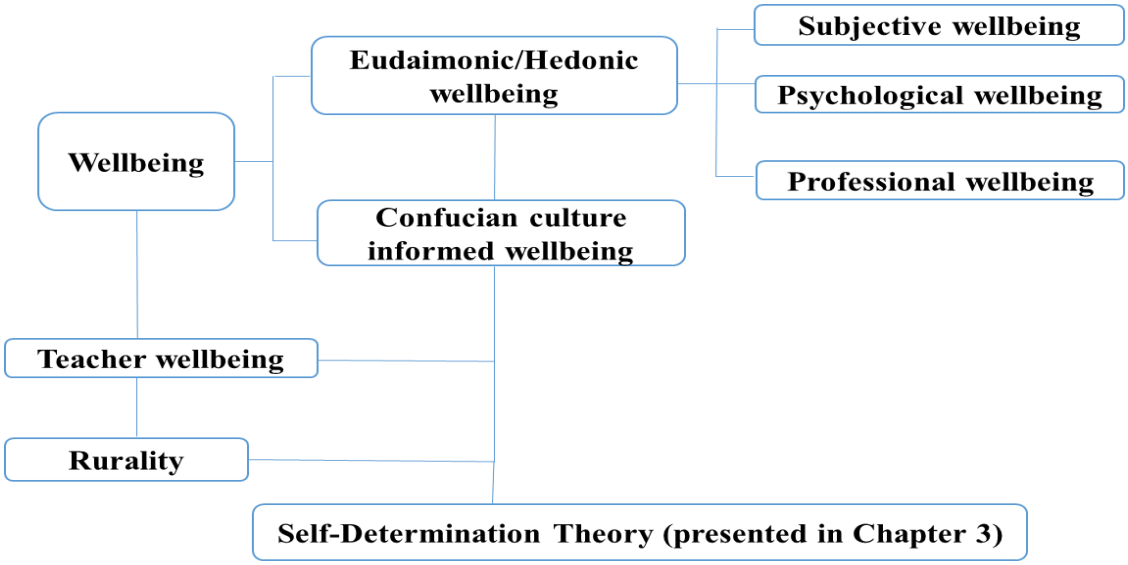

Figure 2.1. Processes used for the literature review

2.2 Rurality

The concept of rurality is hard to *define* because of geographical, environmental, sociodemographic and rural characteristics (Humphreys, 1998; Roberts, 2019; Roberts & Hannum, 2018), and it is also difficult to precisely *operationalize* the concept of rural (Edwards & Matarrita-Cascante, 2011). Roberts and Hannum (2018, p. 1) suggest that we do "not engage critically with what rural means" because of its "multidimensional nature" which has not been fully explored and understood. There is a lack of consensus on the definition of rurality. Rurality is a concept that emerged from the indication of rural space. For example, Harrington and O'Donoghue (1998) defined rurality according to the distance between the nearest urban node. The main purpose of these definitions of rurality is to contrast the rural with the urban (Beynon, Crawley, & Munday, 2016).

This has resulted in the inconsistent taxonomies of rurality. For instance Murray et al.'s (2004) study used accessibility/remoteness to measure rurality, which is based on the road distance to the town centre and can be seen as a geographical index. However, this scale is

only a partial snapshot of rurality (Murray et al., 2004). This raises the concern that research on rurality tends to overlook the agency of rural communities, especially the strength within rural communities (Moletsane, 2012). Broader perspectives on rurality have emerged. These views imply rural communities are complex social systems, as such rurality should not be a unidimensional construct (Hazel & McCallum, 2016). Humphreys (1998) suggests we incorporate the aspects of community relationships, demographics of populations, environmental and economic variables. Edwards and Matarrita-Cascante (2011) argue the formation of the concept of rurality is based on the perspectives of urban residents, as such rurality is largely operationalized as simple lifestyle, natural resources, close family ties and traditional cultural values.

Roberts and Green (2013) suggest that rurality needs to focus on rural social space. This echoes with the view of Caschili, De Montis, and Trogu (2015), who argue rurality can be understood based on the social-cultural life of rural communities. Trussell and Shaw (2009) emphasize that rurality is largely a socially constructed concept underpinning a subjective conceptualization of rurality. While Horton (2008) constructs rurality based on cultural meanings, Cruickshank (2009) defines rurality in a different way, which focuses on local or regional autonomy. In addition to the above definitions of rurality, Edwards and Matarrita-Cascante (2011, p. 449) further suggest "rural research must consider the contextual contribution of rurality", for example, socio-demographic variables and cultural contexts. Moreover, Cruickshank (2009) defines rurality in a different way, which focuses on local or regional autonomy.

Research methodologies vary for rurality studies. According to Shen, Wang, Quan, and Xu (2019, p. 98) rurality is used to denote rural space. Differences between rural, urban and rural development, and the focus of rurality research, lies in the areas of "understanding rurality, measure rurality and how rurality changes". Qualitative research methods are used in rurality studies. For example, Hazel and McCallum (2016) use case studies to investigate rural teachers' employment in Australia. Rurality has also been studied as a quantitative index, such as Beynon et al. (2016) who use factor analysis to construct the index of

rurality. Waldorf (2006) argues the index may reflect the multi-dimensional nature of rurality. However, these dimensions only focus on population density and demography (Beynon et al., 2016). Roberts and Green (2013) support the compatibility of mix-methods research methodology for rurality research, as a mixed-methods approach can be used to emphasize the particular problem being researched.

Rurality can be understood through Bourdieu's (1984) theories. Bourdieu's theory including habitus, capital and field (Richardson, 1986). To be specific, *capital* has the potential capacity to reproduce itself in identical and expanded forms, either economic, cultural, social, or symbolic, and is seen as a complex social space; *field* is the social setting with desirable resources i.e. capital, in which embodied social structure i.e. habitus that operates; and variations in *habitus* is construed by differences in capital (Bourdieu, 1984). Bourdieu's social theory asserts that the rural social space as a practice encompasses the interaction of field and habitus (Reid et al., 2010). Habitus concerns cultures and values which is a concept of "mental structure" (Li, 2013, p. 835). In comparison to the metropolitan, rural is described as deficient, backward and socially undesirable, which Bourdieu would define as a kind of symbolic violence (Reid et al., 2010). A rural social space is the field, which is the sum of habitus and capital, and capital will contribute to wellbeing (Wijesekera, Alford, & Mu, 2018).

However, Beynon et al. (2016) argue that the traditional definitions of rurality overlook the intricate social dynamics of rural locality. Local economy, community wellbeing and sense of belonging can be factors elucidating rurality (McManus et al., 2012). Rurality is interconnected with social, moral and cultural values in a rural space that rural dwellers engage. These views support the claim by Cloke and Milbourne (1992) that rurality is a social construct. According to Cloke, Marsden, and Mooney (2006) rurality can be described as a three-fold rural space model that integrates rural localities, formal representation of rural, and everyday rural life (see Figure 2.2). Furthermore, Cloke et al. (2006) argue that rural community and local culture manifest rurality, and the changing society impacts on rurality. Reid et al. (2010) constructed the rural social space concept

that combines both geographic and cultural dimensions, as such rurality can be regarded as a set of relationships, behaviors and meanings generated by people living in a particular rural place.

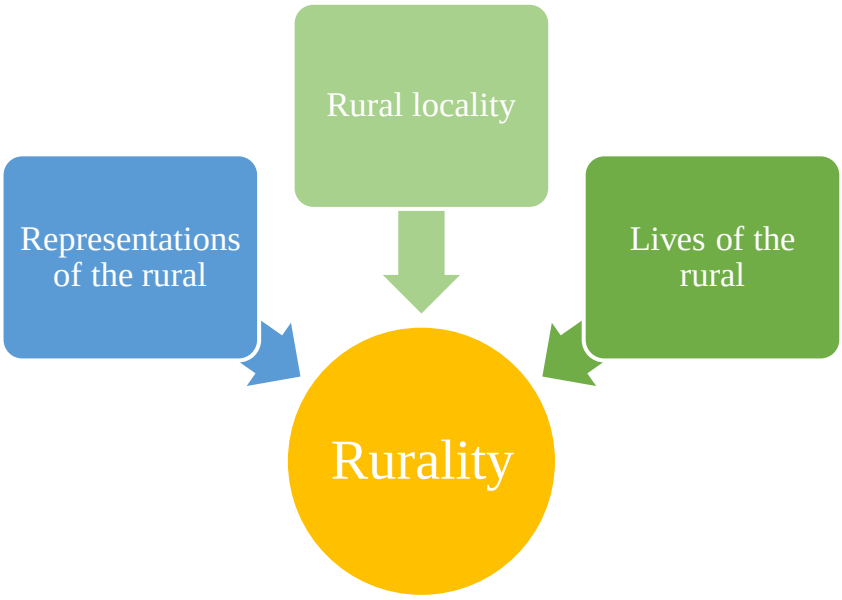

Figure 2.2. Rurality model. Adapted from The Handbook of Rural Studies (p. 52) by Cloke, Marsden and Mooney, 2006, London: United Kingdom.

The definition of rurality is based on its theoretical perspectives, which influence the scope of the research (Koziol et al., 2015). There are three theoretical perspectives regarding rurality. First, Brown and Schafft (2011, p. 5) suggest rurality can be conceptualized based on "population and settlement structure and landscape", and most quantitative research on the *rural* is built on this perspective focusing on demographic and spatial theories (Koziol et al., 2015). However, "rural places are increasingly less distinct from urban places", as trade liberalisation, environmental problems and ageing populations "radically alter rural spaces" (Pini & Mayes, 2015, p. 28). Cloke et al. (2006) propose political-economic theories of rurality focusing on distinctions between rural and urban, as such, the distinctions are used as a premise for educational studies. However, such distinctions are "asserted rather than explored or questioned" (Pini & Mayes, 2015, p. 27). Socio-cultural theories shifted perspectives on rurality to community (Pini & Mayes, 2015),

they focus on cultural networks and values and contribute to social-cultural conceptualizations of the rural (Koziol et al., 2015).

Although rurality is a multifaceted construct which contain complex perspectives and aspects, Zhao, Ameratunga, Lee, Browne, and Exeter (2019) caution us to focus on the aspects of rurality according to the objectives of the study. The present study aims to explore the positive connection between rurality and rural teachers' wellbeing, in order to shift the focus of rurality away from demographic variables only. Pini and Mayes (2015) have argued that social-cultural perspectives enrich the understanding of rurality. For example, a traditional measure of rurality, such as income, only provides a partial view of rurality (Cloke & Milbourne, 1992), and does not capture the social, cultural and psychological aspects of wellbeing for rural teachers. Therefore, the present study aims to explore the influential and differentiated impacts of Confucian culture on rural Chinese teachers' wellbeing. Thus, the present study adopts Reid et al.'s (2010) conceptualization of rural social space focusing on the rural demographics "across both geographic and cultural formations" (p.262).

2.2.1 Rurality and rural teachers in China

Zhang (1998) introduced the western concept of rurality into Chinese societal context around twenty years ago. The focus of rurality studies in China lies in the spatial distribution of rurality and rural development types (Xiaoying et al., 2017). For example, demographics and economic activity are used to set the criteria for distinguishing between urban and rural (Roberts & Hannum, 2018). In China, rurality is also the identity of rural residency (Hukou) which is regulated in the household registration system. This constrains the free movement between the rural and urban regions (Roberts & Hannum, 2018). In comparison to metropolitan areas, rural areas in China are commonly described as deficient and socially undesirable (Kim, 2019; Li et al., 2018; Mingren & Shiquan, 2018).

To explore rural teachers' wellbeing, it is important to understand the rurality of Chinese teachers, because rurality and wellbeing can be inter-related. Wellbeing is more than a

personal trait, with community often being essential to individual wellbeing (McCallum & Price, 2012). According to Ramsey and Smit (2002) the wellbeing of rural communities relies on multiple facets such as ecological, political, social-economic, and institutional factors.

However, divergent perspectives exist in the literature with regards to the relationship between rurality and wellbeing. Murray et al. (2004) found that the accessibility of rural residence is positively associated with subjective wellbeing, whereas Gilbert, Kathryn, and Deborah (2016) discovered that lack of accessibility to rural residence indicated lower life satisfaction, and was not associated with Eudaimonic wellbeing. The disparities may be because the notions of rurality have not obtained consensus, as well as the inconsistency of the focus on wellbeing in terms of Hedonia and Eudaimonia (Gilbert et al., 2016).

International research on the rurality of the teaching profession has focused on a deficit model, stressing poverty, disease, marginalization and entropy (Moletsane, 2012; Roberts & Cuervo, 2015). For example, in African rural schools, the characteristics of rurality are regarded as, extreme poverty, poor resource support for teaching and learning environments, and poor transportation (Olatunji & Ajayi, 2016).

This is also the case for rurality research in China. In China, rurality is gradually weakened where economic development accelerates urban and rural integration (Xiaoying et al., 2017). For example, with the fast pace of economic development in China, rural residents are inclined to move to bigger cities for higher paid work. In these cases, some of them leave their children behind in the rural areas, which causes the unique phenomena of 'left-behind children' as discussed in the literature. These children are considered the most disadvantaged in China (Hu, 2019). As Roberts and Hannum (2018, p. 2) assert the rurality of China is being "marginalized in the relentless move to modernity".

Since 2001 in China, the funding for education is no longer through central government appropriation, and this has caused funding disparities, leading to the merging and closure of rural schools and the decreasing number of rural teaching posts (Roberts & Hannum, 2018). Chinese society has thus witnessed widening intra-group differentiation and

inequalities (Li, 2013). Rural residents are in the lowest social stratum (Li, 2008), and thus, rurality has been deemed as undesirable, backward and inferior (Yin, 2008). Therefore, the notion of rurality implies a deficit model of rural schooling (Reid et al., 2010; Roberts & Cuervo, 2015), and as such, it cannot be having a positive effect on rural teachers' wellbeing.

Rurality research in the field of education has been focusing on social justice and rural education (see, for example, Roberts & Green, 2013; Roberts & Hannum, 2018). This is because rurality focuses on the ideas of place and space, and serves to understand the "construction of rural disadvantage" (Roberts & Green, 2013, p. 768). Schools in rural areas have "generally achieved education outcomes below their metropolitan counterparts" (Roberts & Green, 2013, p. 765). For example, influenced by Confucian culture, exams remain a "major focus of schools and parents" in China (Roberts & Hannum, 2018, p. 4), however rural students are in a disadvantaged situation because of the lack of quality teachers in rural China (Roberts & Hannum, 2018). The deficit model on rurality in relation to school education in rural China "essentializes rural educational disadvantage" (Roberts & Green, 2013, p. 765).

Thus, being a rural teacher in China is not always presented in a positive light. Rurality is viewed negatively in China, and thus, the gap between rural and urban is enlarging (Xue & Li, 2015). So it is not surprising that rural schools are suffering from lower quality teaching and thus learning outcomes and are thus seen as inferior (Hannum, 1999). According to Roberts and Green (2013), there is a need to tackle rural educational disadvantage in a positive way. Furthermore, Edwards and Matarrita-Cascante (2011, p. 465) purport that future research needs to focus on "building capacity of rural communities". This present study aims to specifically focus on the positivity of rurality which may strengthen teacher wellbeing. This suggests a shift from a 'deficit' to a 'strength' and 'context-based' rurality model. It echoes the methodology of Appreciative Inquiry (AI) which will be expounded in Chapter 4.

2.2.2 Rurality and Confucianism

It has been recognized that rurality is a complex mix of rural geography and economics however, its connection with culture has been overlooked (Roberts & Green, 2013, p. 767). Culture is a multifaceted concept, however, if culture values that interact with the social world was overlooked, there is a risk of setting up a deficit model of wellbeing (Pedrotti & Edwards, 2017). Vasantkumar (2017, p. 371) mentioned "The rural is revealed as a cultural rather than an objective terrain. Yet an attention to particular aspects of its cultural-ness may offer a way out of this theoretical impasse", which suggests that rurality and culture are inseparable.

Individualism-collectivism is the mostly widely accepted cultural divisions (Wu, Zhou, Chen, Cai, & Sundararajan, 2018). Kessler and Ustun (2008) report the results based on a cross-national survey and show that people living in collective cultural contexts manifest lower prevalence of anxiety and depression. This may be because cultural factors such as the emphasis on the value of harmony in collectivism are the protector of negative effects (Parker, Chan, Tully, & Eisenbruch, 2005). However, a quantitative study by Ogihara and Uchida (2014) show that collectivism does not closely correlate with wellbeing in individualizing Japan. China's situation is similar to Japan, with the influence of western life styles and rapid economic growth, Chinese societies are currently experiencing urbanization and individualization (Yang, 2018; Yi, 2019).

According to Wu et al. (2018), rural Chinese communities are trying to adapt the collectivist values to the individualizing environment, the engendered value mismatch may negatively affect wellbeing. Their study gauges wellbeing via the collectivist cultural perspective, however, the measurement of collectivism only addresses general perspective on Chinese culture, such as "how important is not being lonely to you" (p.59). This cannot explain the phenomena that contrary to individualization, some collectivist values, such as the values of marriage and family, are even more prominent in rural China (Zhou, Yiu, Wu, & Greenfield, 2018). This implies that solely addressing the collectivist cultural perspective and rural Chinese teacher wellbeing cannot fully inform and explicate the unique

relationship between rurality and teachers' wellbeing in rural China. There is a need to understand rurality in China based on Confucian culture which has been rooted in rural China for more than two thousand years.

Deeply rooted in Confucianism, China has been mainly a rural society until the rapid urbanization as a result of the economic reforms since 1978 (Fei et al., 1992). For over two thousand years, the relationship between rurality and Confucian culture has been close and complex. This is manifested by the phenomena that human relationships are highly valued in rural society of China, which echoes the Analects of Confucius: "what one does not want should not be given to other people", and individuals must show filial piety for their families and friendship, unrelated individuals will be completely rejected (Ying, 2013, p. 29). This is because rural society in China has less flow of population in comparison to the urban counterpart, people interact with and rely on each other, people must be humble and considerate for others and must not concentrate on personal reward in the acquaintance-driven rural Chinese society, as such adhering to Confucius moral doctrines is crucial for people to ensure their 'face' (a Chinese cultural interpretation of respect and social standing) or pride is protected for themselves and their offspring (Ying, 2013). Rurality of China and Confucianism are intertwined, as Chinese rurality can be understood through Confucian culture (Figure 2.3). This thesis aims to investigate if this relationship between rurality and Confucian culture has an impact on the wellbeing of teachers.

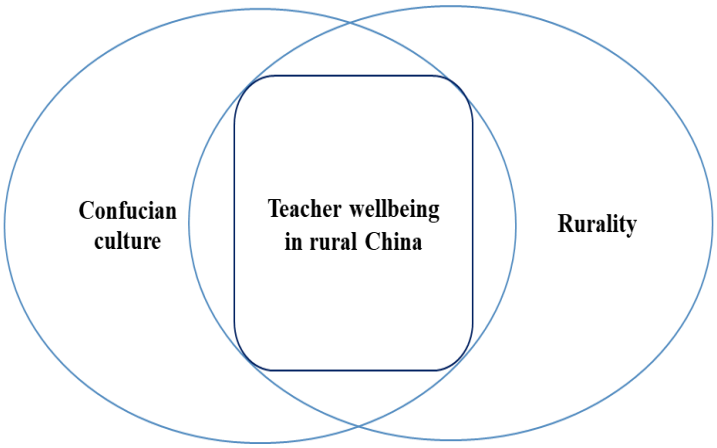

Figure 2.3 Confucianism and rurality on teachers' wellbeing

The present study investigates a cultural understanding of rurality in rural China. There has been little research on rurality in relation to culture and teachers' wellbeing in rural China. Therefore, this study will contribute to the previous research focus of rurality on location, landscape and population (Sherval, 2009). The present study incorporates Confucian culture into rurality, explores the influence of Confucian cultural values on rurality and teachers' wellbeing, and aims to elucidate the relationship between teachers' wellbeing and rurality related factors based on Chinese Confucian cultural contexts, which fosters a dynamic understanding of teachers' wellbeing in rural China.

2.3 The meaning of wellbeing

Wellbeing is a term that is notoriously hard to define (Schrank, Riches, Coggins, Tylee, & Slade, 2013). It is commonplace that wellbeing is conceptualized and based on the presence or absence of particular qualities (Joshanloo, 2016b), such as healthy functioning, addressing positivity of wellbeing, in contrast, burnout indicating a negative conception (Renshaw, Long, & Cook, 2015). Wellbeing cannot be simply understood as a continuum. This is because positive and negative qualities are not opposite poles of each other but rather negatively associated factors (Keyes, 2007). Schrank et al. (2013, p. 528) have argued that rewording negative to positive items to construct a wellbeing scale cannot be

"sufficient to meaningfully capture wellbeing". Wellbeing may be viewed as a social process under both individual and collective levels with material, relational and subjective dimensions, especially because the ways in which "people understand wellbeing is very different in different contexts" (White, 2010, p. 160). Tse (2017) suggests the definition of wellbeing should be inclusive of subjective self-assessment as well as ascribed objective components.

According to Veenhoven (2009) wellbeing is viewed as a process, only if optimal inner life satisfaction and external liveability of environment are achieved. For the purpose of discussing poverty in developing countries, Gough and McGregor (2007) conceptualize wellbeing as inclusive of three dimensions: material, subjective and relational, and quality of life. Furthermore, according to White and Kern (2018), wellbeing is not merely about a flourishing life for individuals, it also means to live well in a community based on Aristotelian perspectives. Broadie and Rowe (2002) contend that wellbeing is a goal, which is in line with Aristotle's notion of excellence. Aristotle's philosophy argues that the achievement of the optimal states is universal to all human beings (Tse, 2017). Based on Aristotle's Eudaimonia view of wellbeing, which is rooted from Nicomachean Ethics focusing on humans' volition and free choice (Bobzien, 2013), Self-Determination Theory (SDT) conceptualizes "positive mental health in terms of well-being" (Frydenberg, Martin, & Collie, 2017, p. 47).

Oishi and Diener (2009) surveyed 416 participants with varied cultural backgrounds to show that different cultures do influence people's sense of wellbeing. For example, the conceptualization of wellbeing for Thai people incorporates six dimensions: healthy body, close related family, supportive communities, fair governance, ideal ecological environments, and affluent material life (Tse, 2017). Another example is the notion of inner wellbeing concerning what people think and feel they are able to do, which is conceptualized to describe the wellbeing of rural communities in the contexts of India and Zambia. The subjective wellbeing (SWB) notion alone is not sufficient to capture the meaning of local Indian and Zambian people's wellbeing (White, Gaines, & Jha, 2014).

Wellbeing is a complex psychological and sociological construct which broadly concerns optimal experience and functioning and can differ between cultures and disciplines. Such as the field of medicine which accentuates health, in comparison with the social science discipline, which focuses on a broader scope such as social status (Keith, 2011 p.365). In the field of educational psychology, Frydenberg et al. (2017, pp. 50-51) have argued that in order to deliver an effective well-being related whole-school intervention programme, the key is to consider its particular social and cultural context for the program delivery.

Wellbeing can be broadly defined as an overarching concept of quality of life, as a positive developmental concept integrating physical, cognitive and social-emotional dimensions across stages of a lifetime; or with a focus on policy formulation to promote the mental and emotional health of citizens (Carlisle, Henderson, & Hanlon, 2009; Pollard & Davidson, 2001; Rees, Bradshaw, Goswami, & Keung, 2010). However, the notions of wellbeing and quality of life are not exactly the same, according to Bezruczko, Fatani, and Magari (2016) quality of life refers to the social aspect of life, while wellbeing accentuates people's perception of life satisfaction with regards to domains of living. McCallum and Price (2016) further acknowledge that wellbeing is diverse and fluid underpinned by positiveness.

Schrank et al. (2013) suggest that wellbeing can be conceptualized through a 'good life' approach which addresses the domains of happiness, needs fulfilment, meaning and social-cultural background. Schrank et al. (2013) argue this approach best reflects wellbeing's complexity because it allows "a wide range of factors to be focused on in potential interventions to improve wellbeing" (p.531). They emphasize that the components of the 'good life' are 'satisfaction and happiness', 'meaning in life' and 'fulfilment of needs'. This resonates with the present study's theoretical framework which will be presented in Chapter Three.

2.3.1 Hedonic and Eudaimonic wellbeing

The taxonomy of wellbeing has two broad categories: Hedonic and Eudaimonic, both emphasizing joy and human potential respectively (Keyes, Shmotkin, & Ryff, 2002b; Ryan & Deci, 2001a). Hedonic wellbeing is operationalized through affective and subjective wellbeing (Peiró, Ayala, Tordera, Lorente, & Rodríguez, 2014). Ryff (1989) challenged the operationalization of Hedonic wellbeing and opened a new window of research on the Eudaimonic approach to wellbeing, while Ryan and Deci (2001b) conceptualized Eudaimonic wellbeing as the optimal level of human functioning.

Hedonia focuses on the positive affects and pleasures which are the essence of SWB, whereas Eudaimonia emphasises life meaning, virtue and moral excellence which explains the concepts of psychological wellbeing (PSW) such as self-esteem and autonomy (Shin & Lyubomirsky, 2017). A large scale quantitative study by Disabato, Goodman, Kashdan, Short, and Jarden (2016) with 7617 participants from 109 countries, showed a high correlation of 0.96 between Hedonic and Eudaimonic wellbeing. This result questions whether they are significantly different constructs. However, Joshanloo (2016b) argued the high correlation is due to the different statistical procedures adopted, that is by using exploratory structural equation modelling instead of confirmative factor analysis the correlation will be lower.

Hedonic and Eudaimonic perspectives differ in the aspect of states or outcomes. According to a longitudinal study by Thorsteinsen and Vittersø (2019), Hedonic wellbeing focuses on outcomes, such as satisfaction and pleasure, whereas the Eudaimonic wellbeing focuses on the process of a sense of meaning. Also, there are various routes to Hedonic pleasure, not all of the routes entail Eudaimonic wellbeing (Disabato et al., 2016; Thorsteinsen & Vittersø, 2019). Eudaimonia is a way of living which is characterized as what is intrinsically worthwhile to human (Ryan, Huta, & Deci, 2008). Although pleasure or positive affect are important because they are intrinsically preferred states and facilitate human functions, purely focusing on Hedonic living can lead to dead-end wellbeing through blinded maximization of pleasure (King, Hicks, Krull, & Del Gaiso, 2006).

2.3.2 Objective and subjective views on wellbeing

Another perspective of wellbeing conceptualization is about the objective and subjective views of wellbeing (Huppert, 2014). The former can be, for example, education, housing that government is responsible for; the latter denotes the people's own subjective feelings about their experience of life (White, 2010). Wellbeing is initially framed according to national wealth, such as using Gross Domestic Product (GDP) as a measure, then grounded as a subjective mental concept, e.g. subjective or psychological wellbeing, and moving towards positive psychology and recovery research (Schrank et al., 2013). Objective views on wellbeing have been criticized because they overlook psychological aspects of human society (Adler & Seligman, 2016).

The conceptualizations of wellbeing have shifted from being objective to subjective. The notions of wellbeing have been evolving since the World Health Organization (WHO) constitution indicated that mental and social wellbeing is as important as physical wellbeing, where wellbeing is not merely the absence of disease or infirmity (WHO, 1948). Wellbeing has emerged from objective measures of GDP, life expectancy and personal income to subjective measures of an individual's feelings about their status (White, 2010). As GDP is unable to capture psychological and environmental status of any society which informs 'soft' aspects of societal prosperity, so it cannot be the sole measure of wellbeing (Adler & Seligman, 2016).

Flèche and Layard (2017) suggest we look beyond income, employment and physical health, and that mental wellbeing should not be ignored when studying deprivation and poverty. With the burgeoning of positive psychology, wellbeing is not just about the absence of mental illness but is closely related to quality of life, happiness and healthy living (Ryan & Deci, 2001a). There are five broad domains which cover this perspective and they include awareness, coping, emotions, goals and relationships (Rusk & Waters, 2015). However, subjective views of the indicators of wellbeing have limitations such as instability and memory dependency, which can be biased by the respondent's mood and particular situation, so it may not be verifiable (Gilbert et al., 2016).

2.3.3 Subjective and Psychological wellbeing

Subjective wellbeing (SWB) emerged in the 1950s with a focus on quality of life and is regarded as the cognitive process of attribution (Keyes et al., 2002b). Diener (1998) defines the term SWB as frequent experiences of positive affect, and infrequent experiences of negative emotion. To be specific, it is about "individuals' perceptions and evaluations of their own lives in terms of their affective states and their psychological social functioning", and it contains measures of "the presence and absence of positive functioning in life" (Keyes, 2002a, p. 208).

Accordingly, mental health was operationalized as "a syndrome of symptoms of an individual's subjective wellbeing" (Keyes, 2002b, p. 208). However, mental health is not solely about the presence of positive affect or SWB (Keyes, 2002b). According to Diener, Suh, Lucas, and Smith (1999), SWB is "a broad category of phenomena that includes people's emotional responses, domain satisfactions and global judgement of life satisfaction" (p.277). Furthermore, SWB is culture related and is built on the fulfilment of social responsibility (Lu, 2006 as cited in Sun, Chen, Johannesson, Kind, & Burström, 2016, p.862).

Diener et al. (1999) note that there are two approaches to address SWB; the bottom-up approach which is to study an individual's needs fulfilment; and the top-down approach which focuses on structures within a person, such as personality. It has been accentuated that personality was the most consistent predictor of SWB, however, this discounts the importance of factors other than predisposition which could potentially influence wellbeing, and accordingly diminish the effectiveness of social and policy interventions to enhance people's wellbeing (Diener et al., 1999).

Ryff (1989) challenged the operationalization of Hedonic wellbeing and opened a new window of research on the Eudaimonic approach to wellbeing. Wellbeing research begins to echo the notion that wellbeing is a complex and multi-dimensional construct. Ryff (1989) conceptualizes PSW in terms of meaning and reaching one's full potential of life embracing

aspects of human behaviour and motivation. Ryff claims a six dimensional model to conceptualize PSW: 1) self-acceptance; 2) environmental mastery; 3) autonomy; 4) positive relations with others; 5) personal growth; and, 6) purpose in life, all of which are focusing on the positive functioning of human-beings (Ryff & Keyes, 1995). Ryff's multidimensional concept of PSW is widely used, however, the scale's unstable factor structure is of concern (Schrank et al., 2013). Building on Ryff's model of wellbeing, Horn, Taris, Schaufeli, and Schreurs (2004) in their study measure the wellbeing of Dutch teachers added a further two dimensions of cognitive wellbeing: 1) ability to assimilate new information and concentrate on work duties; and 2) psychosomatic wellbeing.

The relationships among Eudaimonic, Hedonic, subjective and psychological wellbeing are complex. Consensus has not been reached in the literature. According to Ryan et al. (2008), and McInerney, Korpershoek, Wang, and Morin (2018), Eudaimonia cannot be defined by the modern term of PSW, but rather PSW can be a measure of outcomes of Eudaimonic wellbeing. Ryan and Deci (2001a) argue that wellbeing under the Hedonic view focuses on life satisfaction and SWB. In contrast, the Eudaimonic view builds on the concepts of realization of needs and PSW. Diener (1998) contends that the Hedonic view will help researchers to understand what contributes to a happy life, whereas the Eudaimonic view can be used to define wellbeing.

According to a large scale quantitative study by Joshanloo (2016b) with a sample of 3986 American adults, PSW and Eudaimonic wellbeing are not identical. PSW captures private aspects of Eudaimonic wellbeing, whereas the social aspects of Eudaimonic wellbeing construe social wellbeing. However, another quantitative study by Royer and Moreau (2016), and an examination of literature related to positive psychology by Donaldson, Dollwet, and Rao (2015) propose that Eudaimonic and Hedonic views construe psychological and subjective wellbeing respectively. In contrast, a study on relationships between personality and wellbeing by Temane and Wissing (2008) conceptualized PSW based on Hedonia rather than a Eudaimonia perspective. Wellbeing studies initially focused on the affective state of SWB (Diener et al., 1999), which has gone through a shift to

embrace affect as well as behaviour and motivation (Ryff & Keyes, 1995). This evolves into the subject areas of subjective and psychological wellbeing.

Subjective and psychological wellbeing are distinct constructs but correlated. Royer and Moreau (2016) argue psychological wellbeing is relatively stable in comparison with SWB. Keyes et al. (2002b) elaborate the phenomena through an on and off diagonal pragmatic paradigm. To be specific, neuroticism is a factor that leads to lower subjective and psychological wellbeing, whereas, openness to experience predicts SWB, but not Eudaimonic wellbeing. Thus, if there is a lack of meaningful opportunities in life, PSW is supposed to be lower, but we can try to boost SWB to preserve the positive affect, high demands and pressure which can diminish an individual's SWB but boost PSW.

According to Keyes et al. (2002b, p. 1018), SWB and PSW are construed as "antecedent, consequent, or even mediating variables depending on one's guiding theory". Although positive, negative affect and life satisfaction have been recognized as essential components of SWB (Joshanloo, 2016a), consensus has not been reached for PSW (Joshanloo, 2016b). One reason is because SWB and PSW constructs largely reflect a satisfying life among western cultures (Keyes et al., 2002b).

2.3.4 Professional wellbeing

Keyes (1998) argues psychological and subjective wellbeing may not cover all aspects of optimal functioning. The present study emphasizes contextual factors of teachers' wellbeing on the teaching profession because "work and employment play a central role in most people's lives" and is one of the most important drivers of wellbeing (De Neve et al., 2018, p. 77). As such, people's work domains in a modern society largely decides their social status and wellbeing.

Professional wellbeing includes both affective wellbeing such as job satisfaction and other outcome measures such as motivation and competence (Van Horn, Taris, Schaufeli, & Schreurs, 2004). Thus, professional wellbeing overlaps and mingles with subjective and psychological wellbeing. In addition, professional wellbeing differentiates from general

wellbeing as its focus is on self-efficacy and job satisfaction. This construes the perception of people's capability required for professional tasks. However, teachers' professional wellbeing is not a stand-alone construct, it is strongly related to teachers' relationships with colleagues and students focusing on the teaching profession alongside positive psychology (Yildirim, 2015).

2.3.5 Eastern and Western cultural contexts of wellbeing

The debate around conceptualizations of wellbeing is currently focused on western views of Hedonic, Eudaimonic or integrative of both (Peiró et al., 2014). Wellbeing research has focused on the cultural context-free exploration of wellbeing and claims the concept of wellbeing is universally applied to all human beings (Dagenais-Desmarais & Savoie, 2012). For example, Huppert (2014) argues there are nine general factors affecting wellbeing, these include material living conditions, employment, health, education, social relationships, basic rights, personal characteristics, plus a population level indicator, such as income inequality and life expectancy. However, cultural context as a factor is not included in the model.

The culture-free stance of wellbeing has been challenged by many scholars, including for example Christopher (1999), Joshanloo (2014), Spencer-Rodgers and Peng (2018) and White and Jha (2018a). Contemporary notions of wellbeing are guided by western conceptualizations rooted in western cultures and informed by western instruments (Joshanloo, 2014). Christopher (1999) argues wellbeing is culturally rooted, and argues that wellbeing as a concept is biased towards individualism, such as PSW which is founded on liberal individualism. As such, wellbeing should "recognize differences by culture" (White et al., 2014, p. 744). In order to avoid more confusion, there is a need to shift the research focus to context-specific wellbeing, such as the wellbeing of occupations, social groups and cultures. This is due to the complexity and diversity of human societies, thus it is futile to try to construct a one size fits all wellbeing model.

It can be argued that the focus of wellbeing differs between eastern and western cultures (see Table 2.1 on page 52). For example, in the field of cross-cultural research, cultural identity is referred to as self-construal. According to Hofstede's individualism index (1980) countries are clustered as individualism and collectivism, which can affect people's cognitive, emotional and motivational processes (Keith, 2011 p.512). Previous research has illustrated that conforming to social norms is more important to collectivist countries, while autonomy is more important to individualistic countries (Oishi, Diener, Lucas, & Suh, 1999; Suh, Diener, Oishi, & Triandis, 1998). White (2010) suggests that for collectivism countries, the moral dimension of wellbeing is important to people, which adds to the collective cultural dimensions of wellbeing.

However, culture has not figured prominently in the field of wellbeing research. For example, positive psychology has been criticised because it is biased towards western cultures (Lomas, 2016), and as Izquierdo (2005) contends, it is strongly influenced by individualism and a western way of thinking. In response to this critique, efforts have been made by cross-cultural researchers to embrace a greater level of cross-cultural sensitivity, which has been reflected in recent studies about the defining, experiencing and reporting of wellbeing under different cultural contexts. Lomas (2016) purports a new linguistic angle to view wellbeing's cross-cultural sensitivity. That is, although the experience of wellbeing may not be particularly different across cultures, linguistic relativism holds language, which does shape thoughts and experiences.

In light of these views, in order to better understand teachers' wellbeing under an eastern cultural context, such as China, there are three characteristics that echo the positive psychology paradigm: first, feelings which include positive feelings (幸福) and complex feelings (阴阳), because 'not all feelings pertaining to well-being are strictly positive per se' (Lomas, 2016); second, relationships (缘分); third, character which embraces qualities or skills (风韵) which can help people live well, and also features spirituality of the psycho-spiritual development（德，道，无为).

Wellbeing concepts have evolved chronologically in Chinese culture. In the pre-Qin dynasty, wellbeing was about satisfaction and morality, followed by a Mohist utilitarian altruism and Taoism focusing on freedom. During the Han, Tang, Wei and Jin Dynasties, the focus gradually shifted to a mixture of Taoism, Confucianism and Buddhism with a notion of spiritual freedom and immortality. By the time of the Song, Yuan, Ming and Qing Dynasties, the notion of wellbeing emphasizes the justice and individual pursuit of happiness (Wang, 2008). Although eastern cultures support self-abnegation, the evolution seems to start to pay attention to individual or self.

Western views contend that wellbeing is a matter entirely individual compared to the eastern view which focuses on social norm adaptation (Fraser, 2013; McCallum et al., 2017). According to Joshanloo (2014) the crux to understanding the western notions of happiness and wellbeing is to distinguish the Hedonic and Eudaimonic views of conceptualization of wellbeing. Hedonia is focused on positive feelings, whereas Eudaimonia is based on virtues and positive functioning (Keyes & Annas, 2009). Hedonic wellbeing addresses what people think and feel which reflects cultural patterns (White et al., 2014).

To view the differences through the lens of SDT, two of the three basic psychological needs, relatedness and competency, are seemingly common to both cultures whereas autonomy is not highly valued by eastern culture. Ryan and Deci (2000a) argue this kind of difference is about the definition of autonomy and suggests that basic needs are fundamental to all human beings with relative variation in levels of importance despite cultural normativeness. The contradiction of the research findings is ascribed to the wording of definitions with regards to basic psychological needs. As such it is necessary to distinguish between similar wordings, such as independent vs. non-reliance and autonomy vs. violation.

However, the contradiction cannot be simply attributed to the wording issue, we need a broader model to support wellbeing research. Lomas (2015) conceptualized a Universal Relativism model that incorporates cultural differences regarding wellbeing under the

positive psychology and ecological model paradigms (Figure 2.4). This model specifies the universal and relativistic determinants of wellbeing. For example, work and family are generic factors across different cultures and societies, whereas the awareness of cultural variances have the explanation power for social phenomena, while individualistic cultures choose to be active in politics to fulfil the sense of social participation. Furthermore, marriage is of greater benefit with individualism cultures (Lomas, 2015). However, Diener (2009) argues being unmarried can be harmful for collectivistic culture, because it does not align with the social norm. It can be argued that the mechanisms of cultural differences are complicated. Thus, the diagram (Figure 2.4) stresses the importance of inclusion of culture as part of the wellbeing model.

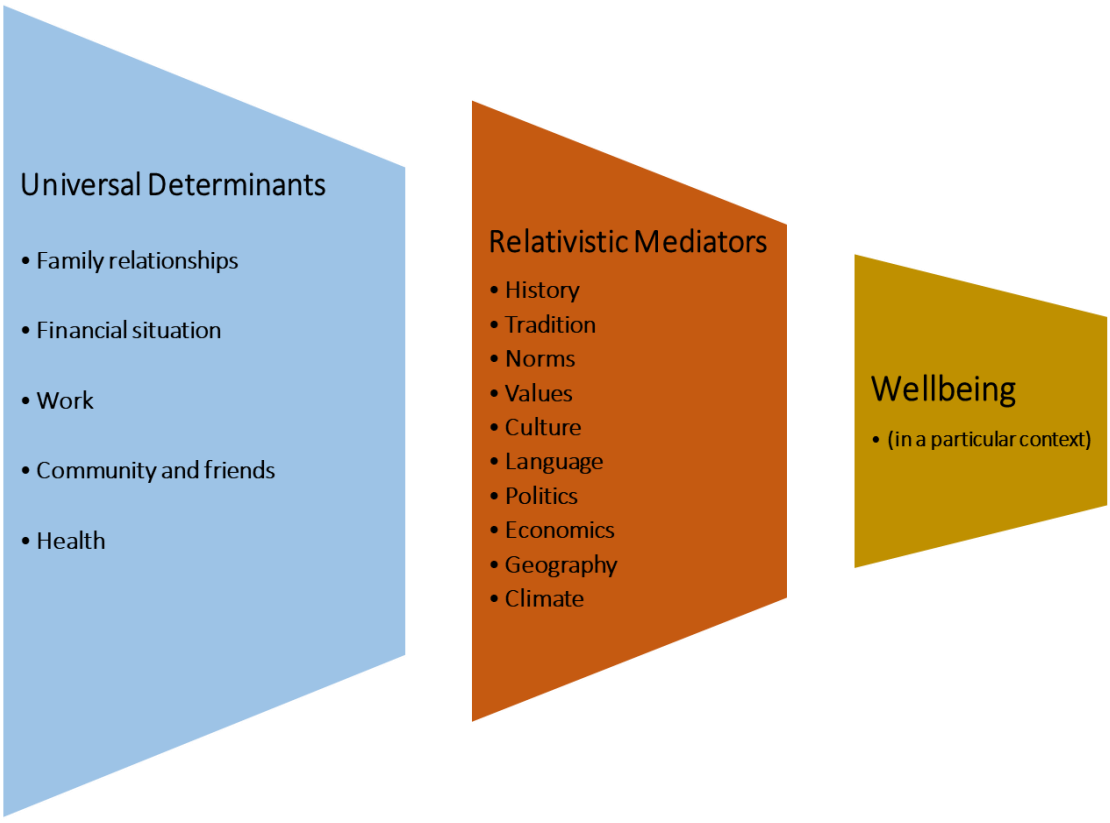

Figure 2.4. The conceptualization of Universal Relativism Wellbeing Model.
From "Positive cross-cultural psychology: Exploring similarity and difference in constructions and experiences of wellbeing" by Lomas, 2015, International Journal of Wellbeing, p.70.

Liu, Song, and Miao (2018) argue that teacher wellbeing is a balance of individual and collective cultures. The individual aspects focus on motivation, self-efficacy and social, emotional independence. In contrast, the collective aspects focus on societal contribution, professional development, emotional and social harmony. The individual-collective balanced framework, viewed through the theoretical lens of SDT, identifies three fundamental needs of human-beings: 1) autonomy and 2) competence (both belong to the individual aspect), while 3) relatedness (belongs to the collective aspect). Also, the incorporation of an individual-collective balanced framework can provide an in-depth understanding of teachers' wellbeing under the unique societal and cultural context in rural China.

According to Triandis (1989), embracing the individualism/collectivism dimension of culture can be instrumental to discern differences of the SWB construct across cultural contexts. In individualist cultures, people perceive themselves as an autonomous entity and being different is highly regarded, while in collectivist cultures, individual's needs are subordinated to the group's and being unique is not encouraged (Suh et al., 1998). Various aspects and factors of life are weighted differently for wellbeing under different cultural contexts (Diener et al., 1999). For example, Chinese workers' salaries have been on a stable upward trend for the past decade, but this factor does not necessarily enable a wellbeing uplift concomitantly. Based on Diener et al.'s (1999) study, it was purported that age, marriage, rewards or remuneration and education do not exert a universal and monotonous directional influence on wellbeing. Pragmatically, it is sensible to treat those factors as control variables in the field of wellbeing research (Keyes et al., 2002b).

Culture plays a key role on wellbeing, because the way "people think, feel, and act is quite different across cultures" (Oishi, 2016, p. 1398). Diener, Napa-Scollon, Oishi, Dzokoto, and Suh (2000) suggest that Asian cultures tend to report a greater level of negative emotion and lower life satisfaction. The possible explanation is that western cultures consider pleasant feelings more desirable, whereas eastern Asian cultures treat unpleasant and pleasant feelings almost equally (Scollon, Diener, Oishi, & Biswas-Diener,

2016). This stream of research encourages studies toward a classification of individualism and collectivism for the purpose of explicating wellbeing under different cultural contexts (Diener et al., 2000).

However, White and Jha (2018a) employed a mixed-methods approach to investigate cross-cultural wellbeing, and their findings from the research suggest such a general classification of different cultures is unable to capture a precise picture of wellbeing. Both emic (focus on specific cultural context) and etic (cultural-universal) stances on wellbeing have received criticism in the literature. According to Khumalo, Temane, and Wissing (2011), the etic approach overlooks the local or culture-specific understanding of wellbeing. In contrast, the emic approach is not an optimal option for cross-cultural comparison on wellbeing (Khumalo et al., 2011). Thus, besides the focus on eastern Confucian culture, in order to embrace both eastern and western perspectives, the present study adopts western SDT which is theorized according to Eudaimonia, construing optimal human functioning through basic psychological needs fulfilment, to understand Chinese rural teachers' wellbeing. This will be discussed in detail in Chapter 3.

2.3.6 Confucian culture

Mou (1983) asserts that western philosophy is about the theory of knowledge and science. Eastern philosophy of Confucian is different because of the emphasis on sensible feelings and rationality, which can be viewed as a form of intentional truth. Confucianism is valuable to the theorization of concepts such as teachers' wellbeing. According to Hall and Ames (1987, p. 328) "recourse to Confucian thought could conceivably inspire the creation of new models for the activity of thinking by Western philosophers". Furthermore, eastern dialecticism is influenced by Confucianism, which possesses unique features of balance between positive and negative, with harmony at its core (Spencer-Rodgers & Peng, 2018). Dialecticism is differentiated from Aristotle's formal logic in the West (Li, 2018). It uses contradictions, such as the clashing but instructive viewpoints of "Yin" and "Yang", to understand the world (Luk-Fong, 2013). Cross-cultural studies by Wang, Hou, and Gould

(2018), and Wong and Liu (2018) establish that Confucianism rooted dialecticism has a profound impact on wellbeing. For example, dialecticism's cultivation of negative emotions can lead to lower levels of wellbeing, whereas dialecticism's seeking of positive in a negative situation can be beneficial for wellbeing (Wong & Liu, 2018).

Confucianism is fundamental to Chinese culture with ethics at its core (Qian, 1976). Confucian tenets and values were recorded in the《论语》(Analects), which is the most authoritative sources for the teaching of Confucianism (Zhang, Jin, Torero, & Li, 2018). The highest standards of moralities are Way and Virtue, which denote that the total truth for human nature and the universe is about ethics (Lin & Ho, 2009). So the ideal person under Confucian value is a "gentleman" (君子) who conforms to Confucian ethics.

To emphasize the fundamental value of Confucian ethics, the doctrine of benevolence (仁) appears 109 times in the Analects of Confucius which means to love and help people. Benevolence embraces the value of loyalty and magnanimity, loyalty means 'near to the doing of one's best' (Lin & Ho, 2009, p. 2405). "恕" (gentleness) indicates the consideration and being empathetic of others' feelings, for example the Analects says: "己所不欲，勿施于人" ("do not impose on others what yourself do not desire").

The Analects of Confucius also assert that individuals must love their own parents, and others' parents, then whole communities, which stresses the value of 'filial piety' and 'righteousness'. The value of rites (礼) focuses on the Confucius value of decorum which is closely linked to the core value of benevolence. Confucius' concepts of Tien (天), Te (德) and Tao (道) are different from the Western philosophies, as they are grounded in aesthetic rather than rational order (Hall & Ames, 1987). To be specific, "Tien is the source of meaningfulness, not in the sense of an eternal repository of pure possibilities"; rather, "Tien encompasses the traditional past as the cumulated products of human activity"; "Te is particular excellence of an individual within his or her context, not as an essential given but as a realized perspective upon things which at one and the same time centers the individual and focuses his or her context"; "Tao is emergent from actions of persons whose

self-realization is such that they are able to serve as peculiarity intense foci of meaning and value", and individuals are determined by the Ming (命) of Tien (Hall & Ames, 1987, pp. 248-249).

According to Hall and Ames (1987), Tien Ming Te Tao are related to the realization of life meaning, whereas Li (礼) Yi (义) and Ren (仁) are the established rites, through which to obtain authoritative humanity. Models are of paramount importance in Confucian doctrine because Confucius believes that Li is "ultimately grounded in immanent forms of personal and social action" (p.176). Also, Li puts a focus on the sense of shame rather than guilt, which expounds that Western societies value law to realize social order, in contrast, eastern societies emphasize how a person is perceived by others as "a condition of one's relationship to others" (p.174).

Under Confucianism the feeling of commiseration manifests the principle of benevolence, the feeling of shame reflects the principle of righteousness, and the feeling of modesty and complaisance is related to the principle of decorum (Mencius, Book II, Part I, Chapter VI, 250-150 BC). As such, life meaning emerges from the social context grounded in norms while remaining open to the Ming of present circumstances. Confucius' vision of wellbeing is dynamic, which does not only call for the conformation of traditional norms, but also supports the agency of adaptation of current situations, which is in line with SDT's autonomy.

In Confucianism, harmony is the primary goal of personal and social life. This is because a vital value is attached to social and family relationships, thus this is different from the focus of the individual self. The way of attuning and tuning elucidates the difference between Eastern harmony and Western agreement. According to Hall and Ames (1987), attuning is the "blending of two or more ingredients in a harmonious whole with benefit and enhancement that maximizes the possibilities of all without sacrificing their separate and particular identities", and tuning is to find agreement by "bringing one ingredient into

conformity and concurrence with an existing standard such that one ingredient is enhanced possibly at the expense of others" (p.166).

Confucianism accentuates the value of self-cultivation, self-discipline, self-abnegation and asceticism, which fosters the senses of ethics and responsibility, however, this should be in harmony with society and not in isolation from others and society (Joshanloo, 2014). In Confucianism, a happy life is a good life with the virtues of benevolence, righteousness and propriety at the heart (Hwang, 2006). We can see that positive affection and pleasure are not emphasized in the Confucian view of eastern notions of wellbeing (Lee, Lin, Huang, & Fredrickson, 2013). Western psychological models accentuate self-determination and deliverance from convention (Ryan & Deci, 2000b). These individualistic factors are not important indicators of wellbeing in eastern cultures, because self-transcendence is considered as an important component of wellbeing which promotes the transcendence of personal desire for the sake of the group in eastern cultures (Joshanloo, 2014).

Confucius preached that the common virtues of benevolence, propriety and righteousness rules the human society. As such, eastern wellbeing is not about achieving positive affect, but rather the realization of self-cultivation, harmony of family and the community through hard work, frugality, fulfilling social responsibilities and suppression of inappropriate desires (Shin & Lyubomirsky, 2017).

It seems that a wellbeing notion in eastern Confucian cultures is more in line with the Eudaimonic notion, but the striking differences still cannot be overlooked. Confucianism accentuates the value of harmony which is not necessarily based on western notions of volition and needs, that is why Confucian doctrines reinforce self-conquest, self-discipline and self-abnegation (Joshanloo, 2014). For instance, independence or autonomy is not appreciated in eastern cultures because the achievement of harmony with others is of importance, whereas the sense of no-self is considered pathological in western psychology. Therefore, self-transcendence and harmony may be considered an important dimension of an eastern notion of wellbeing (Christopher, 1999; Diener, Oishi, & Ryan, 2013; Joshanloo, 2014).

Furthermore, in eastern cultures, a dosage of negative affection or suffering can be seen as an ingredient of a happy life (Joshanloo, 2014). In contrast, western cultures emphasize the balance of subjective and PSW (Keyes et al., 2002b), thus it is difficult to integrate negative affects into a western wellbeing model. Therefore, "more sensitive models and measures are needed to take into account cultural similarities and differences" (Joshanloo, 2014, p. 489).

Acton and Glasgow (2015) emphasize the point that to understand the meaning and the factors that contribute to teacher wellbeing is critical to better support teaching workforce. However, different meanings of wellbeing are being "projected by different agents", and "wellbeing acts like a cultural mirage" (Roy, 2019, p. 800). It is problematic to precisely define and obtain an in-depth understanding of wellbeing due to its diverse explanations and understandings (Acton & Glasgow, 2015, p. 101). To address this gap, the overarching aim of this present study is to explore and construe the meaning of rural Chinese teachers' wellbeing.

2.3.7 Summary of wellbeing

Although wellbeing can be referred to as "feelings of happiness, satisfaction, competence and enacted purpose" (Acton & Glasgow, 2015, p. 104), "the concept of wellbeing has not been well defined" (Schrank et al., 2013, p. 525). This was demonstrated above in the discussion of the literature on wellbeing research which has so far led us to specify 23 versions with 42 distinct dimensions based around the unsettled debate of Hedonic, Eudaimonic or combined theoretical approaches, which has resulted in greater conceptual confusion (Dagenais-Desmarais & Savoie, 2012). It is thus obvious that an agreed definition of wellbeing has not been reached (Liu et al., 2018; Thorsteinsen & Vittersø, 2019).

Subjective, psychological and professional wellbeing are interrelated with complexity. For example, professional wellbeing is constructed primarily based on PSW e.g. competence and efficacy; as well as aspects of SWB e.g. teacher's job satisfaction

(McInerney et al., 2018). Whereas Horn et al. (2004) suggest that occupational wellbeing is inclusive of psychological and SWB, which connotes that the improvement of wellbeing would lead to enhanced motivation.

Figure 2.5 illustrates that the three dimensions of wellbeing: subjective; psychological; and professional wellbeing, contribute to optimal human functioning and emotional status. Joshanloo (2016b, p. 2024) suggests that "Hedonic wellbeing both results from and leads to optimal functioning". This echoes the view from Gilbert et al. (2016) that SWB may embrace both Hedonic and Eudaimonic parts of wellbeing. Therefore, both Eudaimonic and Hedonic actions contribute to SWB, whereas Eudaimonic pursuits can yield more enduring pleasure rather than temporary effects which contributes to SWB. Ryan et al. (2008) suggest Eudaimonic living can lead to meaningful life and yield enduring Hedonic pleasure. It implies that PSW contributes to positive affect as well. Dagenais-Desmarais and Savoie (2012) suggest that we need to integrate the two approaches, because neither the Hedonic nor the Eudaimonic approach is sufficient in itself to elucidate the notion of wellbeing. For instance, Keyes' operational model of wellbeing comprises dimensions of emotional/subjective, social and psychological wellbeing (Keyes et al., 2002b).

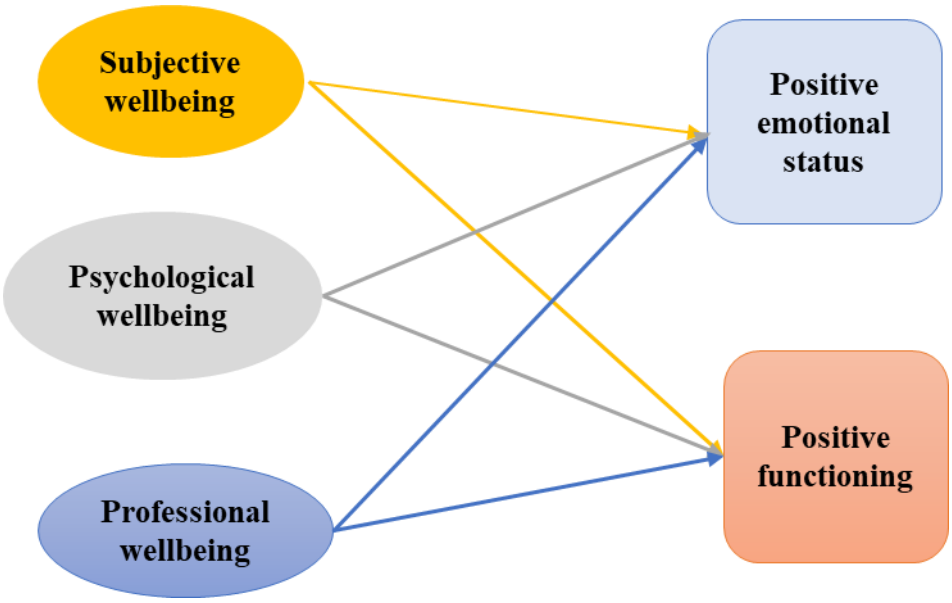

Figure 2.5. Three dimensions of teacher wellbeing

The Hedonic approach views wellbeing through the angle of happiness and life satisfaction, whereas the Eudaimonic approach focuses on optimal functioning, meaning and self-actualization (Dagenais-Desmarais & Savoie, 2012; Omodei & Wearing, 1990; Thorsteinsen & Vittersø, 2019). However, both views are different from eastern conceptualizations of wellbeing. For example, Dao (道) is the "Confucian counterpart to Eudaimonia", whereas Eudaimonia "seem to forget that most of us are at best on the way" to "the ideal of moral perfection", in contrast, Confucianism emphasizes "the standpoint of those how are on the way to virtue" (Huff, 2015, pp. 424, 429). Eudaimonic wellbeing raises the question about what is a good life, as a philosophical foundation of wellbeing, this echoes Confucian culture which is to teach and promote what is a good life for gentlemen (君子) (Qian, 1976). Although both eastern and western philosophies focus on elements that constitute the good life which construes the core of wellbeing, they are inter-related with subtle differences (Table 2.1). This Table 2.1 clearly shows the differences between the western and eastern conceptions of wellbeing.

Table 2.1

Wellbeing notions under Eastern and Western cultural contexts

Context specific wellbeing (culture & profession)		Definition/meaning
Western	*Hedonic/Subjective wellbeing*	• "A broad category of phenomena that includes people's emotional responses, domain satisfactions and global judgement of life satisfaction" (Diener et al., 1999, p. 277). • "Formulates well-being in terms of overall life satisfaction and happiness" (Keyes et al., 2002b, p. 1008).
	Eudaimonic/Psychological wellbeing	• "Draws heavily on formulations of human development and existential challenges of life" (Keyes et al., 2002b, p. 1008).
Eastern	*Confucianism*	• A happy life is a good life with the virtues of benevolence righteousness and propriety at the heart(Hwang, 2006). • Accentuates the value of self-cultivation, self-discipline, self-abnegation and asceticism (Joshanloo, 2014).
	Other wellbeing views under an eastern Chinese context	• Positive feeling (幸福), complex feelings (阴阳), not all feelings pertaining to well-being are strictly positive; • Relationship obtained by destiny (缘分); • Qualities or skills(风韵) which can help people live well; • Spirituality of the psycho-spiritual development（德: integrity; 无为:entirely natural）(Lomas, 2016).

2.4 Teacher wellbeing

Work consumes a significant proportion of time in people's lives, so it is essential for people to experience wellbeing in the workplace, this will also help the wellbeing of communities (Blustein, 2008). The importance of teachers' wellbeing has been overlooked, and this has contributed to high rates of teacher turnover, particularly in rural areas worldwide and resulted in the difficulties of maintaining quality teachers (Margolis et al., 2014, p. 392). Teaching is a stressful profession because it is not only physically but also emotionally demanding (McCallum et al., 2017; Zembylas & Schutz, 2009) with a high

prevalence of exhaustion (Maslach, Schaufeli, & Leiter, 2001; Tehseen & Ul Hadi, 2015). Teacher wellbeing is different from general notions of wellbeing due to its focus on self-efficacy and job satisfaction explaining the perception of people's capabilities required for professional tasks as a teacher (Yildirim, 2015). A recent report from Education Support UK (2019) reveals that teacher wellbeing is lower than in the general population, teachers' stress levels are closely related to teacher attrition and in an upward trend.

Teacher burnout is an important indicator of teacher wellbeing stressing emotional exhaustion, depersonalization, and lack of personal accomplishment (Yin, Huang, & Chen, 2019a). It has been widely acknowledged that teacher burnout can contribute to low self-efficacy (Loerbroks et al., 2014), deteriorating performance (Osher, Sprague, Weissberg, Axelrod, Keenan, Kendziora & Zins, 2008) and poor classroom climate (Paro, Hamre, Locasale-Crouch, Pianta, Bryant, Early, Clifford, Barbarin, Howes & Burchinal, 2009). Currently, the teaching workforce is characterized by a climate of high attrition, high teacher stress and a lack of a sense of belonging (OECD, 2017).

Teaching as a unique profession is characterized as emotional labour (Lam, 2019, p. 249), as the job demands daily interactions with students, parents and colleagues (Yin, Huang, & Wang, 2016). Teachers have distinctive social expectations and professional norms. Teachers are role model for students, and are expected to up-regulate positive emotions while down-regulating negative emotions (Gu & Li, 2013). Teaching is an isolated profession because teachers are not in contact with their colleagues "for much of the working day" (Collie et al., 2016, p. 789). All of these issues warrant special attention to teacher wellbeing due to the unique characteristics of this profession.

Teacher wellbeing is critical for teaching quality and students' learning outcomes. McCallum and Price (2010), Roffey (2012) and Harding et al. (2019) contend that teacher wellbeing and student wellbeing are closely associated, and teacher student relationships play a key role in teacher wellbeing. Teacher wellbeing impacts students' wellbeing as well as their academic performance. Furthermore, according to Allen, Kern, Vella-Brodrick, Hattie, and Waters (2018), a teachers' sense of connection to a school, is an essential

component of teacher wellbeing, and can predict a student's sense of belonging, and the latter is significantly influenced by teacher-student relationships.

Furthermore, relational factors are significant to teacher wellbeing. Roffey (2012) describes teacher wellbeing and student outcomes as two sides of the same coin, highlighting that a teachers' wellbeing is closely linked to a student's wellbeing. A positive sense of a teacher's wellbeing influences their students' wellbeing, because the uniqueness of the student-teacher relationship affords teachers with internal rewards and gives meaning to their work (McCallum et al., 2017). However, besides the altruistic aspect of internal rewards with regards to the teacher-student relationship, Lam (2019) argues that social rewards can also be a contributing factor to teacher wellbeing.

Waters and Loton (2019) recently proposed a SEARCH framework which identifies six pathways to foster and examine the effectiveness of interventions focused on students' wellbeing: strengths, emotional management, attention and awareness, relationships, coping and habits and goals. It is an evidence based framework and is promising to see the big picture by integrating the findings of individual studies and interventions (Waters & Loton, 2019). However, the SEARCH framework only focuses on student wellbeing. According to White and Murray (2015), fostering a whole school approach to wellbeing, teachers' wellbeing should not be overlooked.

Few definitions of wellbeing are specific to teachers. For example Aelterman, Engels, Van Petegem, and Pierre Verhaeghe's (2007) definition stresses the importance of harmony between environmental factors and personal needs in order to nurture teachers' positive emotional state. In contrast, Acton and Glasgow (2015) and Bricheno, Brown, and Lubansky (2009) posit that teacher wellbeing lies in professional fulfilment, satisfaction, relationships with colleagues and students, and teachers' control over their work. For example, Acton and Glasgow (2015, p. 101) define teachers' wellbeing as an "individual sense of personal professional fulfilment, satisfaction, purposefulness and happiness, constructed in a collaborative process with colleagues and students". However, this definition does not account for the cultural context.

McCallum et al. (2017) contend that the extant definitions of teacher wellbeing are influenced by contextual characteristics. Therefore teacher wellbeing can be viewed through Bronfenbrenner's model (1979; cited in Price & McCallum, 2015). This model views teacher wellbeing through the relationships between individual teachers and school, societal and cultural environments. For example, drawing from the ecological perspective, there are three categories of community factors, ranging from micro to macro points of view affecting teachers' wellbeing. They are satisfaction with the community; school environment factors, such as workload, career development and relationship with the principals; and teachers' own characters, e.g. demographics, similarity with the local communities (Aelterman et al., 2007).

Another innovative teacher wellbeing model (Figure 2.6) developed by Dodge, Daly, Huyton, and Sanders (2012) holds the view that wellbeing is like a see-saw with resources and challenges. When wellbeing is optimal the see-saw holds balance. This concept resonates with the model of eastern Taoism using the concepts of Yin and Yang to assert wellbeing which is cultivated through both good and bad and liberated from human desires (Shin & Lyubomirsky, 2017). It also echoes the view that wellbeing is initially positive and homeostatically protected, but a sufficient adverse level of challenges may break the balance of homeostatic system and cause ill-being such as depression (Caltabiano & Ricciardelli, 2012, pp. 104-105).

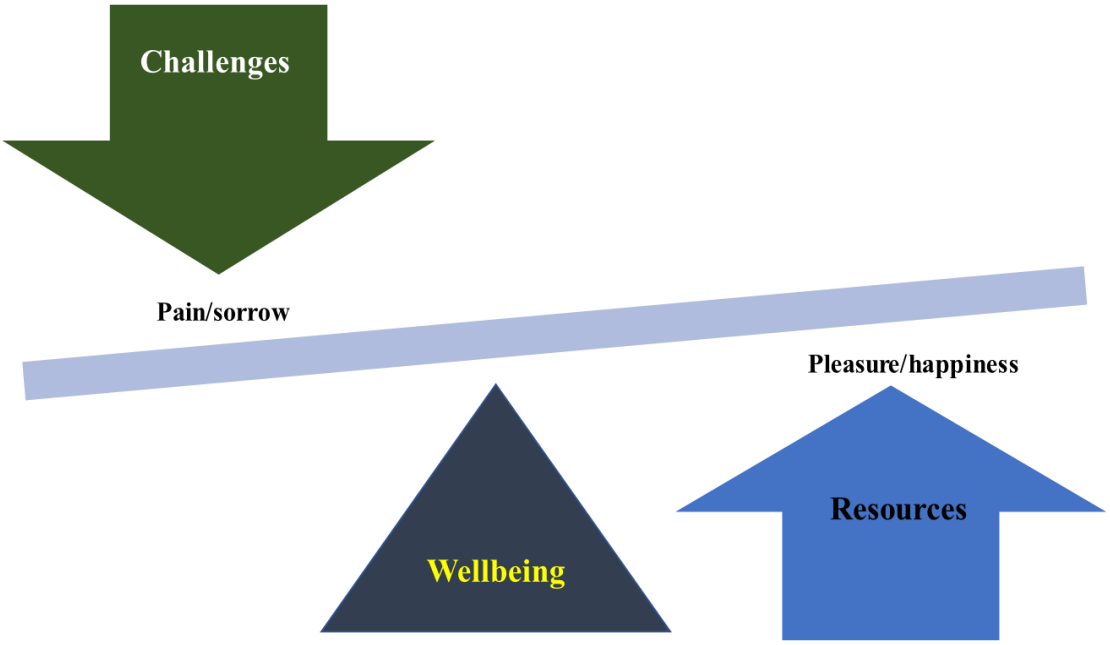

Figure 2.6. A model of wellbeing. Adapted from "The challenge of defining wellbeing" by Dodge, Daly, Huyton and Sanders, 2012, International Journal of Wellbeing, p.230. Copy right 2015 by Open Polytechnic of New Zealand.

Aelterman et al. (2007) summarize the findings from the literature related to teacher wellbeing and suggest three broad categories of factors affecting teachers' wellbeing: factors specific to individuals, to the profession, and to the context of society. This is helpful for disentangling the various factors and trimming the ideas of the configuration of the research design, for instance, how to target and measure teachers' wellbeing in a systematic way, which may include teachers' subjective, psycholgical and professional wellbeing under a particular social-cultural context.

However, without clearly specifying the dimensions and theoretical foundations of wellbeing, the identification of factors can be confusing. For example, rewards can be a 'double-edged sword' for teachers' wellbeing. On the one hand, rewards can be seen as a recognition of competence and promote teachers' wellbeing (Dagenais-Desmarais & Savoie, 2012). On the other hand, if rewards are considered as extrinsic motivation they may hinder some aspects of teachers' wellbeing (Deci, Koestner, & Ryan, 1999). Previous studies have shown that personalities affect wellbeing. For example, Barrett (2016) contends that a neurotic personality tends to remember more negative emotion, whereas

extraverts recall positive emotion. Thus, it is almost impossible to cover all aspects that affect teachers' wellbeing by only considering the issues of efficiency and parsimony.

Teacher wellbeing includes negative and positive dimensions (Van Horn et al., 2004), however, the majority of studies accentuate stress and burnout (Hoy & Tarter, 2011), which results from the emphasis of teaching as a stressful profession with a confrontation of multiple stressors (Friedman, 2003). Thus, teacher wellbeing deficit models focus on adverse factors that lead to negative outcomes. For example, the Maslach Burnout Inventory (Maslach, Jackson, & Leiter, 1996) reinforces teachers' exposure to stressors that leads to a state of burnout. The model expounds that teacher burnout can be understood in three perspectives: structure, measurements and predictors; and, the exploration of burnout predictors (Zhu et al., 2018). However, according to Mansfield et al. (2016, p. 84), focusing on a deficit model may not be informative on teacher wellbeing, as teacher wellbeing is an "important resilience-related outcome".

Johnson et al. (2014) explore five themes including policies, teachers' work, school culture, relationship and teacher identity through the concept of resilience under a positive psychology framework to address teacher wellbeing. However, Margolis et al. (2014) question the benefit of the resilience approach because it could lead to unsustainable professional circumstances for teachers. Acton and Glasgow (2015) further suggest that future studies should go beyond the perspectives of burnout and resilience and instead "foster an approach that promotes happiness and positive functioning" (p.111). However, Mansfield et al. (2016) propose a teacher resilience framework that suggests that teacher wellbeing is one of the overarching themes of resilience.

Teacher wellbeing underpins teachers' optimal functioning in the workplace (Collie et al., 2016) which is a construct involving teachers' perceptions of their personal, professional and relational selves (Hwang, Bartlett, Greben, & Hand, 2017). It covers teachers' psychological, subjective and pedagogical or professional wellbeing (Acton & Glasgow, 2015; Collie, Shapka, Perry, & Martin, 2015a; McCallum et al., 2017).

Echoing the uniqueness of the teaching profession and based on a review of teacher wellbeing literature, wellbeing has been defined as

> Diverse and fluid respecting individual, family and community beliefs, values, experiences, culture, opportunities and contexts across time and change. It is something we all aim for, underpinned by positive notions, yet is unique to each of us and provides us with a sense of who we are which needs to be respected (McCallum & Price, 2016, p.17).

This definition influences and guides the present study on teachers' wellbeing because of its focus on three main points: 1) wellbeing is fluid and ever changing; 2) wellbeing is culturally embedded; and 3) wellbeing is positive.

2.5 Summary

This chapter has provided a literature review on rurality, wellbeing, teacher wellbeing and the relationship to cultural contexts, focusing on Confucianism and Hedonia/Eudaimonia. This literature review has identified the gaps in the literature and associated research, which clearly show that differences exist in the conceptualizations of wellbeing between Confucianism and Hedonic/Eudaimonic views. Prior to this study, there has been no research addressing this research gap on construing the meaning of teacher wellbeing under a Confucian cultural context of China. This literature review above has provided an in-depth account of the different meanings and notions of wellbeing and teacher wellbeing, and the essential role that culture plays on wellbeing was also discussed.

This chapter has thus served as a basis to scaffold the formulation of the theoretical framework that guides this study to explore the meaning of rural Chinese teachers' wellbeing within a Confucian cultural context and elicits the theoretical significance of the present study. The following chapter 3 will analyse the theoretical framework that is guiding this present study.

Chapter 3: Theoretical framework

3.1 Introduction

The present study draws on Self-Determination Theory (SDT) under a Confucian cultural perspective to build the theoretical framework to explore and understand rural Chinese teachers' wellbeing. This chapter will detail and categorize the discussion of this theoretical framework is categorized in four sections: The first section will examine SDT; the second section will discuss the cultural context; the third section will broadly define the theoretical framework; and final the fourth section will outline the significance of the present study.

3.2 Self-Determination Theory

Theory can be used to contemplate research questions, analyse research problems, and guide the interpretation of research data (Reeves, Albert, Kuper, & Hodges, 2008). Social scientists claim no single theory can be treated as a universal law to explain the causal relationship of complex interrelated functions of societies (Reeves et al., 2008). However, theory can be used as a conceptual tool to understand complex social realities, as Lewin (1951) stated, "there is nothing so practical as a good theory" (p.169). Lamond (2015) further explained that theory can be used to understand and predict reality.

International research acknowledges two main types of wellbeing theorization, they are Hedonic and Eudaimonic (as discussed in above section 2.3). For example, Diener et al. (1999) and Watson (1988) focus on a Hedonic approach, and Ryff (1989) and Ryan and Deci's (1985) theorization of wellbeing aligns with functioning components of wellbeing which is conceptually close to Aristotle's notion of Eudaimonic wellbeing. In contrast, a combined position that embraces both Hedonic and Eudaimonic aspects of wellbeing was

pioneered by Keyes, Shmotkin, and Ryff (2002a), Seligman (2004), and Tennant et al. (2007).

Although SDT predates Positive Psychology, SDT belongs to the broader research agenda of Positive Psychology because it is built on the concept of Eudaimonic wellbeing and the basic psychological needs of SDT accentuate the factors that enable wellbeing rather than reducing wellbeing (White & Murray, 2015, p. 142). SDT explains optimal human motivation which contributes to positive outcomes such as wellbeing and resilience, but SDT also goes beyond prototypical Positive Psychology theories which monotonously focus on the positive side (Sheldon & Ryan, 2011). Sullivan (2019) argues SDT needs and optimal level of wellbeing are two separate entities. However, this view overlooks the close relationships between them. SDT has its unique contribution to wellbeing research on proposing three basic needs and two types of behavioural regulation, they are; needs of relatedness, autonomy and competency, and controlled and autonomous motivation, which results in healthy wellbeing (Ryan and Deci, 2001).

3.2.1 Controlled and Autonomous motivation

SDT differentiates two types of behavioural regulations and argues that if a person is autonomously motivated, she or he cannot articulate what is the intentionality or goal for the activity, because the activity is intrinsically satisfying, as such the line between the reason and goal is mingled (Pawlik & d'Ydewalle, 2006, p. 257). SDT contends that autonomous motivation predicts effective performance especially for heuristic tasks (Deci & Ryan, 2008).

According to SDT, there are five types of motivation: one, intrinsic motivation which construes a status of being intrinsically motivated; and the other four types are extrinsically motivated actions: External regulation, introjected regulation, identified regulation, and integrated regulation (Deci, Olafsen, & Ryan, 2017). External regulation is needed when a certain act is for rewards or to avoid punishment; introjected motivation is to enhance self-

esteem and circumvent guilt; identified motivation denotes the performance of an act due to the realization of the values of significance; integrated motivation construes that the act is fully in line with the totality of the identification of the value system (Ryan & Deci, 2000a).

Extrinsic motivation does not necessarily mean low quality (Pawlik & d'Ydewalle, 2006). This is because extrinsic motivation can be internalized (Ryan, 1995b) as integrated regulation belongs to autonomous motivation. SDT researchers argue autonomous regulation of behaviour is beneficial for healthy wellbeing across all cultures (Ryan & Deci, 2003, 2017).

However, these claims were challenged by Cross and Gore (2003) who argue that the pursuit of autonomy is characterized by independence. This is mainly representing western individualistic societies. Pawlik and d'Ydewalle (2006) challenged the view because it misinterpreted SDT's conceptualization of autonomy, as the opposite of autonomy is not about relying on others for support, rather denotes feelings of not being in control, so volition is intrapersonal rather than interpersonal and core to autonomy. In this sense, individualism and collectivism are orthogonal to autonomy. Previous research supports this view and claims that autonomy fosters wellbeing for people from collectivism cultures as well, such as Chinese and Russian societies (e.g. Chirkov & Ryan, 2001; Pawlik & d'Ydewalle, 2006; Rapheal & Varghese, 2015).

3.2.2 Basic psychological needs

SDT is a meta theory in the field of psychology, it aims to understand the fundamental motivations of human beings through gauging people's basic needs of relatedness, competence and autonomy; SDT contends that the fulfilment of three basic needs facilitates autonomous motivation and healthy wellbeing (Deci & Ryan, 2008). SDT as a meta theory includes a series of theories which construes optimal levels of human wellbeing, psychological needs theory is at its core (Deci et al., 2001; Doménech-Betoret, Lloret-Segura, & Gómez-Artiga, 2015). According to SDT, three basic human needs are

autonomy, competence and relatedness, and Ryan et al. (2008, p. 153) provide this summary of them:

> Autonomy refers to a sense of choice and volition in the regulation of behaviour, competence concerns the sense of efficacy and has respect to both internal and external environments, relatedness refers to feeling connected to and cared about by others, and the satisfaction of these needs fosters wellbeing.

Thus, SDT is built on the proposition that the three basic psychological needs fostering optimal levels of wellbeing, which emerge from the hypothesis that under the conditions of perceived autonomy, competency and relatedness support intrinsically motivated behaviours (Ryan, 1995b). Consequently, needs fulfilment not only benefits intrinsic motivation and emotional integration, but is also essential to growth in any domain as 'specifiable nutrients' (Ryan, 1995b).

The fulfilment of basic needs fosters intrinsic motivation and leads to optimal wellbeing (Ryan & Deci, 2001a), because psychological development and wellbeing cannot be achieved without addressing the needs, which specify "innate psychological nutriments that are essential for ongoing psychological growth, integrity, and well-being" (Ryan & Deci, 2000b, p. 228 & 229). The three basic needs play a necessary part in optimal development. SDT directly predicts wellbeing because the satisfaction of three basic needs is related to general health and self-esteem as well as an inverse of anxiety and somatization (Ryan & Deci, 2000b). Autonomy indicates the feeling of cause of individual's own behaviour.

Competence reflects the feeling of effectiveness, although competency is closely related to self-efficacy, their differences are notable; self-efficacy is future oriented and a specific feeling of effectiveness, whereas the need for competence focuses on the present and denotes a more general feeling. Thus a need for competence may foster people's wellbeing on a more general level (Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008); and relatedness is about the feeling of connection and being understood (Deci & Ryan, 1985).

Therefore, it is asserted that SDT offers a comprehensive theoretical framework to gauge optimal human functioning, development and wellbeing (Ryan & Deci, 2000a).

According to Ryan and Deci (2001a) needs fulfilment will be beneficial for both subjective wellbeing (SWB) and psychological wellbeing (PSW). This is because although SDT is conceptualized based on Eudaimonia, "Hedonic wellbeing both results from and leads to optimal functioning" (Joshanloo, 2016b, p. 2024). Joseph and Roy (2018, p. 31) propose that a "good life would ideally be both happy and meaningful", the feeling of efficacy is a core ingredient of a meaningful life (Stillman et al., 2009), and "both happiness and meaning gain from involvement in social relationships" (Joseph & Roy, 2018, p. 26). It can be argued that SDT proposes basic psychological needs and echoes Joseph and Roy's (2018) proposition of a good life which contains Hedonic and Eudaimonic aspects of wellbeing. Furthermore, needs fulfilment is not only essential for human survival and wellbeing, but is the nutrient for flourishing in a social environment (Ryan & Deci, 2001a).

Besides needs fulfilment affecting wellbeing, there are other factors as well. Nix, Ryan, Manly, and Deci (1999) argue if succeeding in a goal under external pressure results in happiness (linked to SWB), it does not result in vitality (linked to emotional wellbeing). Costa and McCrae (1992) assert that perceptions of wellbeing are persistent across the lifespan of humans due to its relatedness to personality. Their research results also indicate that extraversion and agreeableness are consistently positively associated with SWB, while neuroticism is a consistent negative indicator. This resonates with the findings of the study by Temane and Wissing (2008); however, their study further pointed out the role of cultural context which was intertwined with personality and affected wellbeing.

It can be argued that extraversion and low neuroticism are linked to Eudaimonic views of self-acceptance and self-efficacy, agreeableness has a linkage to relationship, and low neuroticism closely relates to autonomy (Schmutte & Ryff, 1997). Diener, Sandvik, and Pavot (1991) believe SWB is related more to the frequency of the intensiveness of positive experiences, so experience rather than avoidance will incur higher wellbeing. Suppressing

emotions is detrimental to wellbeing (King & Napa, 1998) and emotional disclosure is a beneficial factor for wellbeing (Butzel & Ryan, 1997).

3.2.3 School teachers

The Teaching and Learning International survey (OECD, 2014) indicated that hours of teaching have opposite effects on aspects of teachers' wellbeing. That is, longer teaching hours would have a positive influence on teachers' self-efficacy, but would negatively affects teachers' job satisfaction. However, based on SDT, self-efficacy is the determinant of a sense of competence, which is the core component of fundamental human needs that determines human wellbeing and job satisfaction. It is a key indicator of wellbeing. This is reflected in the different conceptualizations of Hedonic and Eudaimonic wellbeing; competence is a basic need for SDT which is built on Eudaimonic wellbeing (Ryan & Deci, 2017); whereas job satisfaction is closely related to SWB built on Hedonic wellbeing (Renshaw et al., 2015).

It seems there is a real dilemma regarding teacher quality in poorer rural regions of China. According to McKinsey and McKinsey (2007), to get the right applicants teachers need a good starting salary. This is the key solution for a high performance schooling system. However, for economically poor area especially in some rural areas in China this is not possible, because decentralized budgets do not allow a higher than average salary being offered to rural teachers in China, and thus it is unsurprising that top university graduates prefer to teach in urban schools and the tight, decentralized budget would not allow a higher than average salary for rural teachers in China (Xuehui, 2018). McKinsey and McKinsey's (2007) report also states that lower performing school systems can rarely attract quality teachers. However, motivation to teach is one of the key factors to be considered and of concern to the policy makers in relation to the selection of the right teaching candidates (Allington & Johnston, 2000; Collie et al., 2016).

In top performing education systems, such as Singapore and Finland, motivation for teaching is the key teacher selection criteria (Sharif, Upadhyay, & Ahmed, 2016). Being highly motivated to teach with optimal functioning and wellbeing is the crux of quality teachers. This is because when fundamental needs are met, teachers are more likely to have consonance of personal value to reach a state of flourishing of wellbeing. SDT proposes that three psychological needs are essential nutrients to both motivation and wellbeing (Ryan & Deci, 2017). Furthermore, some studies have shown that needs satisfaction is positively correlated with teacher wellbeing (Klassen, Perry, & Frenzel, 2012) and motivation (Taylor, Ntoumanis, & Standage, 2008). Figure 3.1 illustrates that the satisfaction of the three basic psychological needs lead to highly motivated teachers with an optimal level of wellbeing. Moreover, SDT emphasizes the importance of domain-specific study, because to understand the general principle in specific spheres, has significant influences on operation (Ryan, 1995b).

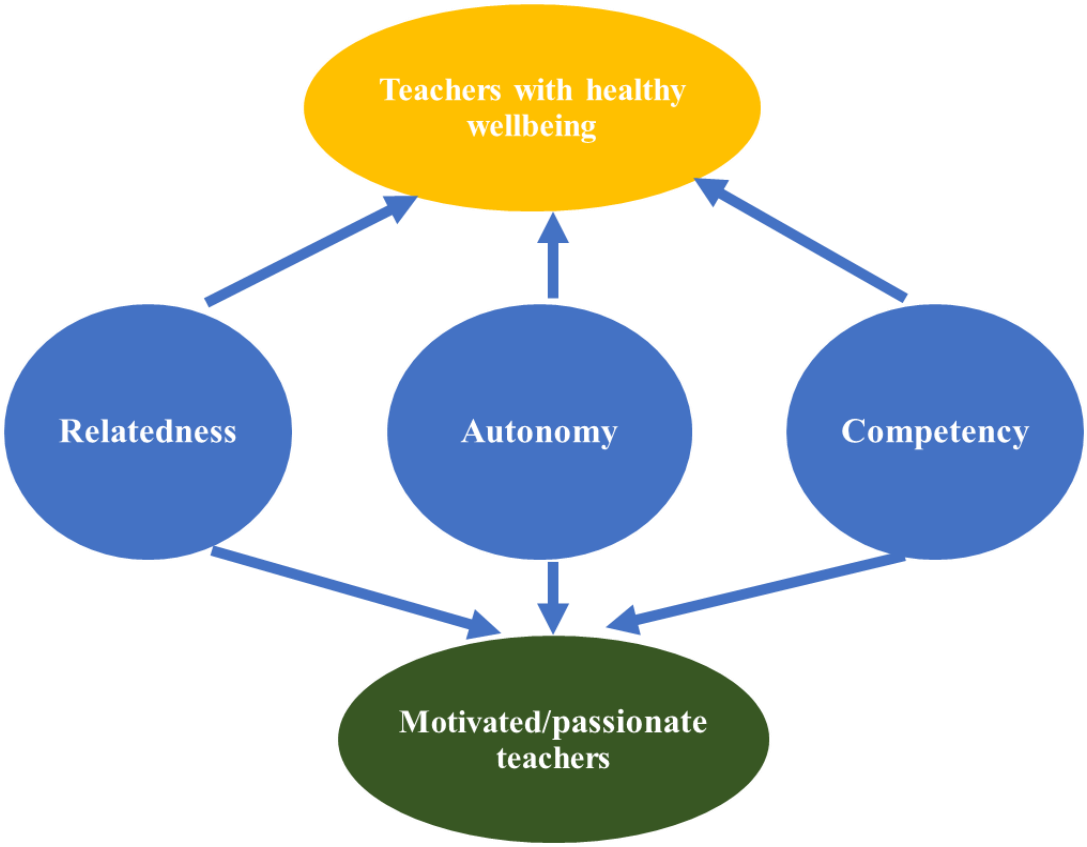

Figure 3.1. Psychological needs fulfilment in relations to teacher wellbeing

The latent construct of basic psychological needs is interpreted in two different ways. According to Sheldon (2011) psychological needs can categorize needs as requirements. This resonates with SDT's conceptualization that needs are essential nutrients for human functioning. In contrast, the other category is needs as motives, such as Maslow's (1954) theory of personality and motivation, explicating a hierarchy of needs that prompts relevant behavioral efforts.

This study adopts SDT that was first developed by Deci and Ryan (1985) to understand Chinese rural teachers' wellbeing and in combination with social, cultural and ecological factors to gain an in-depth understanding of teachers' wellbeing related to teacher retention. It will be meaningful for policy makers to develop policies that retain quality teachers in rural China to address the gap between rural and urban schools. SDT is a theory about motivation and wellbeing which construes that the fulfilment of the three basic psychological needs fosters optimal functioning (Ryan & Deci, 2017). Previously, researchers have used SDT needs fulfilment processes to model teachers' wellbeing and thriving, for example the studies by Collie et al. (2016), and Collie and Perry (2019). This present study will therefore explore teachers' optimal functioning and wellbeing through SDT to examine the complex phenomenon of teacher wellbeing in rural China.

3.2.4 Teacher wellbeing

Various theories may be applied to study teachers' wellbeing. These include the job resources and demands model (Bakker & Demerouti, 2007), and SDT related theories including Maslow's needs theory (Maslow, 1954), Attachment theory (Ainsworth, 1964), Flow theory (Csikszentmihalyi, 1975), and Doyal and Gough's (1991) Needs theory.

As established by the research of Maslow (1954), Ainsworth (1964), Csikszentmihalyi (1975) and Doyal and Gough (1991), SDT is built upon and interrelated with their well-established psychological theories: Maslow's Needs theory (Maslow, 1954), Flow theory (Csikszentmihalyi, 1975) and Attachment theory (Ainsworth, 1964).

SDT possesses similarities with Maslow's Needs theory (Maslow, 1954), the differences lie in the paralleled or hierarchical focus of satisfaction of needs (Doménech-Betoret et al., 2015). However, according to Rasskazova, Ivanova, and Sheldon (2016, p. 552), SDT's basic psychological needs "may better represent" the human needs in relation to wellbeing, as Maslow's models of "self-actualization and self-esteem" are less important. Also SDT psychological needs fulfillment are more related to wellbeing than low-level needs satisfaction, for example financial security. Furthermore, SDT solves issues of endless proposed needs, which formulates three basic psychological needs supporting human growth and wellbeing (Ryan, 1995b).

Furthermore, SDT deepens the needs theory proposed by Doyal and Gough (1991) which contained five aspects of the social indicators of wellbeing: first, intermediate needs, such as food and health care; second, universal goals, such as participation in society; third, specific satisfiers for example houses; fourth, society preconditions such as living standards; fifth, basic needs, such as health and autonomy. However, Doyal and Gough (1991) conceptualized and operationalised autonomy as 'learned helplessness' and mental stress. SDT modifies this by proposing basic psychological needs which if fulfilled would result in optimal levels of wellbeing, which echoes the perspective of positive psychology and appreciative study.

Flow theory suggests that optimal wellbeing requires an optimal challenge. Too much challenge leads to frustration, whereas too little leads to boredom (Csikszentmihalyi, 1975). This is in line with SDT's basic need of competency (Ryan & Deci, 2000b). In order to obtain competency, individuals need to overcome challenges and turn those challenges and negativities into the positive sense of competency. SDT argues that intrinsic motivations are instrumental for individuals to face and conquer optimal challenges (Deci, 1985). Thus, both SDT and Flow theory stresses that challenges and negativities are integral parts of wellbeing, meanwhile previous studies also showed that positive life outcomes are strongly related to wellbeing (Howell, Kern, & Lyubomirsky, 2007; Lyubomirsky, King, & Diener,

2005). As such, the notion of wellbeing can be regarded as a spectrum from negative to positive.

Attachment theory (Ainsworth, 1964) addresses the importance of intimate relationships between infants and their caregivers for their ultimate wellbeing. This is closely related to the basic need of relatedness, however, relatedness has its focus on social context instead of the infant-caregiver relationship, and attachment security is determined by the fulfilment of SDT psychological needs (Ryan & Deci, 2000b). This conforms to recent neuroscience advancement, which shows that the development of the psychological status and the structure of the brain occurs throughout the life course of a human-being rather than solely determined by biological genes or formed in early childhood. The new neural pathways are constantly developing in response to the human societal environmental stimuli, as such, it reinforces the resonation with SDT's need of relatedness (Roffey, 2012). However, SDT emphasizes the importance of the need of relatedness during the whole life course rather than early childhood only.

The above theories resonate with SDT's three basic psychological needs of relatedness, autonomy and competency. SDT advances these theories. According to Collie and Perry (2019, p. 703), "a growing body of research has identified the relevance of SDT for understanding teachers' wellbeing at work".

Job resources and demands model (Bakker & Demerouti, 2007) suggests job demands are the physiological and psychological costs from the particular profession that require physical and psychological effort; job resources can reduce the costs and achieve work goals. Although teachers' wellbeing can be viewed through the job resources and demands model (Huang et al., 2019), this model does not capture the crucial dynamics emanating from the idea that teaching "is an emotional endeavour" (Yin et al., 2019a, p. 1). For the above reasons, SDT was adopted as the guiding theory for the present study through which to explore rural teachers' wellbeing in China.

3.3 Cultural context

Modern psychology is dominated by western cultures (Pawlik & d'Ydewalle, 2006, p. 58). According to Joshanloo (2014, p. 475), western notions of wellbeing take root in "western old and new streams of thought". Wellbeing research has been criticized by Christopher (1999), Uchida and Kitayama (2009) and Joshanloo (2014) because of its culture-free stance. Shin and Lyubomirsky (2017) emphasize that eastern wellbeing is rooted in group or community, in contrast, western wellbeing is derived from the individual, such as personal autonomy, self-expression and self-actualization. As culture is embedded in the lives of society and human social activities (Vygotsy,1986, cited in Kabir & Akter, 2014), and it is one of the most significant and pervasive factors in our work life (Blustein, 2008).

Focusing on the cultural context is crucial for studying social phenomena. For instance, a study by Lambert D'raven and Pasha-Zaidi (2016) examined Seligman's (2011) PERMA model (a western wellbeing theory focusing on a visionary new understanding of flourishing) through a qualitative thematic analysis in the context of United Arab Emirates. Although the results showed that PERMA is culturally consistent, the study's focus is on locus of control which is defined in the west, the study acknowledges that research must further consider "wellbeing findings on culture itself" (Lambert D'raven & Pasha-Zaidi, 2016, p. 923). This is because "an important source of psychological meaning comes from an individual's cultural environment" (Adler & Seligman, 2016, p. 15).

According to White (2010, p. 161) wellbeing including the material side of wellbeing is grounded in a "particular social and cultural location". For example, in China, if people have a stable job paid by government, they are called 'eat emperor's rice', this reference to rice is not incidental, and reflects the embedding of Confucian values as well as basic human needs. Moreover, meaning and identity are key to the conceptualization and operationalization of wellbeing, and culture provides "guidelines for what meanings are to be attached to" (Gough & McGregor, 2007, p. 329). This reveals the interconnected dimensions of teachers' wellbeing with its cultural grounding.

SDT asserts the importance of the fundamental psychological needs of autonomy, relatedness, and competence with a focus on the individual's capability to exercise intrinsic motivation, optimal functioning and wellbeing (Ryan & Deci, 2000a). SDT proposes three basic needs that are either supporting or antithetical to wellbeing depending on cultural inputs, is congruent with the needs or not, and furthermore, suggests that volition is the key to the process of the integration of needs and values (Ryan, 1995b). However, the discourse in the literature is focused on autonomy as well as a general distinction between individualism and collectivism. Filak and Sheldon (2010) clarify that autonomy is neither independence nor freedom but internal acceptance and volition based on the discussion around individualism and collectivism.

Ryan and Deci (2017) conceptualize SDT's basic needs according to the Eudaimonic wellbeing model which is characterised as pursuing intrinsic rather than extrinsic values. SDT focuses on the explication of people behaving in volitional ways and the fulfilment of basic psychological needs, as well as how external regulations or values are internalized and form an integrated self (Ryan et al., 2008). However, SDT suggests that culture is only influential on Hedonic wellbeing, as Ryan et al. (2008) purport, in contrast with Eudaimonic wellbeing, Hedonic pleasure is not culturally neutral, but is towards a bias on individualist culture.

The Eudaimonic perspective of wellbeing originates from Aristotle's philosophy of happiness as "a character of persons that entails living in accordance with reason and moderation, and aiming toward excellence and the realization of a complete human life" (Ryan et al., 2008, p. 143). Eudaimonic pursuits reflect that volition is crucial for wellbeing rather than external control, because Eudaimonic wellbeing is rooted in autonomy (Deci et al., 2017; Ryan et al., 2008). For example, a person pays tax because of the fear of punishment or for the good of all. If it is the latter, it is internalization of external regulation as an intrinsic value which satisfies an autonomy need that fosters optimal wellbeing. Thus, Eudaimonia is not a positive feeling or cognitive appraisal of pleasure. This is distinctive

from Hedonia with pleasure at its core, which possesses more weighting in individualistic culture.

SDT does not relate to the specific cultural contexts to address the mechanism of the psychological needs that interplay with and reflect on particular cultural and societal settings. However, a crucial function of culture is value expression, which allows people to "derive pleasure by expressing basic values" (Pawlik & d'Ydewalle, 2006, p. 53). Thus, an in-depth understanding of wellbeing needs to include the cultural perspectives, which rationalizes the present study to "take culture into account in ever more complex ways" (Pawlik & d'Ydewalle, 2006, p. 58). Therein lies the gap in the literature and research to date that this study aims to address. This research will thus underpin the importance that SDT psychological needs have in interacting with a specific cultural background in rural China.

As in every culture, teacher wellbeing needs to emphasize teachers' meaningful engagement with the relational societies and cultures (Liu et al., 2018). Moreover, the importance of the fundamental human needs varies between cultures. If we overlook the view of cultural balance, the research findings will be inconsistent, and the comparison of literature would not be warranted. For example, in the culturally individualistic western context, community support from the public serves as an avenue to improving wellbeing (Webb, Vulliamy, Sarja, Hämäläinen, & Poikonen, 2009). In contrast, in culturally collective eastern contexts, individual significance is fulfilled through relational meaningfulness. Thus, if a significantly effective intervention based on individualistic culture is applied to a collectivist cultural context, it may fail. For instance, research by Guo and Hanley (2015, p. 63) revealed that practices of Cognitive Behavioural Therapy (CBT) "need to be modified for cultural responsiveness" for clients with Chinese cultural backgrounds.

It has been argued that collectivist cultures do not value autonomy as much as individualistically oriented cultures (Oishi et al., 1999; Suh et al., 1998). However, Sheldon and Krieger's (2004) empirical study argues that Self-Determination of personal

goals or autonomy strongly correlated with wellbeing to an equal extent for both eastern and western cultures. This could be explained by human nature; that people tend to avert the feeling of being pressed or compelled, which agrees with Ryan and Deci's (2017) proposal that SDT is universal across cultures.

However, this claim overlooks the importance of cultural context which could have mediating and/or a confounding effect on wellbeing. A previous study by Diener, Diener, and Diener (1995) shows that east Asian survey participants have lower SWB scores than American participants after controlling the effect of income as well as pre-assumed artifactual factors, such as the humble and self-abnegation nature of eastern culture. Also, Diener (2003) argues that culture is a moderator that interacts with emotion variables closely related to wellbeing.

This may cause controversy in research results. For example, feeling isolated is a prominent problem for rural teachers in America, and this is a factor in causing teachers to leave the teaching profession (Lomas, 2015). However, this is not a contributing factor for Chinese teacher attrition. One of the key findings from the OECD (2014) provides evidence to support the claim that the teacher-teacher relationship is significantly associated with teachers' self-efficacy and the teacher-student relationship is highly related to teachers' job satisfaction in China.

According to Ryff, Singer, Wing, and Love (2001) relatedness is of utmost importance to the basic psycho-sociological needs because loneliness is detrimental to life satisfaction. It is argued that a harmonious relationship with others is fundamental to PSW and human flourishing. However, loneliness has not been identified as a key issue for Chinese rural teachers, this is probably due to the differences between collectivist dominated culture in China and individualistic culture in the USA. The uniqueness of the relatedness need for rural Chinese teachers may explain this discrepancy.

Half a century ago the political action of the Cultural Revolution (1966-1976) was detrimental to traditional Confucianism, which had dominated Chinese culture and had been rooted in Chinese society, especially the rural Chinese community for over 2000 years

(Qian, 1976). During the subsequent years of economic reform and open-door policy, the now more occidentalized Chinese society is embracing western capitalism (Li et al., 2018). The societal and cultural transformations are also reflected in rural China. Chinese rural society is characterized with traditional Confucianism, but is now experiencing underlying social changes. This study therefore aims to find out how traditional Confucian culture influences teachers' wellbeing in the contemporary neoliberal era which is restructuring rural China.

3.4 Theoretical framework

There are a number of ways of interpreting, conceptualizing and operationalizing wellbeing. Huppert (2014) argues that in order to come to a unified agreement, researchers could specify the key components of wellbeing. Huppert and So (2013) indicate ten components of wellbeing: competence, emotional, stability, engagement, meaning, optimism, positive emotion and relationship, resilience, self-esteem and vitality. Seligman's (2008) core indicators of wellbeing are engagement/interest and meaning/purpose. Whereas, Huppert (2014) adds resilience, self-esteem, optimism, vitality, Self-Determination and positive relationship as the key components of wellbeing.

However, Huppert (2014) suggests that it is very ambitious for researchers to form a consensus in regards to the definition of wellbeing. The last resort is to utilize the psychometric technique to use a smaller number of components to engage most of the variations of wellbeing, such as the Rasch or Factor Analysis model which can be utilized to validate the scales and to highlight the significant indicators of wellbeing as well as the range of scores of wellbeing from low to high.

This present study addresses the key components of a wellbeing framework proposed by Schrank et al. (2013) which reflects the intricate nature of wellbeing. It includes satisfaction and happiness, which taps into teachers' subjective wellbeing; meaning in life

corresponding to psychological wellbeing of rural teachers; fulfilment of needs resonating with SDT's three basic psychological needs.

Western notions of wellbeing are clearer on positive and negative aspects of wellbeing, whereas eastern wellbeing notions are blended (Shin & Lyubomirsky, 2017). According to Joshanloo (2014), in order to acknowledge the differences between Eastern and Western notions of wellbeing, wellbeing needs to be conceptualized separately to resonate particular cultural beliefs. However, SDT suggests that cultural values are more easily internalized when the needs of competency, autonomy and relatedness are satisfied, and claims that the key to the psychological internalization process is needs satisfaction (Arvanitis, 2017). Thus, SDT proposed a psychological process of internalization based upon needs satisfaction to offer the basis for exploring rural teacher wellbeing by examining the fulfilment of the basic human needs within Confucian culture. However, the SDT psychological needs are "in an abstract sense"; there is a pressing need to obtain the specific meaning of SDT psychological needs in particular cultural and societal settings (Gough & McGregor, 2007, p. 332).

This study utilizes SDT as a theoretical lens to view factors that contribute to teachers' wellbeing with an emphasis on the unique eastern cultural context. The present study aims to operationalize teacher wellbeing through a process of linking constructs and observable measurements based on theoretical justification (Shmueli, 2010). Three basic psychological needs of autonomy, relatedness and competency are hypothesized to foster teacher wellbeing in rural China. The present study conceptualizes teacher wellbeing in terms of basic psychological need fulfilment. This study aims to integrate teachers' subjective, psychological and professional wellbeing and further investigates the conceptual relationships between psychological needs fulfilment and the three dimensions of teacher wellbeing to inform the operationalization of teacher wellbeing based on SDT with a focus on Confucian culture.

The present study conceptualizes rural Chinese teachers' wellbeing based on SDT psychological needs fulfillment because "values are more easily internalized when

envrionment provides the nutrients for the support of the needs for autonomy, competence and relateness" (Deci & Ryan, 2000 as cited in Arvanitis, 2017, p.59). Thus, the fulfillment of rural teachers' psychological needs contributes to optimal levels of teachers' wellbeing, which also implies eastern Confucian values may be integrated within teachers' sense of wellbeing. This provides a theoretical foundation for the conceptulation of teacher wellbeing under a Confucian cultural context.

The theoretical framework used in this study is illustrated in Figure 3.2 below. It incorporates the dimensions of teachers' subjective wellbeing, psychological wellbeing and professional wellbeing based on Chinese Confucian cultural context, which addresses the aspects of job satisfaction, job meaningfulness and professional excellence with a focus on cultural context and sensitivity. This theoretical framework suggests that cultural context is core to rural teachers' wellbeing and functioning based on SDT's three basic psychological needs fulfilment.

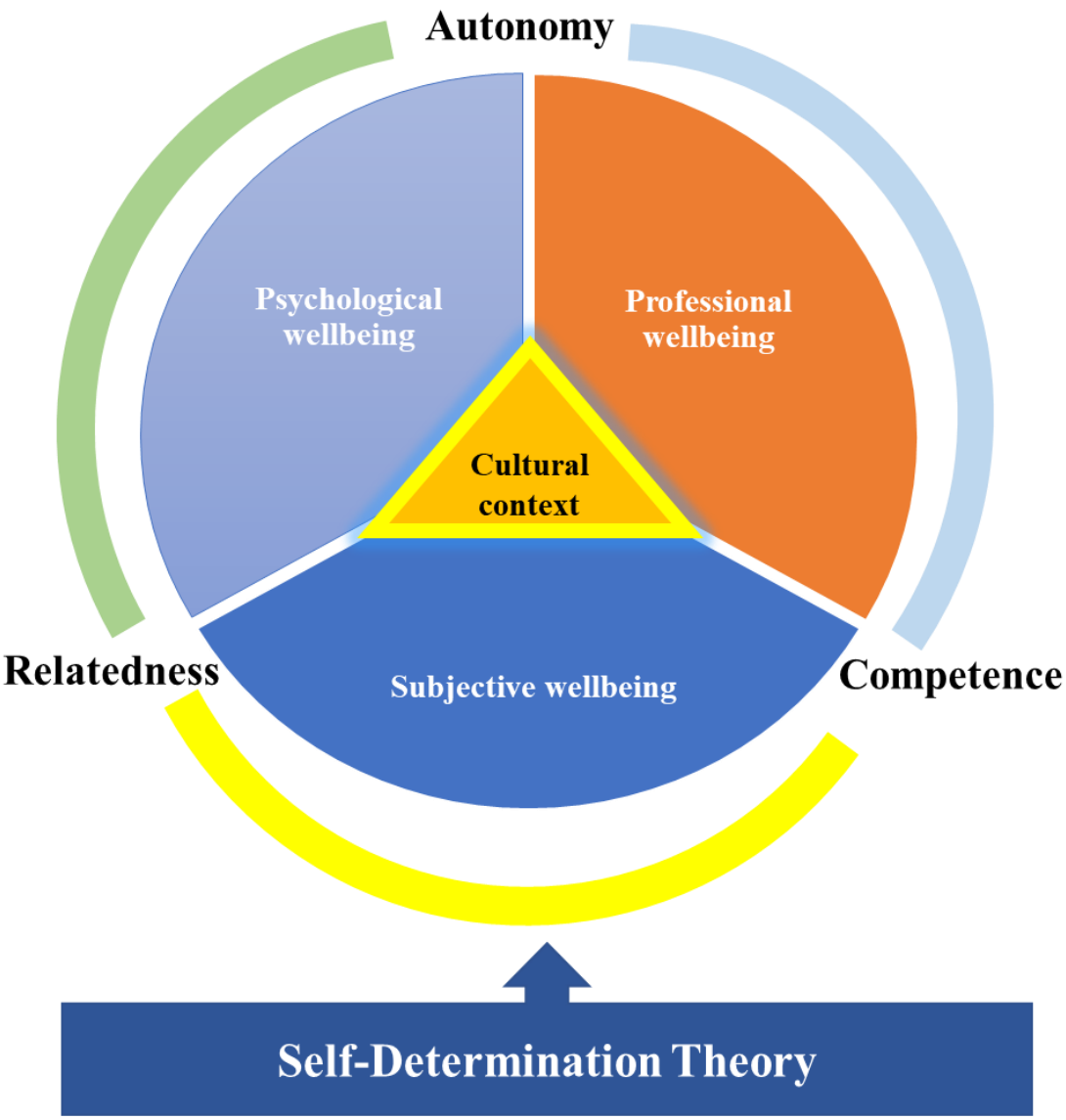

Figure 3.2. Conceptual model of teacher wellbeing in rural China

3.5 Contribution to the discipline

SDT theorizes wellbeing by linking basic psychological needs satisfaction as the fundamental premise. Ryan and Deci (2000b) suggest that the three basic psychological needs of autonomy, relatedness and competency are universal across cultures. Upon satisfaction of optimal health and wellbeing being reached, "avenues to basic need satisfaction may differ widely from culture to culture" (p. 246). However, SDT does not expect the invariant effects and relations between needs satisfaction and wellbeing in all cultures especially for those that are substantially different from the western world. This is because different cultures have different processes, effects and outcomes of needs satisfaction in relation to wellbeing (Ryan & Deci, 2000b). For instance, conformity and compliance in a collectivist culture may be an avenue to a realization of autonomy or relatedness, whereas it is considered as a threat to autonomy for individualistic cultures (Ryan & Deci, 2000b).

The evidence that the satisfaction of SDT psychological needs fosters optimal wellbeing has been widely acknowledged (Collie et al., 2016; DeHaan, Hirai, & Ryan, 2016; Ryan & Deci, 2017; White & Jha, 2018a), and cultural variation is a dynamic perspective of SDT. However, it is unknown how it impacts on wellbeing under Chinese cultural environments for a unique profession like teachers in rural areas. Furthermore, almost all of the literature in regards to the conceptualization and operationalization of wellbeing is based on Aristotle's concepts, and tends to subscribe to the notion that only two perspectives of wellbeing exist, which are Hedonic and Eudaimonic wellbeing (Harding et al., 2019). So, western notions of wellbeing dominate the field of psychology (Shin & Lyubomirsky, 2017).

In contrast to western culture, eastern culture normally refers to the countries of Asia, and more than 60% of world population resides in Asia (United Nations, 2017). Thus, an eastern notion of wellbeing is "critical to a more complete understanding of phenomenon" (Shin & Lyubomirsky, 2017, p. 12). This study will expand existing wellbeing models

based on SDT through a re-contextualization of the unique rural teaching profession within the eastern Chinese Confucian cultural context.

Conceptualizing rural Chinese teachers' wellbeing based on SDT and Confucian values has theoretical and empirical significance because of the acknowledgement of teacher wellbeing as being both generic and specific in the cultural context. This can produce an unbiased picture of rural teachers' wellbeing. This study transcends the dichotomy taxonomy of individualism and collectivism, which provides a framework for a conversation between western psychological theories and eastern cultural forms and heritages. As such, the implication for this study is the identification of positive factors that will enable policy makers and schools to undertake strategies and actions to address teachers' wellbeing which leads to positive educational outcomes. This study will also identify the potential levers of change to advance teachers' wellbeing and to provide a meaningful contribution to enrich teachers' training programs. It is hoped that the findings of this study could contribute to enabling rural Chinese teachers to be involved in creating viable teaching experiences as imperative to their optimal wellbeing.

In sum, the original contribution to knowledge is that the present study adopts an Appreciative Inquiry (AI) informed mixed-methods approach, and reveals the nature of rural teacher wellbeing based on Confucian cultural contexts through an SDT theoretical lens. The advanced understanding of teacher wellbeing will be conducive to support "the emotional nature of teachers' work" (McCallum et al., 2017, p. 20) and raise teachers' self-awareness of wellbeing (White & Murray, 2015), and design future interventions to increase job commitment among rural teachers because of its potential for highlighting unique cultural values and elucidating rural Chinese teachers' identity and character strengths.

3.6 Summary

This chapter has presented a theoretical framework to guide this study, and has explicated the relationship between rural teacher wellbeing, SDT and Confucian cultural contexts. The

significance of this study has been identified and discussed. This study deviates from the traditional focus on remediating stress, and rather focuses on the identification of factors that positively affect and enhance teachers' wellbeing. This may enable policy makers and schools to undertake strategies and actions to address teachers' optimal functioning and wellbeing and lead to positive educational outcomes for students. This underpins the adoption of a mixed-methods and Appreciative Inquiry (AI) approaches for this research, and which will be detailed in the next chapter (Chapter 4).

Chapter 4: Methodology

4.1 Introduction

This chapter outlines the methodology of the present study, and firstly provides an introduction and justification of the use of the Appreciative Inquiry (AI) approach. Secondly, this chapter will explain the data collection procedures including the qualitative and quantitative phases which are based on an overarching mixed-methods methodology. Thirdly, the issues related to sampling will be discussed. Finally, the ethical considerations of the study will be outlined. Overall, the present study is based on a mixed-methods paradigm informed by an AI approach with a focus on what is the optimal promotion of teachers' wellbeing in rural China.

4.2 Appreciative Inquiry

AI was developed by David Cooperrider and colleagues at Case Western University USA. AI is based on the assumption that every individual or communities possess something that works well (Cooperrider, 1986; Cooperrider, McQuaid, & Darwish, 2018; Cooperrider, 2008; Cooperrider & Whitney, 2001; Cooperrider & Whitney, 2005). AI searches for the "best in people, their organizations, and the relevant world around them" (Cooperrider & Whitney, 2001, p. 3) and focuses on "harnessing the power of collective positive emotions, organizational strengths, and the relationships of the organization's members" (Waters & White, 2015, p. 20). AI was initially used as a positive strategy to promote organizational change through the identification of good practice, designing development plans and ensuring implementation (Cooperrider & Whitney, 2001; Shuayb, 2014), and it is increasingly used in new and novel ways in the field of school education (e.g. Cooperrider, McQuaid, & Darwish, 2018; Waters & White, 2015).

Chapter 1 above established that the rural school education system is disadvantaged in comparison with urban schools in China. For example, students' dropout rates in rural primary schools is consistently higher than in metropolitan schools (Luo & Wendel, 1999; Mingren & Shiquan, 2018). This morass has been shown in the decline slowing down of Gini coefficient (Changzheng & Jin, 2009). Previous research has focused on negative factors, such as lower teacher qualities, poverty and poor facilities, but the gap is widening between rural and urban education (Loerbroks et al., 2014).

According to Kern, Waters, Adler, and White (2015, p. 501) exploring teacher ill-being has been informative, however, "it has not given us a comprehensive understanding of teacher wellbeing". Addressing positive indicators to teacher wellbeing is crucial for the advancement of knowledge and practice of school education (Renshaw et al., 2015). A strength-based model "offers important new ways to assist schools" to foster a positive institution (Waters & White, 2015, p. 20).

AI does not hide or ignore the negative (Stavros, 2018), rather it fosters a balanced understanding of both sides of rural teaching experiences within a Confucian Chinese societal setting. However, there is a lack of research to validate teachers' positive values and strategies, and the application of AI to the field of education needs to prioritise teachers' wellbeing (Kern, McQuaid, & Godwin, 2018). The present study shifts the research focus to uncover what fosters rural teachers' wellbeing in China.

AI is categorized under the research agenda of positive psychology due to its broad theoretical perspectives, which underpins positive psychology's fundamental assumption that human goodness and thriving are as authentic as distress and disease (Hoy & Tarter, 2011), as well as positive psychology's focus on human strengths and what makes life worth living (Sheldon & Ryan, 2011; Stavros, 2018). Although AI belongs to the research agenda of positive psychology, they are like two sides of the same coin; positive psychology is to explicate what is a good life (Kim, Doiron, Warren, & Donaldson, 2018); whereas AI is to empower people to figure out what is a good life for themselves (Stavros, 2018). AI is a philosophy of knowing and a methodology of human development, which is

to search for the best within people by asking questions highlighting positive potentials, as such, AI is to empower and appreciate rather than to negate or criticize under the assumption that people have inspiring accounts of positivity (Cooperrider, 1999).

AI's theoretical foundation is based on complexity theory emphasizing positive feedback and self-organization (Mason, 2007), and positive organizational scholarship focusing on optimal functioning and flourishing (Dutton & Sonenshein, 2011). Complexity theory focuses on the nonlinear which means there is more than one single cause for an effect, in the same vein, there is not necessarily only one effect with a cause (Ralph, 2012). This promotes diversity and enables an adaptation to local context (Tregunno, 2013). For example, White and Murray (2015) applied AI to evaluate positive education programs targeting whole-school wellbeing, including students, teachers and school leaders, to promote a positive change at St Peter's College, Adelaide, South Australia. The outcome of their study suggests that AI can be a suitable approach to interrogate teacher wellbeing.

AI has five core principles: 1) Constructionist: identity is socially created through words, hence the adoption of AI based qualitative interviews; 2) Simultaneity: indicates that questions stimulate innovation; 3) Enactment: AI can make a difference because of a constructed living model of the ideal future (Louw, Grobler, & Cowden, 2018), and it resonates positive principle which accentuates positive change through discovery; 4) Anticipatory: a visualisation which inspires actions and wholeness focuses on collective creativity, in which 'I' becomes 'we' (Cooperrider, 2008); and, 5) Free-Choice: liberates power (Louw et al., 2018). Thus, AI can create new perspectives and meaningful changes by means of a '4-D' cycle process Discovery, Dream, Design and Destiny (Louw et al., 2018). Simply put, AI involves the art and practice of enquiring positive interview questions to find out the best of the past and understand the desired future through visualisation (Cooperrider, 2008).

There are eight assumptions based on the five AI principles. First, in every society, although groups or individuals may sometimes feel gloomy, things still work and life goes on; second, focusing on what goes well rather than what goes wrong, is important because

the ‘focus’ will become our reality; third, and this assumption is based on a poetic principle, AI works with multiple realities which are created in the positive moments that people are interested in, and these moments are broader than facts that can be checked and verified; fourth, the way of asking questions influences people’s ways of doing things according to the principle of simultaneity; fifth, AI is an affirmative approach that helps people build confidence to conquer challenges and move forward because of AI’s focus on what has been going well; sixth, AI is conducive to carry forward the best practice in the past; seventh, AI respects differences rather than rushing into consensus; and finally eighth, language used in AI constructs reality according to constructionist principles (Reed, 2007; Zahirul, Lee, Mark, & Kathryn, 2017).

Cooperrider (2003) asserts that the aim of AI is to focus on strengths by ‘eclipsing’ the negative issues. However, this is challenged by Bushe (2012) who argues that it may lead to negativity and a one-sided perspective. White (2010) also argues that the “core promise of wellbeing as being positive” may lead to produce “false consensuses due to its exclusion of negative experiences” (p.167). AI has also been criticized because of its complete focus on positiveness which may not be a universal truth, as negative experiences can be motivating and informative (Bushe, 2012). In fact, an appreciative study conducted by Kevany and MacMichael (2014, p. 46) revealed that “participants were encouraged to speak freely and comments about negative aspects of rural life were valued equally.” Also, the Dream phase of the 4D cycle for AI is able to uncover the frustration (Waters & White, 2015), so negativities can be understood without a straight focus.

Another criticism in regards to AI is about its overreliance on the case study method and lack of quantitative designs, as AI constructs reality according to constructionist principles (Zahirul et al., 2017). However, AI has its roots in action research which is based on positivist assumptions as well as a social constructionist position (Reed, 2007). Thus, although AI is a qualitative research technique (Louw et al., 2018), it can be applied to mixed-methods study. For example, Shuayb (2014) and White and Murray (2015) have conducted appreciative inquiries based on mixed-methods approach in the schools of

Lebanon and Australia. Thus, AI is able to embrace negative experiences and avoid negative reactions from the participants, and is compatible with mixed-methods, which "creates great flexibility for researchers to develop a research design that suits the context" (Shuayb, 2014, p. 306).

4.2.1 Context for an Appreciative Inquiry

Rural life has been described as the antithesis to modernity, which leads to the recurrent discourse that 'rural' is the cause of the problem for rural education (Biddle & Azano, 2016). However, exploring the "unique rural social context and how to best enact formal educational structure within it", has been overlooked (Biddle & Azano, 2016, pp. 315-317). AI plays an important role by allowing us to privilege and learn from the rural social space and the positive experiences of participants. According to Keyes (2002a) wellbeing and ill-being are a different but related continua, and fostering a better understanding of both can provide evidence based support to effective intervention (Lamers, Westerhof, Bohlmeijer, Klooster, & Keyes, 2011). As Dunn and Dougherty (2008) state: "as a society we need to know how people can flourish" (p. 314). Under the AI framework, rurality, rural schooling and its impact on teacher wellbeing can be better understood. This is because "coming to know a place means recognizing and valuing the forms of social and symbolic capital that exist there, rather than elsewhere" (Reid et al., 2010, p. 272).

Furthermore, AI does not try to bury negativities (Cooperrider, 2008), but allows rural teachers to address them in a non-destructive form. Past research has aimed to assess and reduce teacher stress (e.g. Chaplain, 2008; Liu & Onwuegbuzie, 2012), but fewer validated scales gauge positive factors of teacher wellbeing. According to Van Horn et al.'s (2004) model, teacher wellbeing is a complex construct which contains positive and negative dimensions (Mankin, von der Embse, Renshaw, & Ryan, 2017). It is crucial to explore the positive side of wellbeing to gain an in-depth understanding of teacher wellbeing. According to Hoy and Tarter (2011), AI introduces a new way of building a positive school. Thus, AI can be used to explore optimal levels of teacher wellbeing in rural China.

Despite negative factors contributing to the stress of rural teachers, rural teachers still manage to be motivated to teach and help children to learn and thrive in rural China (Tang, 2018). Gu and Li (2013) argue that teachers' resilience is key to this, which is not only about "bouncing back" from harsh situations or setbacks, but also about the capabilities to deal with the unpredictable circumstances of teachers' everyday work lives at different stages of their professional lives and this is also context specific. However, there are broader reasons than resilience which emphasize teachers' own personal attributes, such as meaning and gratitude (Kim et al., 2018). Therefore, this present study is focused on probing what attributes keep rural teachers going as well as maintaining optimal levels of wellbeing.

AI was adopted here to explore rural Chinese teachers' wellbeing. Previous studies have acknowledged the concerns for rural teachers in China, however, some rural teachers are thriving in rural teaching (Mingren & Shiquan, 2018; Qian, Youngs, Hu, & Prawat, 2018; Wu, 2018; Xuehui, 2018). AI echoes the theoretical framework of this present study because Self-Determination Theory (SDT) can serve as a theoretical lens to address and interpret the transformation of challenges to positive functioning (Sheldon & Ryan, 2011).

An overarching objective of AI is to answer the question: what are the greatest strengths of our school, our teachers and our students? (White & Murray, 2015, p. 153). With a focus on what goes 'right' at rural school, it allows teachers to construct shared futures with clear objectives based on their strengths, for instance, 'meaning' as part of PERMA (Seligman, 2011) theory aims to get teachers to ponder and act in ways greater than themselves.

For the present study, AI allows rural teachers to construct what is ideal for their wellbeing, under the theoretical lens of SDT. Rural teachers' views and the existing theory are interrelated and triangulated through the mixed-methods design in order to construe what is ideal in terms of rural teachers' optimal wellbeing. The strengths of adopting AI is that the approach complements the deficit model and offers a positive view on teachers' experiences. It also ameliorates the capability to predict and explain the negatives and disorders.

4.2.2 Processes of AI

Cooperrider's (2008) AI processes as seen in Figure 4.1 illustrate the using 4-D cycle including Discovery, Dream, Design and Destiny, which is conducive to access the positive core (Cooperrider, 2008). There are four AI processes, first, a positive focus of inquiry; second, inquiry about the best moments; third, identification of life-giving forces; and, fourth, creating an ideal future (Tregunno, 2013). Furthermore, the AI process broadens the options of evidence based interventions to improve whole school well-being (White & Murray, 2015, p. 94). The phases of this 4-D cycle are interwoven and intertwined. For example, the discovery phase inquires into the positive core; the dream phase is to envisage the greatest potential; then design phase is to implement the positive change; while the final phase of destiny promotes the actions based on the previous AI phases (Cooperrider, 1999). The present study is designed on a variation of the 4-D cycle and is based on the four general AI processes.

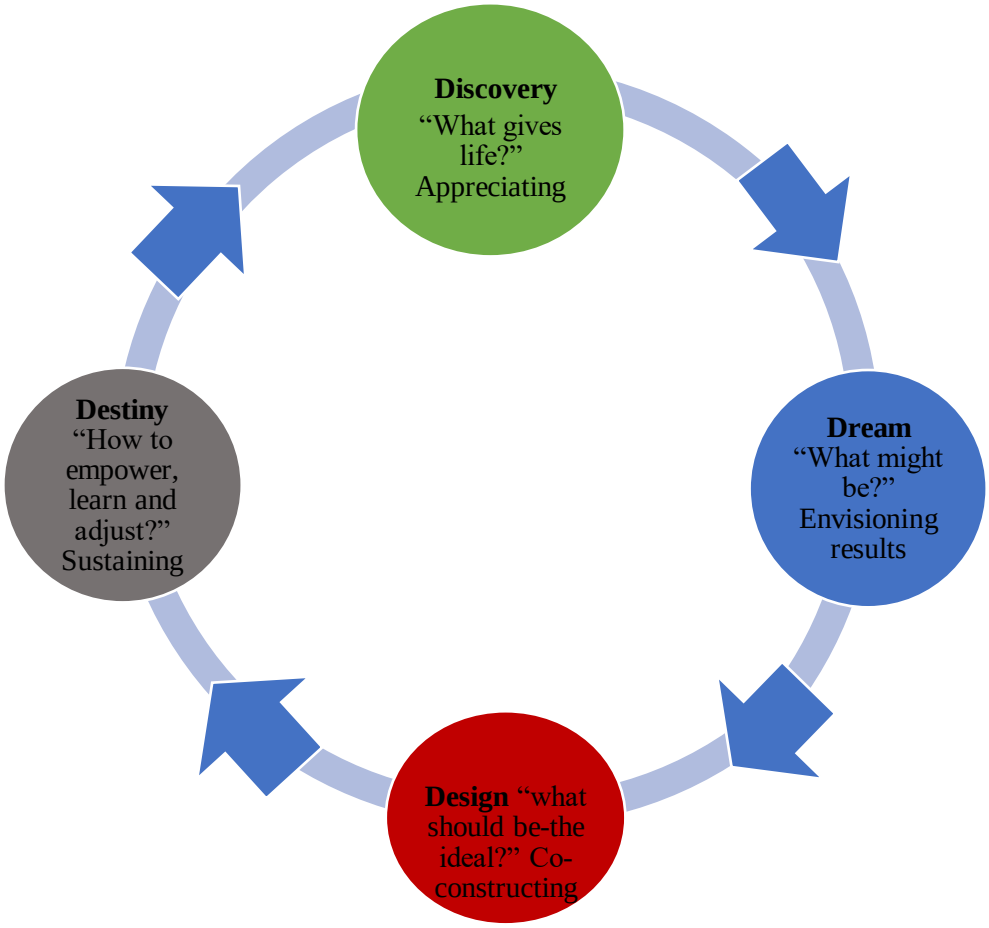

Figure 4.1. AI processes: 4D cycle
Based on AI handbook for leaders of change (p.128), by Cooperrider, 2008, Brunswick, OH : San Francisco, CA, Crown Custom Publishing, Inc.

4.2.3 Methods of conducting Appreciative Inquiry

AI is a method focusing on a strengths-based model to uncover the positive core (Waters & White, 2015). According to Stavros (2018), the AI cycle can be processed as a conversation involving all stakeholders of an organization, is flexible and home-grown depending on the objectives of the study. The AI processes for the present study is based on a variation of the 4-D cycle, the data collection reported in the study is focused on the cycle of 'discovery' because discovery of a positive core is the fundamental purpose of the AI processes (Cooperrider, 2008).

The focus of AI is appreciation which embraces recognition, confirm strengths and uncovers what gives life and health, so it is a process to identify a person's value and unique qualities (Cooperrider & Whitney, 2005). The crux of AI processes is the appreciative interview which uncovers what gives life and positive core to a community (Cooperrider, 1999; Stavros, 2018). The appreciative interviews are to explore the best stories, and thus the discovered narratives can become a community's identity (Cooperrider, 2008).

The appreciative interviews elicited narratives informing teachers' healthy wellbeing. The AI approach was used to guide appreciative interviews with ten rural school teachers in Jilin Province, China. Data were collected on rural teachers' life-giving experiences and opportunities for changing and improving in terms of rural teaching experiences. The appreciative interviews encouraged rural teachers to share their best practices and life-giving experiences. AI based interviews allow rural teachers to tell their stories in order to empower and co-construct a more promising rural teaching career in China.

Furthermore, a key feature of appreciative interview is its accentuation on sincere curiosity (Stavros, 2018), as such AI has the potential to engage the interview participants in a constructive manner through conversations, which ensures high quality interview data collection (Stavros, 2018; Zahirul et al., 2017). Thus, appreciative interviews as stage one of the mixed-methods study are to appreciate what is positive and promising regarding rural teaching in China.

The appreciative interviews used flipping technique (Stavros, 2018) to elicit how rural teachers turn challenges to positives. This technique is to frame the appreciative interview questions in a positive way to obtain desired results and reveal positive perspectives. Rural teachers are considered to be in a disadvantaged situation in comparison to their urban counterparts (Mingren & Shiquan, 2018), to ask rural teachers to reflect on their experiences by addressing the challenges they came across can be difficult and intimidating. AI shifted the focus to 'best experiences' to diffuse any potential stress that might arise during the interviews. By knowing that the interviews focus on the

identification of strengths rather than weakness, teachers are far less reluctant and defensive to take part in the research because "relationships are vital in AI" (Tregunno, 2013, p. 3).

According to Cooperrider (2008), the core to AI is the affirmative topic choice, the questions being asked during the appreciative interviews set the basis to uncover the positive core of rural teachers. This can inform teachers' wellbeing. AI invites affirmation because AI is built on the assumption that "future images guide present performance" (Cooperrider, 1999, p. 25), which is crucial for rural teachers' healthy wellbeing and functioning.

Cooperrider (2008) speculates the criteria in relation to the selection of the affirmative topic, as suggested the topic should be positive and desirable, and the community is curious of the affirmative topic and desires to understand more because the topic is in line with the direction that the community wants to proceed. The chosen affirmative topic of AI for the present study is rural teachers' optimal functioning and wellbeing. This is an affirmative topic focusing on its positiveness on healthy wellbeing.

As mentioned above in the literature review chapter, there is a dearth of research on teachers' wellbeing in rural China, thus it is an important and significant issue to research and explore further. Research on rural teachers' wellbeing in China resonates with AI's constructionist principle reflecting its philosophical stance. The AI approach was applied to the semi-structured interviews to construct positive images and promote positive actions. Based on this epistemological stance, AI as a methodology for the present study was suitable to explore the meanings of wellbeing and obtain improved understanding of teacher wellbeing in rural China via collecting contextual data from appreciative interviews. Furthermore, the affirmative topic of the present study may "evoke the conversations about the desired future" of rural teachers in China (Cooperrider, 2008, p. 35).

4.2.4 Adapted 4-D cycle for the Appreciative Inquiry

The design of the 4-D cycle of the present study is based on AI's theoretical base which has the five principles. 1) The constructionist principle: construes human knowledge is based on human constructions, which creates our sense of reality (Cooperrider & Whitney, 2005). The AI processes of Discovery and Dream are realized here through the two stages of the present mixed-methods study, which is in line with this constructionist principle; 2) The principle of simultaneity proposes that inquiry and change are interwoven, the positivity discovered becomes the change agent (Cooperrider, 2008), as such, inquiry can be seen as a basis to develop future intervention to improve teacher wellbeing which corresponds to the AI process of Destiny; 3) The poetic principle construes that the affirmative topics are the products of social processes of cultural values, the AI process is an analogous to the "endless interpretive possibilities in a good poem" (Cooperrider, 1999, p. 26), as such, AI can be used to explore teachers' wellbeing in a Confucian cultural context; 4) The anticipatory principle refers to discovered positivity which leads to positive behaviour (Cooperrider & Whitney, 2005), to elicit the potential that the results of the study can be used to design future intervention for teacher wellbeing; 5) The positive principle states that positive social change is built on a positive outlook through the inquiring of positive questions, an appreciative eye is fundamental to AI, which articulates human thriving and potentially creates better worlds, it is a "positive revolution" (Cooperrider, 1999, p. 29).

The present study adopted the 4-D cycle (with variations) to inquire about rural teachers' positive experiences (Cooperrider, 2008; Stavros, 2018; Waters & White, 2015). However, as cautioned, AI and its processes "cannot and should not be reduced to some set of procedures, applied in a more or less mechanical way, it is art as much as science" (Elliott, 1999, p. 57). A similar caveat is noted by Cooperrider and Whitney (2005) who stress that AI will not be an effective approach if the data collection and analysis are reduced to a rule of thumb. This is because AI is not only intellectual but also an emotional process to shift perspectives that go wider than professional lives. When performing AI, simply repeating

the process of a 4-D cycle searching for strength, is not in the spirit of AI (Cooperrider, 2008).

The focus of the present study's AI processes is Discovery (see Table 4.1 and Figure 4.2). The adapted 4-D model guided the AI through appreciating (Discovery), imagining (Dream), defining (Design), and delivering (Destiny) (Cooperrider, 2008). Both Table 4.1 and Figure 4.2 illustrate the AI processes that resonate with mixed-methods. Discovery and Dream were realized through stage 1 and 2 of the present study. Design was informed by the results of the mixed-methods study. Destiny informed the implications of the present study. This echoes the present study's methodology and research design. Similar arrangements about variations of the 4-D cycle within a mixed-methods study can be seen in the studies by Shuayb (2014), Louw et al. (2018) and Clarke et al. (2018). However, the present study differentiates from their studies, because the uncovered positive core of rural teachers informs the development of the meaning of rural teacher wellbeing based on Confucian culture. This may be used to foster a positive organizational change of rural schools in China in the future, whereas it is not the overarching aim of the present study.

Table 4.1 thus illustrates the 4 phases indicative of the 4-D model: Discovery/Dream/Design/Destiny, and provides a sample of the relevant interview questions or concepts used to elicit a response along these themes. How these questions were arrived at are discussed below in more detail.

Table 4.1

Appreciative Inquiry 4-D process

Phases	Relevant interview questions or concepts
Discovery (focus): explore the aspects of the optimal level of wellbeing of rural teachers	Could you tell me a story about your best experience? What makes you go to work at this school every single day? What unique features at school/home/community positively affect your wellbeing? What did you gain from your rural teaching experience?
Dreaming: envisage an ideal future that might contribute to flourishing of rural teachers	If you/your students/school were at its/their best, what would it look like? What is your coping strategy for the challenges and turns out to be a great outcome?
Design: construct what should be ideal for rural teacher wellbeing (informed by the findings of the present study)	This phase will raise the questions: What is the vision for optimal level of rural teachers' wellbeing in China, and how could rural teachers embrace the challenges?
Destiny: empower rural teachers to improve and maintain wellbeing, e.g. through future interventions (next stage to the present study)	Findings of the mixed-methods study can inform the future intervention targeting rural teachers' optimal wellbeing and functioning.

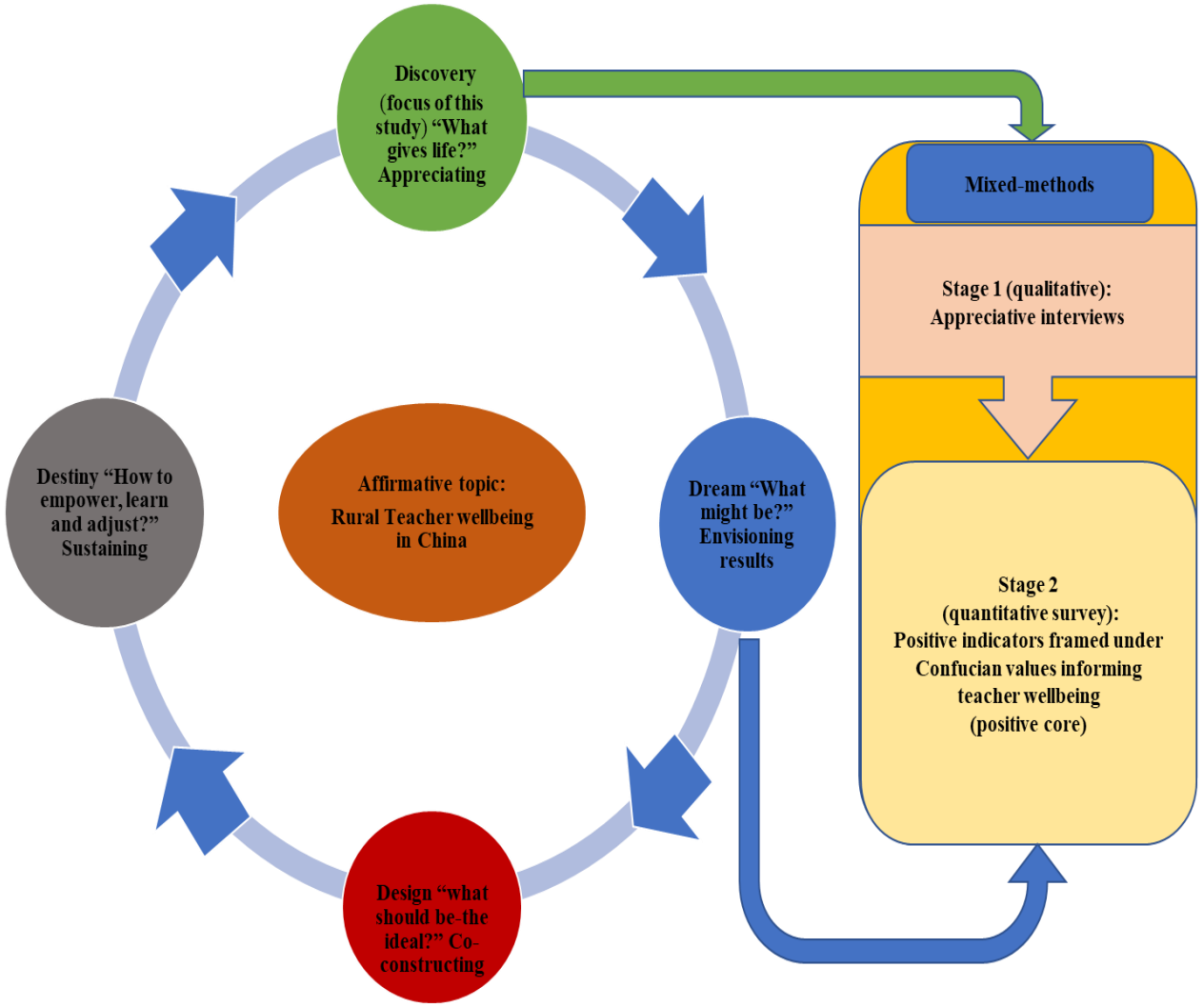

Figure 4.2. AI: 4D cycle within a mixed-methods design
Adapted from AI handbook for leaders of change (p.128), by Cooperrider, 2008, Brunswick, OH : San Francisco, CA, Crown Custom Publishing, Inc.

4.2.4.1 Discovery

Positive principle is core to the AI process. Discovery draws out strength focusing on appreciating and what gives life (Cooperrider, 2008). Furthermore, AI is grounded in affirmation and appreciation and the crux is discovering and valuing factors that contribute to human thriving (Cooperrider, 2008; Whitney, 2010). Thus, as figure 4.2 illustrates Discovery is the focus of the AI process for the present study, which was realized through the two stages of the exploratory sequential mixed-methods study. It identified factors that positively contributed to teacher wellbeing through appreciative interviews with a focus on positiveness.

According to Zahirul et al. (2017), the positive core is identified in the phase of discovery within the 4-D cycle, which is amplified in the dream phase, then the design phase affirms the proposition of the ideal, and implements it at the destiny phase at the end of the cycle. For the present study, at the Discovery stage, the interview questions focused on eliciting teachers' passions and strengths, which explored the positive aspects of rural teaching reflecting positive factors that contribute to teachers' wellbeing.

The focus of the AI processes in the present study is Discovery, therefore rural teachers were asked about their best experiences of teaching. This phase valued and appreciated all factors that fostered rural teachers' flourishing, which is a meaning-making phase (Louw et al., 2018). The Discovery phase is based on the principles of simultaneity, positiveness and wholeness, which construes that AI enables positive change by bringing out the best in rural teachers in China. The outcomes of Discovery were utilized to inform the design and destiny phase of the study. The interview questions asked during the Discovery phase were: Could you tell me a story about your best experience? What makes you go to work at this school every single day? What unique features at school/home/community positively affect your wellbeing? As such, the Discovery phase explored the aspects of the optimal level of wellbeing among rural teachers.

4.2.4.2 Dream

Dream envisages what might be the ideal future (Cooperrider, 2008). The Dreaming phase based on the anticipatory principle, and thus the main interview question for this phase was: If you/your students/school were at its/their best, what would it look like? Dreaming envisaged an ideal future that might contribute to the flourishing of rural teachers. Resonating with the Discovery stage, the Dream stage envisages what might be, and it construes what will be ideal. Thus, teachers were invited to dream for an ideal future that fosters healthy wellbeing. Dream was realized through the two stages of the present study, and it echoes the exploratory sequential mixed-methods design (as seen in Figure 4.2 above).

Thus far, the questions asked during semi-structured interviews engaged with the first two phases of AI processes including Discovery and Dream were based on the objectives and the scope of the research. This was manifested in the variation of the 4-D cycle focusing on Discovery. The study takes AI as an art of asking unconditional positive questions to find out what gives life and meaning to foster rural teachers' optimal wellbeing. The results have the potential to obtain positive change for the community of rural teachers in China in the future as well as inform the Design and Destiny phases of the AI processes.

4.2.4.3 Design

'Design' crafts the visions for the future (Cooperrider, 2008). For this study, Design is to construct what should be ideal for rural teacher wellbeing. This phase is informed by the findings of the mixed-methods approach through uncovering factors that contribute to optimal teachers' wellbeing in rural China. Results of the mixed-methods study will elucidate the meaning of teacher wellbeing in rural China and further reveal nature and ideal of rural teachers' healthy functioning. This serves to answer the research questions outlined in Chapter One (section 1.6.1). At the design stage, a clear vision of the best in the past and future will be constructed according to the results of the mixed-methods study. Furthermore, the design phase will raise the questions: What is the vision for optimal level

of rural teachers' wellbeing in China, and how could rural teachers embrace the challenges? These questions will facilitate the education system in China to positive action and intended results. Thus, it will inform the next stage of AI processes: Destiny.

4.2.4.4 Destiny

'Destiny' creates and innovates what will be ideal (Cooperrider, 2008). For the present study, Destiny aims to empower rural teachers to improve and maintain wellbeing. It implements the designing plans for the optimal level of rural teachers' wellbeing. The Destiny stage can be incorporated into the future intervention development for improving teacher wellbeing in rural China, thus Dream may become reality. As White and Murray (2015) argue the application of cross-cultural wellbeing intervention is crucial for teachers. The findings of this study potentially offered valuable information for future interventions to enhance rural teachers' wellbeing in China. Thus, Destiny will inform the implications of the present study.

4.2.5 Summary of the adapted 4-D cycle

AI is a strength based philosophy based on its five principles informing the AI processes of the 4-D cycle, and yet, it is broader than the 4-D cycle (Cooperrider, 2008). A variation of the AI processes adopted for the present study looked at what gives rural teachers life, energy and hope, and explores teachers' joy, enthusiasm and delight in teaching in rural schools. In the present study, Discovery and Dream were realized through semi-structured appreciative interviews and surveys in stages 1 and 2 of the mixed-methods study. This study thus focused on Discovery of the 4-D cycle by searching for what is or might be sustaining the best outcomes in regards to optimal levels of teachers' wellbeing (Cooperrider, 2008). The Dream phase formulated a vision of teachers' optimal functioning. Although Discovery is the focus of the present study, the Design was informed by the results of the present two stages mixed-methods study, and Destiny informed the implications of the present study. The development of an intervention based on AI is out

of the scope of this study, however, the findings of the present study will be meaningful for future interventions on rural Chinese teachers' wellbeing. The following section will provide details for the mixed-methods approach for the present study.

4.3 Methods: Mixed-methods

Mixed-methods was adopted for the present study. Mixed-methods is a research approach that "gathers both quantitative and qualitative data, integrates the two, and then draws interpretations based on the combined strengths of both sets of data to understand research problems" (Creswell, 2014, p. 2). Creswell and Creswell (2017) see mixed-methods research as a research paradigm. Creswell and Creswell (2017) emphasize that quantitative research provides limited understanding of the context of participants, and qualitative research is subjective and lacks generalizability. The strength of a mixed-methods approach is the capability of provision of "a better understanding of research problem" than either form of qualitative and quantitative data alone (Creswell, 2014, p. 2).

Critics of mixed-methods research is that quantitative and qualitative paradigms cannot be combined because they are based on different philosophical stances (Powers, 1987; Zachariadis, Scott, & Barrett, 2013). A quantitative approach is to use postpostivist claims to develop knowledge, whereas a qualitative approach is used to make knowledge based on constructivist perspectives (Creswell & Creswell, 2017,p.18). However, there are debates about the choices of research paradigms when it comes to the selection of quantitative or qualitative research methodology. For instance, Richardson (1999) argues that research on a social and psychological relationship context is most appropriate in qualitative data. However, Cohen, Manion, and Morrison (2013) recommended a convergence of the two paradigms to promote a greater dialogue between quantitative and qualitative methodology.

Pragmatic views on mixed-methods see both paradigms of qualitative and quantitative as useful tools, this view supports the use of mixed-methods (e.g. Reichardt & Rallis,

1994). However, Creswell and Tashakkori (2007) warn that the logic discontinues by simply placing two distinct qualitative and quantitative studies under a single title. This is not genuine mixed-methods according to Creswell and Tashakkori (2007). Mixed-methods should possess an appropriate blending of different methodologies and produce findings that can be integrated to support the adopted methodologies, either sequentially or concurrently (Creswell & Tashakkori, 2007; Iosifides, 2017; Louw et al., 2018).

Mixed-methods evolved from research in psychology which was used to converge or triangulate quantitative and qualitative data (Jick, 1979). Now mixed-methods has been recognized as an efficient research paradigm that can minimize the weakness of both qualitative and quantitative research methods, because the mixed-methods paradigm could potentially provide deeper understanding of particular educational research questions, improving the quality and explanation power of the data (Johnson & Onwuegbuzie, 2004). Mixed-methods is now being increasingly incorporated into educational research, for examples, the studies by Louw et al. (2018) who investigated the self-acceptance of intellectually challenged school children, Harding et al. (2019) who explored the association between teacher and student wellbeing, and Song et al. (2020) investigated the nature of teachers' subjective wellbeing in China.

It has been emphasized that future research might profit from mixed-methods through increasing the accuracy of data, provision of a more complete view of the phenomenon and to aid sampling (Denscombe, 2008; Iosifides, 2017; Louw et al., 2018). For example, using quantitative surveys as a pre-stage screening tool for interview participant selection. However, there are limitations for mixed-methods. For instance, collection and analysis of both quantitative and qualitative data may prolong the timeframe, and obviously it is challenging for the researchers as they need to be familiar with both paradigms (Creswell & Creswell, 2017, p. 210).

According to Lopez and Snyder (2012, p. 55) mixed-methods is in "particular useful for gaining a more complex understanding" of wellbeing in a cultural context. Thus, mixed-methods was adopted to explore teachers' wellbeing in rural China for the present study.

Also, according to Cohen et al. (2013), the stronger integration of mixed-methods benefits the research more from the mixed-methods paradigm. As such, the particular approaches to conduct a mixed-methods study is crucial for the research design.

Resonating with the research objectives and the research questions, the mixed method approach was designed through the Exploratory sequential approach (see Figure 4.3). Exploratory sequential design starts with qualitative methods to gain in-depth understanding of the phenomena, after this initial exploration, findings of the qualitative phase are used to build the second phase of quantitative study (Creswell, 2014, p. 6). This approach fits the critical realism philosophical stance because of the complexity of the rural teacher wellbeing phenomena (Iosifides, 2017).

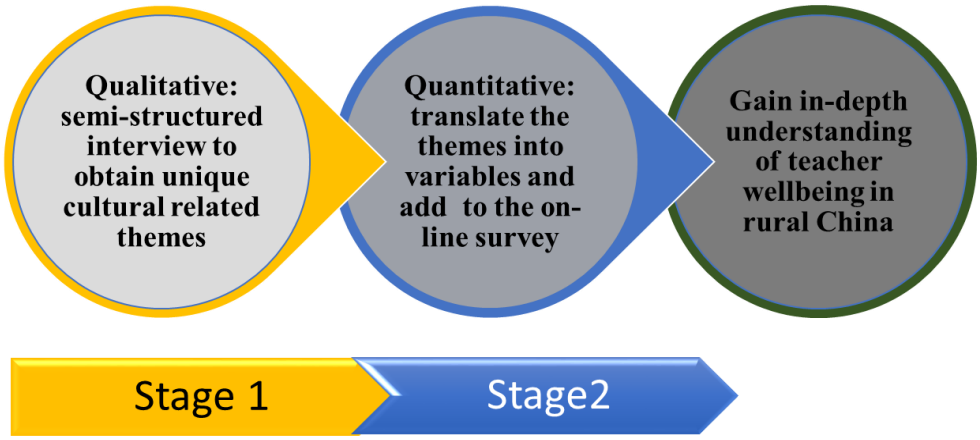

Figure 4.3. Exploratory sequential approach of mixed-methods

According to Creswell (2014), theory can support mixed-methods research to advance the Exploratory sequential design. Semi-structured interviews under an interpretive constructionist paradigm were initially conducted to uncover the themes of rural teachers' experiences based on SDT and Confucian culture; and factors were identified to inform part of the questionnaire items used in the quantitative stage, which contributed to the quest for understanding the deeper levels of realities. The quantitative survey results based on

realist ontology was statistically modelled to reflect the underlying mechanisms of SDT's basic needs and cultural factors with respect to rural teachers' wellbeing.

Suldo et al. (2009) suggests that for an educational study on wellbeing, the mixed-methods approach could be used in an iterative manner. During the initial qualitative study stage, semi-structured interviews (Rubin & Rubin, 2011) were conducted by using a purposive sampling method. This builds on the assumption that the researcher intends to understand and gain insight from a selected case (Merriam, 2009). The semi-structured interviews were performed in a conversational style, which was helpful for the researcher to find out what is important to the rural teachers, and to further explore the unique factors affecting Chinese rural teachers' wellbeing. The findings informed the questionnaire design for the quantitative survey stage.

4.3.1 Appreciative inquiry informed mixed-methods approach

In light of a mixed-methods design, based on the findings of the interviews, the survey instrument was designed. They survey questions were hypothesized to contribute to rural teachers' flourishing. Thus, AI processes echo the objectives of this mix-methods study; and that was to discover the best aspects of rural teachers in Jilin Province, China through identifying what teachers' values are. This will foster rural Chinese teachers' optimal functioning and wellbeing.

According to Cooperrider and Whitney (2005), the positive core is the greatest yet least identified resources. Thus, AI can be an appropriate method to uncover what is best for rural teachers in China. The use of the AI approach to explore teachers' wellbeing could make a meaningful contribution to this research area concerning teachers' wellbeing, because there is scant literature focusing on what fosters teachers' optimal levels of functioning and wellbeing (Paterson & Grantham, 2016).

The study commenced with appreciative interviews to identify the best experiences teachers possessed in rural schools. The results of appreciative interviews were framed as positive statements based on Confucian values to inform the formulation of quantitative

survey items for stage two of the mixed-methods study. This is because AI can be used as a positive frame to gain an understanding of social phenomena (Baker et al., 2009).

The results of the mixed-methods study aim to elucidate the positive factors fostering teachers' wellbeing and further reveals the nature and ideal of rural teachers' wellbeing. This corresponds with the cycle of the design phase. AI is an overarching strength-searching approach, which can potentially weave into the strategic change process to support teacher wellbeing (Waters & White, 2015). "At the heart of AI process is the discovery of a new community" (Elliott, 1999, p. 286), the AI process may discover a promising rural teachers' community by accentuating teachers' wellbeing under Confucian cultural values. Thus, the findings of the mixed-methods study can inform the future intervention targeting rural teacher wellbeing.

Wellbeing can be achieved by implementing strategies that focus on promoting what is wanted, such as positive factors rather than preventing what is not, that is, negative factors. However, this does not ignore complex challenges; rather it views them "through a more positive lens of understanding as to how these challenges can be addressed or overcome" (Wendt, Tuckey, & Prosser, 2011, p. 319). This mixed-methods study adopted AI to explore teachers' wellbeing in rural China by shifting from a deficit view that dwells on misery to a positive view that accentuates satisfaction and passion.

4.4 Stage One: Qualitative Study

Stage one of the research design is a qualitative study using semi-structured interviews based on a purposeful sampling of ten rural teachers. Karasz and Singelis (2009) argue that qualitative research possesses the potential to generate more in-depth understanding of the phenomenon. The qualitative phase of the present study aims to gain a holistic understanding of rural teacher wellbeing through inquiring into rural teachers' working life. The variation of the 4-D cycle of AI guided the interviews. During the interviews teachers were asked about their positive experiences of rural school teaching to discover positives that foster wellbeing. The interviews allowed teachers to dream about what a perfect school

might look like from their perspective, and teachers were encouraged to talk about how to turn challenges into positives and to apply actions.

The data collection included audio recording and instant notes with the interviewee's permission; all interviews of rural teachers in Jilin Province, China were conducted in Chinese and transcribed, coded and categorised by this author verbatim in Chinese language. After reading through the transcriptions, important quotations were located and coded, which reflect teachers' wellbeing. As suggested by Gillham (2000, p. 21), the length of a semi-structured interview in a mixed-methods study should be kept to 30 minutes due to the work and cognitive burden on both interviewer and interviewees. All interviews were kept within a 30 minutes time frame.

4.4.1 Qualitative analysis

Thematic analyses following the semi-structured interviews were used to investigate the cultural aspects and dimensions of rural Chinese teachers' wellbeing. Themes from the key messages in the story emerged from the data that captured the implicit meanings underneath, as such the thematic analysis approach has the "potential to highlight shared meaning" (Clarke & Braun, 2018, p. 108). The use of thematic approach for qualitative data analysis is instrumental for research under an interpretivism paradigm because it is independent of theoretical or epistemological persuasion (Braun and Clarke, 2006).

Thematic analysis is a descriptive method to extract themes and subthemes to describe the data's broad features, unlike grounded theory, and these themes are not necessarily linked to each other (Braun & Clarke, 2006). Thus, thematic analysis was used to analyse the qualitative data to discover the life experiences, ideologies, values, beliefs and other living resources that inform rural teachers' work in ways that aid their flourishing and wellbeing. Generally, there are two approaches for thematic analysis: the data led approach, which is based on "the characteristics of the data and the codings are primarily guided by a careful analysis of what is in the data", and theory led approach, in contrast, it utilizes the

theory to guide the initial coding (Howitt, 2010, p. 175). The present study adopted the first thematic data analysis approach for the interview data used in stage one.

The interview protocols were informed by AI and the objectives of the present study, and they covered the following questions: 1) how and why you became a rural teacher; 2) what motivates teachers and what are their greatest job moment; 3) what personal values help them flourish; 4) how do rural teachers cope with negative emotions in the workplace and turn the negative into positive outcomes; and 5) how they believe they have changed over time and what they thought the future held for them. The thematic analysis results from stage one (semi-structured interview) informed the construction of self-composed wellbeing indicators for stage two - the larger scale quantitative study. Figure 4.4 illustrates the processes of conducting the thematic analysis of the qualitative data for stage one.

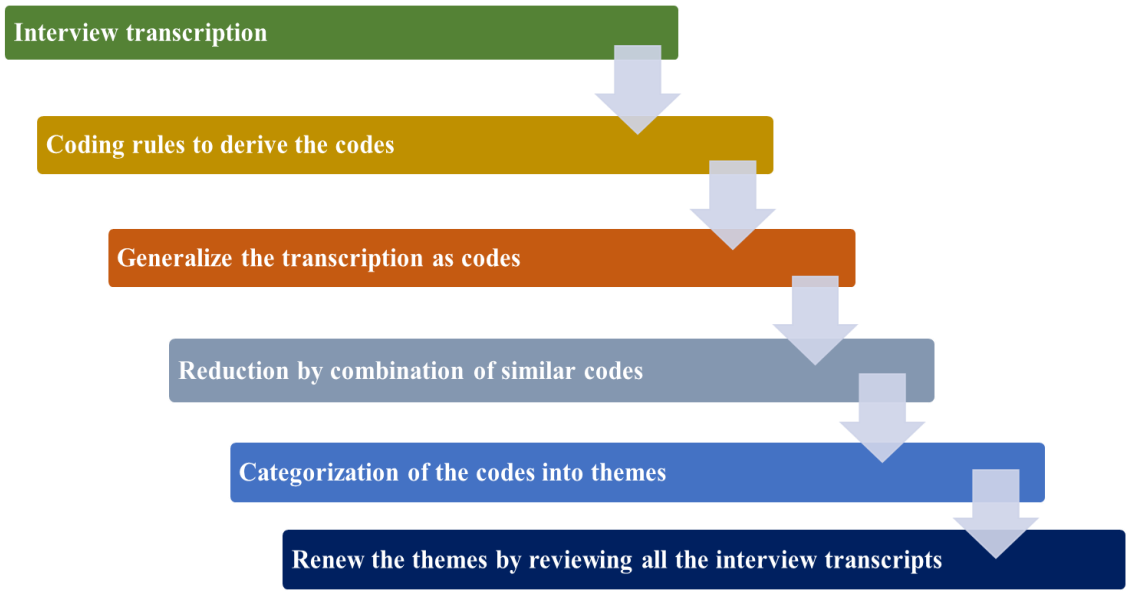

Figure 4.4. Illustration of thematic analysis processes

4.5 Stage two: Quantitative study

Although there are a number of studies on teacher wellbeing focusing on quantitative methods (e.g. Harding et al., 2019; Mankin et al., 2017; Virtanen, Vaaland, & Ertesvåg, 2019), the present study is informed by an exploratory sequential mixed-methods design (Creswell & Creswell, 2017). According to Guetterman et al. (2019), using quantitative

approaches within mixed-methods can enhance quantitative analyses to obtain in-depth understanding of a particular latent construct. Delle Fave, Brdar, Freire, Vella-Brodrick, and Wissing (2011, p. 203) pointed out, a quantitative study and analysis is particularly useful in "understanding and operationalizing the concept". Thus, stage two of this exploratory sequential mixed-methods study used quantitative methods to uncover the factors that contribute to rural teachers' wellbeing and further reveal the meaning of wellbeing for Chinese teachers by incorporating the results from stage one.

Measuring Chinese rural teachers' wellbeing under the unique social-economical and cultural context in rural China is important. As Yildirim (2015) argues studying a concept without measuring it is meaningless. A number of indices exist to measure wellbeing irrespective of the professional profile of teachers. However, it is difficult to reach a consensus to measure teachers' wellbeing. This is because besides the issues of items, dimensions and scales, social and cultural contextual difference leads to different measures for a particular concept (Bricheno et al., 2009; Joshanloo, 2018), such as teacher wellbeing. Diener et al. (2013) suggested that cultural values affect how wellbeing is understood and pursued by people from that culture.

A survey was developed according to the literature and findings from the Phase one semi-structured interviews. Based on the thematic analysis of the interview data, indicators for the survey were formulated according to Confucian cultural values, and positive indicators for teacher wellbeing were identified as the questionnaire items. The details will be presented in Chapter 5. As such, the thematic analysis of stage one interview data informed stage two, a larger quantitative study, by using this author's scale based on the empirical experiences of rural teachers as well as Confucian values. This was combined with the three validated and adapted scales to explore rural teachers' wellbeing including the domains of subjective, psychological and professional wellbeing under a Confucian culture context.

This is the first study that simultaneously includes subjective, psychological and professional wellbeing domains to gauge rural teachers' overall wellbeing based on

Confucian cultural values. Also, According to Kern et al. (2015) and Marsh, Huppert, Donald, Horwood, and Sahdra (2019) multidimensional wellbeing measures can offer better understandings of teacher wellbeing and further promotes wellness for all stakeholders in the education system, as wellbeing can be construed as a scenario of constructs belonging to different psychological or social domains (Seligman, Forgeard, Jayawickreme, & Kern, 2011).

Quantitative data were analysed using Microsoft Excel [version 2016] and R software (R Core Team, 2018). R software is a freely available programming language with command line interface (CLI) specialized for statistical computing and graphics to assess the reliability and validity of the factors (Khan, 2013). Survey data were first descriptively analysed, and measures of central tendency and variability were used to gauge whether data were normally distributed. Correlations and inferential statistics were then used to test and explore the relationships of the factors, and details of this will be outlined in Chapter 6.

The mixed-methods research design incorporated methodological triangulation (Creswell & Creswell, 2017), whereby semi-structured interview findings were used to inform the questionnaire items asked of rural teachers in a large scale survey. In the final discussion and conclusion chapters, this thesis offers an overall integration of the sequential phases (from qualitative phase to quantitative phase) of the mixed-methods research approach to explore rural Chinese teachers' wellbeing in more depth.

4.5.1 Survey design

The following survey design principles were adopted to create the questionnaire for the present study: being concise, using concrete wording, using simple syntax, and measuring one dimension per item to avoid double barrelled questions (Krosnick & Presser, 2010). The researcher himself (who is bilingual in both Chinese and English) completed the Chinese-to-English and English-to-Chinese translation for the adapted instruments. The TSWQ (Teacher Subjective Wellbeing Questionnaire) was adopted to measure teachers'

subjective wellbeing which is operationalized based on dimensions of teaching efficacy and school connectedness via a self-reporting manner (Renshaw et al., 2015). The development of TSWQ is based on Van Horn et al.'s (2004) theory elucidating three main positive indicators of teacher wellbeing: 1) self-efficacy, 2) positive affect and 3) prosocial relationship. The TSWQ measures two aspects of teachers' subjective wellbeing in terms of teaching efficacy and school connectedness (Renshaw et al., 2015). The present study adopted all eight items in the TSWQ (details in Appendix G). It has been reported that higher levels of teaching efficacy is positively associated with teachers' job satisfaction and school connectedness as a form of perception of belonging which is one of the basic human needs (Mankin et al., 2017). This resonates with SDT's psychological needs of competency and relatedness.

Teaching is a unique profession because it is both physically and emotionally challenging (Gomba, 2015; Mansfield & Beltman, 2019; Sharif et al., 2016). As such teachers' professional wellbeing construct is one foci of the present study on teacher wellbeing. The survey of items related to the professional wellbeing dimension are based on Yildirim's (2015) study which has confirmed its validity and reliability on measuring the most important dimensions of teachers' professional wellbeing, they are teaching self-efficacy, job satisfaction and perceived recognition.

Dagenais-Desmarais and Savoie's (2012) Psychological wellbeing at work scale was used in this study. This scale is conceptualized based on thriving at work (Dagenais-Desmarais & Savoie, 2012). TSWQ and Psychological wellbeing at work instruments both have 'efficacy' and 'interpersonal relation' related dimensions. TSWQ's scales of 'school connectedness' and 'teaching efficacy' were selected to be included in the present questionnaire because TSWQ specifically targets the teaching profession which adds to the validity of measuring teacher wellbeing. Therefore the three sub-scales of Psychological wellbeing at work in terms of 'Thriving at work', 'Perceived recognition', and 'Desired involvement' focusing on workplace thriving were kept. Its constructs on 'Interpersonal fit

at work' and 'Feeling of competency at work' were left out because they overlapped with TSWQ.

Furthermore, according to Krosnick and Presser (2010, p. 292) and Cohen et al. (2013), longer surveys may adversely affect engagement, trigger fatigue and generate a lower quality of data. Keeping a survey concise is crucial for a mobile web survey (an online survey via mobile phone), because web survey shows a higher level of missing data issues due to less cooperation than other survey modes (Evans & Mathur, 2018; Manfreda, Bosnjak, Berzelak, Haas, & Vehovar, 2008). So, the overlapping dimensions of different scales were restructured in order to reduce the load on survey participants through an assurance of parsimonious questionnaire items.

Furthermore, according to Deci et al. (1992), the modification of the instruments, such as addition or subtraction of items or alteration of the wording, does not significantly affect the reliability and validity of the original scales, which warrants the feasibility of the practice to adapt validated instrument items to address the research context and questions. A 4-point Likert-type rating system from 1 to 4 was used for all survey items ranging from strongly disagree scored to strongly agree, and it does not have a middle response category because this may induce people to choose the neutral point (Dimitrov, 2011).

Schools have specific parameters leading to unique experiences of teachers, context free measures of wellbeing may not be able to reflect the professional domain of teacher wellbeing. Furthermore, because school is a workplace which involves complex vertical and horizontal relationships, for example, peer teachers, students and principal, and where a teachers' reward is directly related to their students but evaluated by a principal. As Balducci, Avanzi, and Fraccaroli (2016, p. 2964) argue, context-free measures may produce a partial picture, and Sandilya and Shahnawaz (2018, p. 175) further suggest context-specific measure should also be culturally relevant. Therefore, the scales used in the present study were worded according to the specificity of the rural teaching profession in China. The adopted validated scales as well as self-composed scales are suitable for this study because they focus on 'at work' which is context-specific and culturally relevant, and

it echoes teaching as a unique profession where wellbeing is determined by a teachers' work domain and workplace under the context of Confucian culture in rural China.

This researcher (who is bilingual in both Chinese and English) completed all of the Chinese-to-English translation for interviews' transcripts, and English-to-Chinese translation for the adapted instruments. Before the main quantitative survey, the questionnaires were sent to three rural teachers as a pilot test for the survey items to ensure the items would be acceptable and understood. Creswell (2014, pp. 19-20) suggests upon the translation of the qualitative findings into survey items, it is necessary to use psychometric procedures to examine validity and reliability. Thus, reliability and validity were further examined in the quantitative analysis, and details will be presented in Chapter Six.

4.6 Sampling

Purposive sampling was adopted for Stage One of the present study and particular criteria were established for the selection of the purposive sample (Merriam, 1998). Purposive sampling is commonly used in qualitative studies, and the adopted criteria for sample selection is based on the present study's research objectives of the present study which were detailed in Chapter 1 (Knechel, 2019). The criteria for selection of interviewees are: (1) the local educational administrators nominate teachers who are passionate and effective at teaching; (2) teachers have at least five years' experience teaching at rural schools; and, (3) teachers were teaching at their current school for at least one year.

It was assumed that working in the teaching profession for over five years allows teachers sufficient exposure to a variety of work experiences (both negative and positive), to be able to share the issues related to what sustains them in a rural teaching career. This echoes the objectives of the AI, which is not to suppress the negative experiences of teachers; but, to find out how teachers re-engage those negativities and thrive. As similar approach in relation to interviewee selection process was used by for example Wendt et al. (2011) in studying the wellbeing of social workers in Australia based on an AI approach.

It can be adapted and applied to the present study on teacher wellbeing because both professions are characterised as people centred (Collie et al., 2016). The present study aims to explore rural teachers' optimal level of wellbeing, thus the chosen sampling method can maximize the possibilities of the inclusion of flourishing teachers in the sample.

A network sampling approach was adopted for stage two of the mixed-methods study. This sampling approach utilizes "social links between networked individuals to locate and add additional units to the sample", if under "proper selection of seeds and controls, this approach can also be treated as probability sampling" (Callegaro, Manfreda, & Vehovar, 2015, p. 50). This will be conducive for the quantitative analysis used in stage Two and its validity. Network sampling is often described as snowball sampling and originated from convenience sampling, and is suitable for a "geographically dispersed" target population (Heckathorn & Cameron, 2017, p. 102), which matches the situation of localities of rural schools in China (Mu et al., 2013; Xuehui, 2018). The present study utilizes this approach to recruit survey participants who are teachers in a teacher training network in rural China.

As mentioned in Chapter 1, there are generally two types of rural schools in China: suburban rural schools (schools in rural regions but in close proximity to a large or medium size city) and remote rural schools (at least ten kilometres away from a large or medium size city) (Li, 2012). This study focused specifically on suburban rural schools, because there has been a sharp decline of school enrolment in rural China due to the demographic change resulting from the Single-child policy introduced over three decades ago. This has resulted in a lower birth rate and also the shrinkage of the number of school-age children (National Bureau of statistics of China, 2015). The Central Government of China thus launched a policy of "amalgamation of rural schools" (Liu, Zhang, Luo, Rozelle, & Loyalka, 2010), as so, there are now bigger schools in the suburban rural areas, and these represent the majority of rural schools in China.

The proposed sampling process for stage two is also analogous to convenience sampling which is about conveniently selecting the sample based on particular factors such as geographic location, network, economic status or connections to topic (Merriam, 2009).

This study chose the region 'Liao Yuan' of Jilin Province, China as the site to conduct the field work. This region's GDP is 11767 Chinese yuan (around USD 1754) in the rural ("China: Jilin Province Economics Development statistics", 2017), which is close to the China's average rural region's GDP 11422 Chinese yuan (around USD 1703) (National Bureau of statistics of China, 2015). So, the sample is representative, and the analysis results would possess higher statistical power.

The principle to decide sample size is the precision required for estimation of confidence interval (Callegaro et al., 2015). It was anticipated that the web survey data was multi-dimensional. A multivariate statistical procedure was applied. The sample size was estimated by considering the following factors in the sample size calculation formula. That is, the overall sample size calculation is based on the formula: $n = \frac{NPq}{(N-1)B^2} / z^2$+Pq (Ryan, 1995a, p. 178). As there are 58 million teachers in China, 65% of them are teaching in rural schools (Sargent & Hannum, 2005; Tang, 2018), the population of Jilin Province is roughly 1/40 of the Chinese population (National Bureau of statistics of China, 2015), so the estimation of the population of rural school teachers in Jilin Province is around N=94250. The research aims to uncover the characteristics of thriving rural teachers using AI, however, the research does not have a priori evidence about the proportion of thriving teachers in rural China, thus P=0.5 assumes that 50% rural teachers are thriving. Conventionally, z takes the value of 1.96 under normal distribution assumption, allowable error is taking B=3%. So, the optimal sample size n is estimated to be 1068 through calculation.

4.7 Ethics

The present study was approved by the University of Adelaide Human Research Ethics Committee (HREC) (approval number: stage one: H-2018-155 stage two: H-2018-20, refer to Appendix A, B, C, E and F). This study used an appreciative inquiry approach, there was no intent to elicit sensitive data, therefore, this study was deemed as low risk for potential

participants. According to the Chinese Ministry of Education website (http://www.moe.edu.cn/ accessed on 8th May 2018), there was no official requirement in China to secure ethical approval for educational/social research. However, official approvals from the targeted school principals prior to undertaking the research were obtained. In the absence of an ethics process in China, The University of Adelaide ethics protocols were followed. This study conforms to all ethical guidelines of *The University of Adelaide* and the National Statement on Ethical Conduct in Human Research 2007 (updated 2018) (National Health and Medical Research Council & Australian Research Council, 2018).

The data was collected (over two stages) between July and Sep 2018. To minimize the participants' burden for taking the interview and survey, and to assure the protection of participants' physical, mental health and privacy, supporting strategies were put in place under careful ethical considerations (see figure 4.5). The ethics considerations outlined in the next sections are based on the two stages of the mixed-methods study, and describe how the integrity of the current research was undertaken (see figure 4.5).

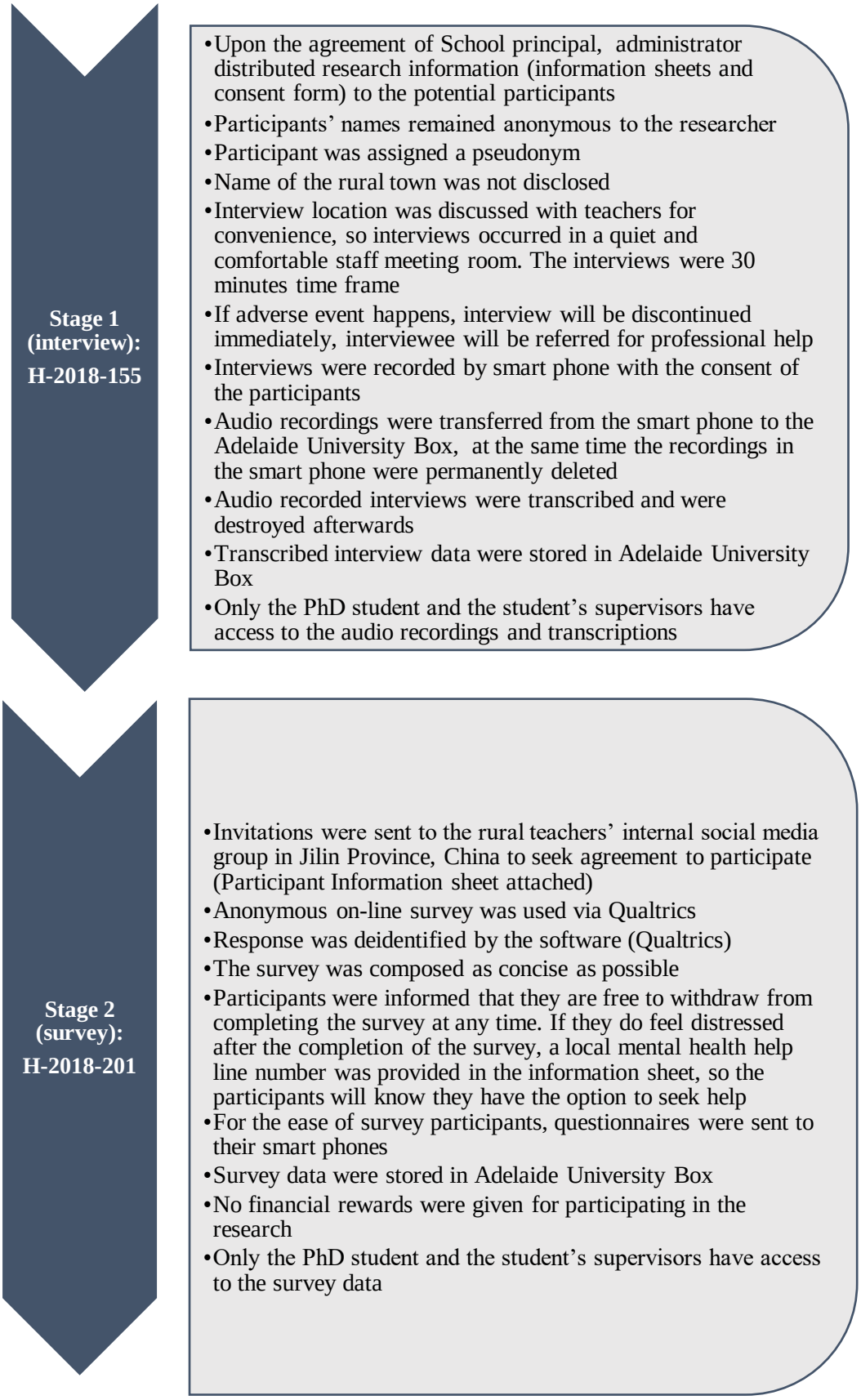

Figure 4.5 Outline of Ethics for the two stages of the mixed-methods study

4.7.1 Stage 1 (H-2018-155)

Based on the exploratory sequential mixed-methods design of the present study, stage one was a semi-structured interview with ten participants. The interviews involved school teachers so careful considerations were given to practical and ethical issues to maintain and assure the highest standard of integrity of the research. They were:

• Informed consent from participants. Interview participation was voluntary. To assure the voluntary participation of the research, there were no financial rewards for participating the interview. Initial contact was made with a school principal. Upon obtaining approval from the school principal, the school administrator distributed the research information (information sheets and consent form) to the potential participants on the researcher's behalf by email. This allowed potential participants to familiarize themselves with the information prior to the interviews. The potential participants were then able to make decision on whether they wanted to participate.

• Potential for emotional distress or harm through participating in the research. This appreciative research focused on positive aspects and success in empowering teachers in rural China, and allowed the potential participants to be mindful of various factors that contributed to their optimal wellbeing. Careful strategies were applied to assure the highest ethical standards. The interview location was discussed with teachers for convenience, so interviews occurred in a quiet and comfort staff meeting room. The interviews were kept short within a 30 minutes time frame. If an adverse event happened, the interview was discontinued immediately, and the interviewee was referred for professional help. Also, if participants felt distressed or uncomfortable during the interviews, they were free to stop the interview and leave.

• Decisions about anonymity and confidentiality. During the interviews, participants' names remained anonymous to the researcher (interviewer). Each interview participant was assigned a pseudonym represented as a number in the data, and the rural town was not disclosed to ensure their identity and personal information were not revealed.

• Data recording and storage. The interviews were recorded via smart phone with the consent of the participants. The audio recordings were transferred from the smart phone to the *Adelaide University Box* (a secured online data storage) once the interview was completed. At the same time, the recordings in the smart phone were permanently deleted. The audio-recorded interviews were used for transcribing and were destroyed afterwards. The transcribed interview data will be stored in the *Adelaide University Box* for up to five years. Only the PhD student and the student's supervisors have access to the audio recordings and transcriptions data to assure the confidentiality.

4.7.2 Stage 2 (H-2018-201)

Based on the exploratory sequential mixed-methods design, stage two was a quantitative survey. As the participants of the survey were school teachers, careful considerations were given to practical and ethical issues to assure the highest standard of integrity of the research. They were:

• Informed consent from participants. Survey participation was voluntary. To assure the voluntary participation of the survey, there were no financial rewards. The survey was clearly explained via the information sheet. With the assistance of a liaison teacher, invitations were sent to the rural teachers' internal social media groups in Jilin Province, China to seek agreement to participate (with participant Information sheet attached). The consent of survey participants was assumed their responses to the questionnaire.

• Potential for emotional distress or harm through participating in the research. For the ease of survey participants, questionnaires were sent to their smart phones by a liaison teacher. The potential burden of completing the survey for the participants was taken into account. Every precaution was taken to accommodate participant needs. For example, the survey was composed as concisely as possible. Participants were informed that they were free to withdraw from completing the survey at any time. If they felt distressed after the completion of the survey, a local mental health help line number was provided in the

information sheet. Therefore, the participants knew they had the option to opt out or seek help.

• Decisions about anonymity and confidentiality. An anonymous on-line survey was used via Qualtrics (a specialized survey software). Qualtrics ensures names and personal information of the survey participants cannot be collected and traced. Also, each survey response was de-identified by the software (Qualtrics), as such, participants' identities remain anonymous. The confidentiality of the survey participants was guaranteed.

• Data recording and storage. Survey data were stored in *Adelaide University Box*. Only the PhD student and the student's supervisors have access to the survey data, thus, the confidentiality is assured.

The above ethics considerations addressing informed consent, minimized potential for emotional distress, anonymity and confidentiality, and data recording and storage, assured and promoted the integrity of the current research.

4.8 Summary

This chapter justified the research methodology for a mixed-methods study on teacher wellbeing in rural China. The AI informed mixed-methods approach was explained. The research design treated teacher wellbeing as an integral part of Chinese Confucian culture. This approach is conducive to discover variations in teachers' wellbeing within the Confucian cultural context to gain an in-depth understanding of rural teachers' wellbeing which is conceptualized and based on SDT' psychological needs (as detailed in Chapter 3). The research design offers a fresh methodological angle to the teacher wellbeing literature.

The methodology for the present study has three methodological implications. First, the methodology is conducive for the present study to investigate SDT's applicability in terms of conceptualization of teacher wellbeing in rural China; second, the mixed-methods study utilizes its qualitative stage to inform the development of survey items which incorporated Confucian values through thematic analysis of the data from stage One. This novel practice will enable the examination of rural teachers' wellbeing within a Confucian cultural

context; third, the study explored whether Confucian culture as a latent construct can be a stand-alone factor based on SDT construing rural teachers' wellbeing in China. The qualitative and quantitative analyses and results, based on the methodology and research design specified in the current chapter, will be presented in the following two chapters, Chapter 5 and Chapter 6.

Chapter 5: Qualitative Results

5.1 Introduction

This chapter reports on the qualitative data of the present study to gain an understanding of rural teacher wellbeing in China that focuses on their working life. The study used an Appreciative Inquiry (AI) approach to conduct semi-structured interviews about rural Chinese teachers' wellbeing. A thematic analysis was adopted for data analysis and this is outlined in the sections below based on open coding procedures. This chapter also describes the extracted thematic statements based on Chinese Confucian culture and rurality and informs the survey instrument used in phase 2.

5.2 Thematic analysis

This section presented the findings of the qualitative study from phase one of the mixed-methods study. This included semi-structured interviews of 10 teacher participants. The sample was assembled through purposive sampling with 10 teachers aged 40-52 (7 females and 3 males). The interviews spanned July to August in 2018, located across six rural schools in Jilin Province, China. This phase adopted a social constructionist (Zahirul et al., 2017) approach to explore the subjective experiences of rural teachers and the relationship of such experiences to their wellbeing under Chinese rural sociocultural contexts.

Ten teachers were interviewed until data saturation was reached. This occurred while interviewing the ninth participant because the responses to the interview protocol were becoming repetitive. Therefore, the recruitment of further interview participants was ceased after the tenth interview. Research themes were identified through the coding of each interview transcript, and broad themes and sub-themes were based on general and specific categories of the codes. By using the open coding method, the initial themes were analyzed by constant re-reading, and three main themes emerged from the data. Some of these

themes/sub-themes were not evident in the former literature, except for research in the rural Chinese teachers' wellbeing related literature (e.g. Kim, 2019; Mingren & Shiquan, 2018; Tang, 2018; Tang et al., 2018).

Figure 5.1 shows the relationship and flow between the 3 steps involved in analysing the data in this research. To reach Step 3 the broad *themes* of 'joy and ease of rural teaching', 'pressure and stress as a rural teacher' and 'teacher perception of student's outcomes', were based on the *categories* derived from Step 2 of 'positive attitudes towards rural teaching', 'negative perceptions of rural teaching' and 'students' outcomes'. These categories were extracted from step 1 on the basis of *open-ended codes,* which were 'contributors to positive experiences of rural teaching', 'factors negatively contribute to rural teachers' perception of positive experiences', and 'teachers' positive comments and concerns of rural students' outcomes. These broad themes were further broken down to sub-themes, such as, teachers' positive wellbeing, because of the close relationship with students and colleagues.

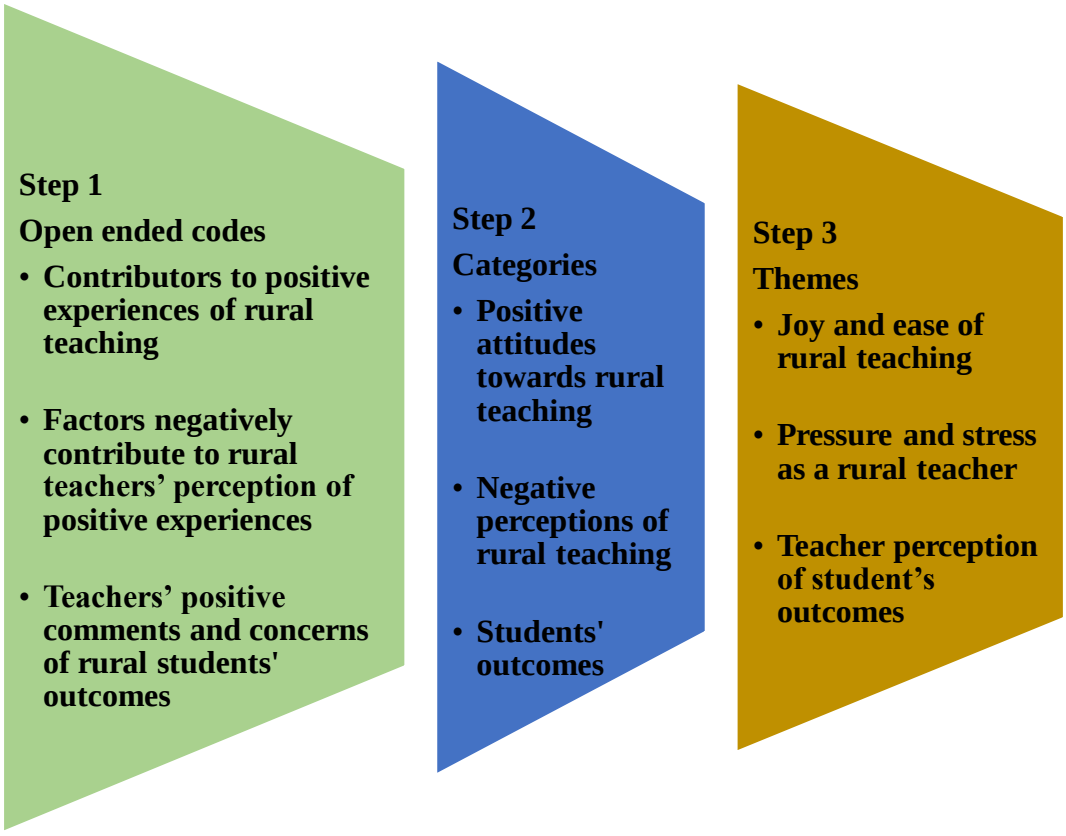

Figure 5.1. Broad themes from phase one interviews

The three broad themes formed a logical structure and will be used to inform the phase 2 survey study. The themes, sub-themes and the process of the extraction of questionnaire items will be presented in detail in sections following.

5.3 Participants demographics

Participants were individually interviewed in person by this researcher in Jilin Province, China, and interviews were 30 minutes long. Secondary school teachers (n=5) were interviewed first, and primary school teachers (n=5) were interviewed next. There were 9 days between the interviews with these 2 different cohorts. This enabled this researcher some time to reflect on the interview performance, to complete interview transcriptions and to trim and analyse data prior to the next set of interviews.

Sociodemographic profiles of interview participants are presented in Table 5.1. The age range of interviewee's was between 40 to 52; of the ten participants, seven were female, three were male; five worked in a middle school, the others were from primary schools; all of the teachers had a Bachelor degree, two had undertaken further study to upgrade a teaching diploma to a Bachelor, one teacher obtained a Bachelor degree through online study; all of the participants had extensive teaching experiences, ranging from 20 to 30 years. The extensive experience of these teachers provided a variety of work experiences in rural schools in China (both negative and positive). Hence the participants were able to talk about what makes them sustain or thrive in a rural teaching career. The sample was appropriate for AI methodology because the purpose of AI is not to suppress the negativities, but to find out how teachers re-engage those negativities and thrive.

Table 5.1

Sociodemographic profiles of interview participants

Interviewee #	Age	Gender	School level	Years of teaching	Educational attainment
1	50	Female	Middle school	29	Bachelor's degree
2	51	Female	Middle school	30	Bachelor's degree (through correspondence)
3	49	Female	Middle school	25	Bachelor
4	52	Male	Middle school	27	Bachelor
5	52	Female	Middle school	29	Bachelor
6	42	Female	Primary school	21	Diploma in teaching (upgraded to Bachelor's degree)
7	41	Male	Primary school	20	Bachelor's degree
8	42	Female	Primary school	20	Bachelor's degree
9	43	Female	Primary school	21	Diploma in teaching (upgrade to Bachelor's degree)
10	40	Male	Primary school	19	Bachelor's degree

5.4 Experiences of rural teachers

The epistemological premise of the thematic analysis is primarily phenomenology which focuses on the exploration of rural teachers' senses of wellbeing based on their experiences. This research has focused on the meaning of the phenomenon, rural Chinese teachers' wellbeing within a Confucian cultural context, therefore phenomenology is the appropriate method for qualitative data analysis (Wesley, Pryce, & Samuels, 2019). Three key themes were identified: (1) positive experiences of rural teachers; (2) pressure and stress on the rural teacher; and (3) teacher perceptions of student outcomes. Each theme will be discussed in the following sections (5.4.1 to 5.4.3).

5.4.1 Theme one: Positive experiences of rural teachers

The interviews revealed rural teachers' living standards and conditions have been improved dramatically since China's adoption of the open door policy for economic growth. Teachers no longer belong to the poor working classes. For example, four of the ten teachers mentioned they drive their own cars for the commute to work; one teacher mentioned she has two housing properties, one in the countryside, one in an urban town, so she can enjoy the country's fresh air in the summer (at her rural property) and the 24-hour heating system at her urban unit in the winter.

For all participants, the rural teaching experience was considered rewarding and enjoyable. Several patterns reflected the enjoyment of rural teaching. First, 5 of 10 teachers reported that they are happy because they are from a rural region. Participant 8 who is female, 42 years old, a primary school teacher, and with 20 years of rural teaching experience mentioned: "I am very happy, because I am from here, my family is close by, I am so familiar with the place and people here" (#8). The majority (8 out of 10) of the participants enjoyed rural teaching because their students returned to visit them. Participant 3 who possessed 25 years of rural teaching experience, explained how happy she was when her students came back and hugged her while telling her the exciting news that they have been offered a place in a university a long distance away in a metropolitan city. She used the word 'hug', in Chinese culture 'hug' is rarely given, and only if in an extremely happy situation. Participants 9, 8 and 4 also gave similar examples.

For example, respondent 9 a female primary teacher with 21 years of rural teaching experience said, "I deeply feel if a student can come across a great teacher it is his or her luck for whole life, your students visited you after many years since graduating, and you know they really appreciate your teaching all those years ago" (#9). On the other hand, respondent 8 argued, "Students still remember you when they lead a successful life, it really makes you happy, such as a student was offered a place in a University, he phoned me and asked me to come over to have drinks and dinner with him at his home to celebrate" (#8).

Similarly, respondent 4 a male middle school teacher with 27 years of rural teaching experience said, "The happiest moment is my students who are successful in their career and come back to school to visit me, for example a student visited me with his wife and child, and told them this is my teacher who helped me a lot while I was a naughty boy in this school" (#4). While this male teacher was recollecting this experience, there were tears in his eyes. The following quote revealed rural students showed gratitude towards their rural teachers.

> If my students can go to the university, I am really happy for them, if not, I am still very happy, such as one of my students who was not good at his academic performance, after a decade of graduation from the school, I came across him on the street, he is a painter, he said 'teacher, if you need any painting in your apartment, let me know, I will do it for you for free', I am really happy for him. (#5)

Participant 5, a 52 years old female, and a middle school teacher with 29 years of rural teaching experience went on to say, "As my students growing up and I know they love me more, this is my real rewards, I know my effort of teaching can change their life, so I stay" (#5). It is noteworthy that in Chinese culture, people seldom express their feelings of love, especially in traditional rural China. Therefore, participant 5 was positive about acknowledging this expression of love.

Four out of ten teachers mentioned they enjoyed teaching in the rural areas because living standards in the rural regions of China have been significantly raised. "The living standard is lifted up, so it is beneficial for our wellbeing, our salary is the same as urban teachers, plus, we have rural teacher allowance, roughly additional 300 yuan a month" (#4). Another male primary school teacher, aged 41 years old, mentioned that material conditions (i.e. salary) were important to their wellbeing, "I do not want to say I am devoting myself to rural teaching, if the government did not pay me, I would not work here as a teacher" (#7). This is interesting because it resonates with Maslow's (1943) hierarchical needs theory which indicates that the needs for survival is core, and the basic foundation of human

wellbeing. In Chinese society, the male is deemed to be responsible for providing for the household. Thus it was interesting that of the four participants who mentioned salary, and three of them were male teachers.

Based on the interview data, permanent employment was considered important by 3 of the 10 teachers who mentioned they felt lucky to be a part of the rural teaching workforce. This reflects rural teachers' endearment of permanent teaching positions in rural schools. For example, respondent 3, a female middle school teacher mentioned: "People see teaching as a very stable government job, and it is harder to be a rural teacher now, because we are government employees" (#3). Participant 2, a 51 year old middle school teacher, with 30 years of rural teaching experience, mentioned the recent freezing of rural teacher recruitment, which made entering the rural teaching workforce hard: "Not like before, nobody wants to teach in the rural, it is getting much harder to be a rural teacher now, especially recently local government freezes the permanent rural teacher recruitment here, in the marketing economy era we can have very stable salary, which is really good" (#2).

Most of the teachers (6 out of 10) stated their enjoyment of close relationships with students, colleagues and the leadership in their rural schools. One female primary school teacher said,

> "We cook lunch in turn and eat together like a family in our rural school", she also mentioned the close relations with her students, "in rural schools we only have 10 students or so, they are with me all the time, they are really like my own kids" (#8). Teachers feel their principal cares about them, a 43 years old female primary school teacher mentioned,

"My school principal told us, I want you know, especially who are in charge of a class, I understand how hard your role is, if you have any issues come to me, I am your support (#9).

Participant 7, a 41 years old male primary school teacher with 20 years of rural teaching experience, mentioned the harmony and solid bonding with his colleagues: "I don't care

the teacher level appraisal and certification, if you really want a higher level title, I can give it up because I will not compete with my colleagues for a title" (#7).

Another male participant who is a middle school teacher, talked about the joy of having close relations with his students: "when my students come to urban area for important exams, I let them have dinner/lunch or even stay at my unit, you know, spent money eating and living outside is a financial burden for some poor rural students" (#4).

A few teachers (4 out of 10) mentioned that teaching gave them enjoyment. "I am very active in teaching pedagogy and skill competition, so I have lots of awards, that is why I have been upgraded to the highest level of our teacher appraisal system, the opportunities in rural is almost the same as in cities only if you try hard enough, but of course for urban teachers they have wider experiences" (#7). Her words also indicated the disadvantage of being a rural teacher is because of the 'rurality' which has "narrowed experiences" compared to the urban context. "To teach better, I force myself to read more, so I improved, which even positively influenced my son" (#1). Her words implied that excellence in teaching benefits her family members.

However, another female middle school teacher said excellence may negatively affect her wellbeing, she remarked: "If I teach with excellence, which may hurt others even elicit jealousy" (#2). The majority of teachers (7 out of 10) emphasized the role their families have in supporting positive rural teaching experiences. For example, Participant 2 stated: "Teaching here gives me the benefits of taking care of my family and especially my own kids, very beneficial for my own kid's education" (#2). Participant 5, who is a 52 year old female middle school teacher mentioned that family helped her to cope with the pressures of rural school teaching. She said "back home I immerse myself in my family life, as wife and mother, then I really load off my stress" (#5). On the other hand, a male middle school teacher said, "The rewards for my rural teaching career are, I fully participated in my own child's growth because I know how to educate my own child" (#4).

The interview data revealed that rurality may support the positive attitude towards teaching, for example, a female middle school teacher mentioned, "We got fresher air here

(than urban cities), county folks are kind and simple, not like city people, kind of indifferent, makes you feel distant to each other" (#1). Participant 3 added, "I do not think urban teachers possess better teaching knowledge than us, they just have better teaching facilities" (#3). This female middle school teachers' words reflect rurality as an important factor, that supports teachers' wellbeing in the particular way of boosting a teachers' sense of competency.

Participants had much to say about the merits of rurality, as they emphasized the idea that rural teachers appear to have more freedom than their urban counterparts. One female primary school teacher had recently, and temporarily transferred to an urban school for a professional development opportunity, and said, "in the city, we teach 50 plus kids in a class, in rural, only about 25" (#8). She also stated that the most striking difference between rural and urban teachers is rural school teachers have much more freedom than urban teachers, because in urban schools, "principals and parents put pressure on teachers…, urban school principals randomly inspect teachers' class without any prior notice" (#8). She also mentioned her age and level of enthusiasm for teaching: "I am in my forties, to be honest my mentality is close to 50, but I am still passionate for my job" (#8). Her words imply that teachers in their fifties may lose their strong passion for teaching, however the rural teaching role may sustain or increase that passion because there is less pressure on teachers.

All participants gravitated to discussing the positive aspects of rurality, but three participants were clear that adaptation and acceptance of rural reality were crucial for them to feel relaxed and be able to enjoy life as rural teachers. Participants provided evidence that conforms to the previous literature, which shows that people are more satisfied in the work place in rural areas because they have more freedom and autonomy (Blustein, 2008; White & Jha, 2018a). What stood out in this present research was that participants believed that freedom and a simple easy life were unique characteristics of rurality. For instance, Participant 10 who is a 40 years old primary school teacher, he remarked:

"I am having lots of freedom here and not that hectic compared to urban teachers" (#10).

Participant 7 added that he was “happy because the society needs me also I do not desire much, but when I first became a teacher in rural school, I feel I deserves more, I feel I am like a pearl but no body recognizes me in the rural school, now I feel very happy because I can teach students well and my supervisors are satisfied to my performance” (#7).

The above quotes illustrate that rurality can foster a rural teachers’ sense of ease and freedom, but it may also lower a teachers’ passion. Furthermore, a female school teacher who had 30 years of experiences stated: “When I just became a teacher, I had so much energy, I wish to improve my students through my teaching, but facilities here are not comparable to urban schools, such as even now we still do not have multimedia, so gradually my passions just become flat, I simply want to slow down, have a rest and enjoy my life as a teacher here” (#2).

These findings show that: the positive experiences of teaching in rural schools is like a kind of ‘glue’ that firmly sticks rural teachers to the teaching profession, as Participant 8 reflected, “if you asked me to teach in the urban schools now, I will not go because I am from the country, I want to help the country kids and wish more of my students succeed, not being a peasant any more” (#8).

Table 5.2 summarizes the major sub-themes of Theme one raised by these rural teachers, and provides some example quotes and highlights the frequency the subthemes were mentioned. It is noteworthy that a majority enjoyed teaching because of the positive feedback from former students.

Table 5.2

Summary of Theme one: Joy and ease of rural teaching

Major subthemes	Frequency	Selected quotes
Enjoyment of close relationship with students, colleagues and leadership	6	"I don't care the teacher level appraisal and certification, if you really want a higher-level title, I can give it up because I will not compete with my colleagues for a title."
Enjoy rural teaching because their student's 'feedback' and 'revisit'	8	"The happiest moment is my students who are successful in their career and come back to school to visit me, for example a student visited me with his wife and kid, and told them this is my teacher who helped me a lot while I was a naughty boy in this school."
Teaching excellence gives teachers enjoyment	4	"To teach better, I force myself to read more, so I improved, which even positively influenced my son."
After adaptation to and accepted the rural reality, they feel relaxed and started to enjoy	3	"I am having lots of freedom here and not that hectic compared to urban teachers."
Family supports positive rural teaching experiences	7	"Teaching here gives me the benefits of taking care of my family and especially my own kids, very beneficial for my own kid's education."

5.4.2 Theme two: Pressure and stress as a rural teacher

AI may elicit negative experiences (Patton, 2003; Stavros, 2018). Negative experiences were highlighted during the appreciative interviews which aimed to explore the complete picture of rural teachers' wellbeing, and this resonated the core of AI which is not to overlook negativity but focus on how rural teachers turn negatives into positive outcomes. Thus, this research revealed that alongside their ease and enjoyment, rural teachers had challenges and many experienced stress and pressure.

One main theme related to teacher stress indicated by 7 out of 10 participants was the lack of parental involvement in supporting the students when they returned home. For instance, Participant 5 declared, "My students are doing well at school, but when they back

home, their parents do not care about their study, which is like a backlash to my hard teaching at school" (#5).

Another theme mentioned by 4 out of 10 teachers was the disrespect and misunderstanding they receive from the general public and wider society, for example, Participant 1 stated that "even though our salary range is the same as urban teachers, I think they (urban teachers) are more respectable than us, you know, sometimes, I call parents to talk about their kids, they even do not bother to pick up the phone" (#1). While Participant 5 further added, "we do not feel privileged as the urban teachers because we are not as respected as the urban counterparts" (#5). While Participant 3 noticed some improvement, she stated that overall there was a lack of respect: "Nowadays is harder to become a rural teacher, because we are government employees now, but our society still do not pay enough attention to us, although this is much better than before, such as when I just became a rural teacher around 20 years ago, I visited a student family, the student's parents said, we do not expect too much from our kid, if he can be a 'little' teacher (like you) in the future, then we will be really satisfied" (#3). Participant 2 was more cynical about the perceptions from society: "Pressure is huge for us these days, such as a prevailing saying: there is no bad students, only bad teachers, it is a real nonsense, if you commit a crime, and can you blame the president of the country?" (#2).

All of the above data were provided by middle school teachers. Middle school students are close to entering the labour force in China, and it seems that school education is not that important to these student because going to university is not considered the only choice and priority for rural students. Participant 2 declared, "No matter students continue to study at university or go for a labour work in the city, or even being a peasant at hometown, they can earn enough money to make a living, they think if they go to a non-reputable university, they still struggle to find a white collar job, so before every one was aiming for university, but now it has changed" (#2). This negative stress factors raised during the interviews revealed that rural teachers would like more recognition from parents, and would like students to focus more on attaining a quality education.

Three out of ten participants mentioned that stress was due to additional responsibilities of teaching related to catering for the students' academic, social and psychological performance at school. As a teacher in charge of a class, unlike subject teachers who are only responsible of teaching children specific subject areas. For example, participant 3 who was in charge of a class reflected, "You are with the kids in your class all the time from morning till late, almost 12 hours a day, not like subject teacher, finish the class then your responsibility is over" (#3). Participant 2 changed from being a teacher in charge of class to a subject teacher and mentioned that she felt "much less pressure" (#2). However, participant 2 also felt stressed because she was sometimes pressured to teach outside her subject areas, and she noted that other teachers are also forced to do so: "My major is chemistry, but I had taught health, PE, math, at that time this is because we have shortage, but nowadays some teachers still cannot teach the subject matching their major, you know, we just recruited a teacher because he has some "networks" or "connections" (guanxi), his major is physics, but he cannot teach physics here, because we already have enough physics teachers in our school" (#2). The above quote indicates that rural schools were not utilizing their optimally, and this had negative impacts on teacher wellbeing.

Three teachers referred to teacher burnout. For example, Participant 8 stated: "The repeating routines as rural teacher makes me feel tired, I even wanted to quit before, for example, I was assigned to teach year one to year six, when they graduated, I started the circle to teach year one again" (#8).

A few teachers (4 out of 10) mentioned the location and facilities of rural schools adversely affected their wellbeing. For example, Participant 4 said the long distance between home and school put stress on him, "I chose to live in a urban town because the facilities are better also good for my own kid's education, but I have to spend lots of time on commuting, there is no school canteen, so I have to find a place to eat during lunch time here, also there no place to take a nap during the 2 hours' lunch break in my school" (#4).

Participant 9 said, "Urban school's facilities are much better than us, here we still have to light stove for the purpose of heating in winter, lots of dust, which makes students very

uncomfortable, and the classroom is still very cold" (#9). Participant 4 further explained, "Not only facilities are much worse than cities, but also entertainment is really boring here, we only have TV as our leisure, in urban region, they have lots of other choices, such as square dancing [a form of free of charge group aerobic dance exercise in the square which is very popular in China], that is why quality university graduates will not come here to teach, government has the initiative of special post teachers to attract university graduates and try to keep them staying in rural school for at least three years, but after then almost all of them choose to leave" (#4).

Participant 2 also mentioned, in addition to the lack of material the ideological aspects related to rurality were a negative experience; she said, "Outlook on life and values here (countryside) are much behind the urban areas" (#2). What stands out here is that rural teachers have to confront the reality that rural facilities and ideologies are at a lower standard than in the urban cities, and this can have a significant effect on rural teachers' wellbeing. AI has the potential to clarify this from a positive perspective to reveal how rural Chinese teachers have turned these negative aspects into positives to help them thrive.

Two teachers felt stressed because of the feeling of 'comparison' and 'competition'. For example, Participant 8 stated that, "The social and peer feedback of being a good teacher is crucial for me, although parents do not put pressure on you, we have a few 'paralleled classes', the comparison puts pressure on me, I am not expecting to be number one, but definitely not the last" (#8). Two out of ten teachers also mentioned that they needed to pressure themselves to work harder to keep rural students' levels of study up to a good standard. For example, Participant 5 stated that, "Rural students' foundation is weak because they do not have as much knowledge as urban kids, as a teacher I have to prepare more for the class to fill the knowledge gap for our rural kids, so sometimes the pace of my class seems slower, I have to pressure myself to catch up with the pace of the syllabus" (#5).

Table 5.3 summarizes the major sub-themes of Theme two. These findings revealed that although rural teachers had challenges and many experienced stress and pressure, they remain in the rural teaching profession.

Table 5.3

Summary of Theme two: Pressure and stress as a rural teacher

Major subthemes	Frequency	Selected quotes
Pressure is coming from the lack of parental involvement	7	"My students are doing well at school, but when they back home, their parents do not care their study, which is like a backlash to my hard teaching at school."
Stress is coming from the society's disrespect and misunderstanding	4	"Pressure is huge for us these days, such as a prevailing saying: there is no bad students, only bad teachers, it is a real nonsense, if you commit a crime, and can you blame the president of the country?"
Certain aspects of rurality	4	"Not only facilities are much worse than cities, but also entertainment is really boring here, we only have TV as our leisure, in urban region, they have lots of other choices."
Feel pressured to teach outside the subject area	2	"My major is chemistry, but I had taught health, PE, math, this is because we have teacher shortage."

5.4.3 Theme three: Teacher perception of student's outcomes

Teacher wellbeing and student wellbeing are inextricably related (Harding et al., 2019; Roffey, 2012), and the interview data revealed that student outcomes are crucial for teachers' wellbeing. A majority of the teachers (9 out of 10) positively commented on how well rural students met learning outcomes. For instance, Participant 10 said, "Their (my students') eager eyesight for knowledge is my real motive to stay here teaching" (#10). Participant 5 added, "I love these kids, they are very simple, not complicated at all, they love labour, such as willing to clean the classroom" (#5). Participant 3 enjoyed the generosity of the students and said, "The students here are lovely, such as when they are eating candy, they offer me to have a try, very genuine" (#3).

The teachers believed that the advantage of being a rural student was being close to nature, for example, Participant 7 said, "they (rural children) have the opportunity to be so close to the nature, when they need some fruits or vegetables, they know where to pick them up in the field" (#7).

However, most of the participants (7 out of 10) believed that the 'left-behind' children needed special attention. Participant 7 described how, "They (left-behind children) have various problems, so I told their parents when they talk to their kids, let them know when you will be back home, what kind of gifts do your kids want from you, let your kids know you care about them a lot" (#7). Participant 7 commented that, "Left-behind children really gives me headaches, they are so hard to manage, because they are very self-centred and some of them lack of confidence, so I asked them to send some videos to their parents who are away working in the city to foster the communication with their parents" (#7). Participant 9 also felt that, "They (left-behind children) are self-centred also with low self-esteem, they do not know how to compromise, also the left-behind children feel they are different from other kids, because they do not have parents around which contribute to their sense of inferiority complex" (#9). In contrast, Participant expressed the enjoyment of teaching left-behind children despite acknowledging it wasn't easy:

> Deal with left-behind children is not easy, the reason is complicated, such as they seem to be self-contemptuous, because they realize their parents are not around, also some of them are very self-centred, this is because their caretaker, normally their grandparents, really spoil them. But it is rewarding to teach left-behind children, because when we build up solid rapport, they open their hearts to me, I feel very happy about it, for example, after I talked to them (left-behind children), they came back to me the other day, told me what I said is correct and good for them, and will follow my suggestion, this kind of feedback makes me really happy as I know they really listened to me and understood my good intention (#5).

Three out of ten teachers mentioned that a change of classroom culture in rural schools had an impact on student outcomes. For example, participant 1 stated: "Before I used lots

of punishments to force my students to study, but nowadays, we cannot do the same thing anymore, so I changed my strategy to foster a good relationship with my students, such as saying, wow you changed your hairdo, looks good on you, let my students know I care about them, sometimes, I even invite my students to eat hot pot together, which does not cost a lot but really builds up good relations with my students" (#1). Participant 10 also commented that "If I criticize my students, some of them may complain to their parents about my criticism, parents sometimes come to school to challenge me, if this issue is not solved properly, how can I teach them in the future?" (#10).

Four out of ten teachers were concerned with the lack of motivation to study shown by the children. They preferred to focus on 'material stuff'. Participant 4 stated: "If I do not ask them (my students) to study, they are so lovely, if I do, they become unhappy" (#4). Participant 6 supported this view: "Rural students are not motivated to study nowadays, as living conditions are much better in the countryside now, they do not care whether they can go to university or not" (#6). Participant 9 highlighted the shifting focus of students: "Students nowadays are competing each other about the material stuff, such as what brands of clothes to wear, so my school regulates students should only wear school uniform" (#9). This also resonated with Participant 8 who stated,

> Parents do not know how to care about their kids' education, they simply know to give their kids money, they have the mindset if other kids can have this, my kids will as well, so the students do not have the passion for knowledge, not like before, students want to go to university, so they work hard, but nowadays students do not have life goals anymore, as our rural kids do not know why they need to study, very bad attitude towards studying, rural kids really need to know how to appreciate (current better living conditions) (#8).

Among the participants 9 out of 10 felt that they could make a difference for rural children. Participant 4 provided an example about a visit to a very poor student's family, and tried to persuade the family pay more attention to the student's school performance. His parents said "I know now, even if we do not build the new house, we will have to send

him to University" (cited by #4). Thus, by the effort of this teacher, the student graduated from university a few years later!

Participant 3 remarked, "I am proud as a rural teacher because my teaching matches our rural kids' needs, whereas urban teachers may not know" (#3). Participant 9 added that, "I deeply feel if a student can come across a great teacher it is his or her luck for whole life" (#9). Participant 8 talked about rural students' extra-curriculum activities, "Rural school should pay more attention to kids' extra-curriculum activities, hope they can have more opportunities to develop their talents, actually, I do not care about their exam marks, but very interesting my class' academic performance is great" (#8).

The following sub-theme revealed that student outcomes, teacher wellbeing and relationships with students' parents are interrelated. Two out of ten teachers mentioned how they dealt with their students' families, for example, Participant 8 described how she had managed conflicts with her students' parents. She said, "I respect the parents even though they do not have any *dan wei* (a formal working place), they are only peasants, I am always willing to take responsibility and try not to blame them [because they are not actively involved in their kids' education]" (#8).

Based on the evidence supplied in the discussion of the above sub-theme it is clear that parents focus too much on their children's material needs but not enough on their education. Therefore, having a strategy to deal with parents is crucial for students' outcomes because the teachers' relationship with students' parents not only affects teachers' wellbeing, but is also directly related to student outcomes. Seven out of ten teachers mentioned that they wanted their students to succeed, as Participant 4 said, "at least not being a peasant anymore" (#4). They believed that success at school and the opportunity to gain an education would help poor rural students improve their quality of life.

Table 5.4 summarizes the major sub-themes of Theme three. It revealed that rural teachers were motivated to teach because they have strong passion to educate and change rural students' life. Thus, the data further revealed that the rural teachers' perceptions of students' outcomes are closely related to their wellbeing.

Table 5.4

Summary of Theme three: Teacher perception of student's outcomes

Subtheme	#Frequency	Selected quotes
Love to teach rural kids	9	"Their (my students') eager eyesight for knowledge is my real motive to stay here teaching."
Left-behind children needs special attention	7	"I have to pay extra more attention to them, for example, a left-behind kid fought with another kid and got injured, I took him to hospital, his mother was in Beijing, so she asked me to pay hospital fee for her son for the time being, and I looked after the kid in the hospital." "But it is rewarding to teach left-behind children, because when we build up solid rapport, they open their hearts to me, I feel very happy about it."
Change of classroom culture in rural schools having impacts on student outcome	3	"if I criticized my students, some of them went back home and told their parents, parents will come to school to challenge me, so I need to change my mindset to try to be good friends with my students, less and less criticism."
Teachers concerned rural student's lack of motivation to study	4	"Rural students are not motivated to study nowadays, as living conditions are much better in the countryside now, they do not care whether they can go to university or not."
Rural teachers make a difference for the rural children	9	"I deeply feel if a student can come across a great teacher it is his or her luck for whole life."

5.5 Summary of thematic analysis

The three overarching themes as illustrated in Figure 5.1 above and discussed above in detail from the phase 1 semi-structured interview data, identified several 'enabling' and 'inhibiting' factors for rural teachers' wellbeing as detailed below in Figure 5.2. Figure 5.2 shows in summary the main factors that were either enabling/positive or inhibiting/negative factors affecting teachers' wellbeing.

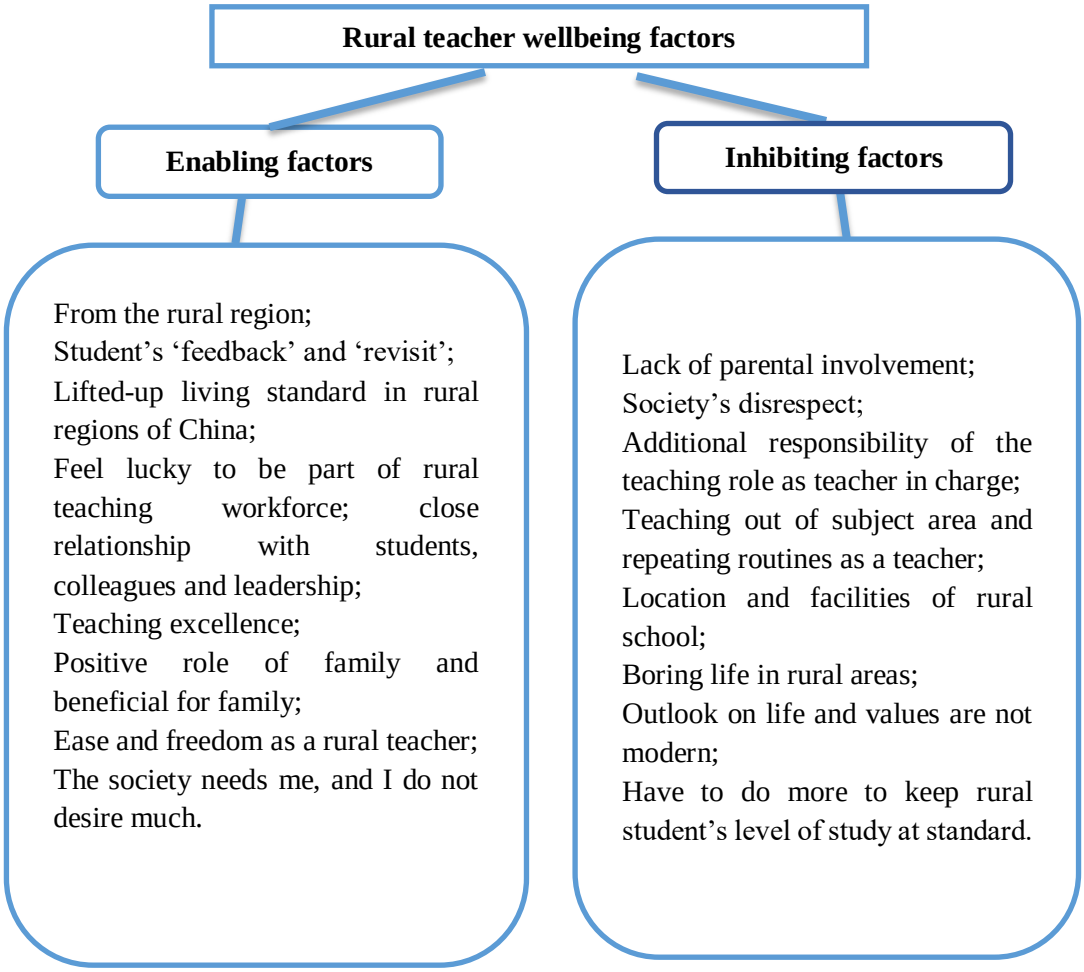

Figure 5.2. Thematic analysis of rural teacher wellbeing

The interview protocol was based on an AI approach, which adopted a modified version with a focus on the discovery phase of the appreciative framework according to the aims of the study and the field work method. AI did not hide or ignore the negative, thus, it fostered a balanced understanding of both sides of the rural teaching experience, and provided a different approach to problem solving, rather than purely targeting negativities. This provided a fresh approach to discovering what sustained rural teachers, as it identified the positive factors that helped to shape teachers' experiences, and contributed to their optimal functioning and wellbeing in rural schools in China.

Although the data showed teachers' concerns about rural students' learning outcomes, these could be interpreted as negative contributors to rural teachers' wellbeing, but these rural teachers nonetheless held positive views towards their teaching careers. They were confident that teaching in the rural areas made a difference for the rural students; they had deep affection to their students and the rural regions they were working in; they possessed a strong sense of responsibility to provide quality education to rural children and hoped students would leave school being confident and happy. The teachers' motivations for being rural teachers and remaining in the rural schools was clearly based in their students' successes.

The data revealed most of the participants (7 out of 10) acknowledged that the first several years in a rural teaching position were challenging, but they chose to stay and thrive in their rural teaching careers. Participant 5 explained what it meant to her to be a rural teacher: "I am growing alongside my teaching career as well, I really appreciate, so I do want to pay back by doing something (teaching here) for my fellow country folks" (#5). The data also revealed that teachers' wellbeing is based on their perception of rewards, whether from their students' educational outcomes, or their own challenges and achievements.

5.6 Chinese culture and rurality framework

The themes based on open coding suggest culturally specific aspects of teacher wellbeing in rural China. In order to identify the cultural effects on wellbeing, it has been suggested to reconstruct culture as specific context variables based on salient contextual cues instead of as a general variable such as collectivism and individualism (Kim et al., 2018; Matsumoto & Kupperbusch, 2001). Thus, the following thematic statements were extracted based on a Chinese Confucius values framework as well as Chinese rurality features, and they were translated into survey items for phase 2 of the mixed-methods study. Figure 5.3 below illustrates that after the coding of interview data according to a traditional Confucian values' framework, the thematic statements were further translated into positive indicators echoing the AI paradigm. These positive indicators were rephrased to the survey items used in this study. This is in accordance with the theoretical framework also used in this study, which posits that culture plays a key role in teachers' wellbeing in rural China.

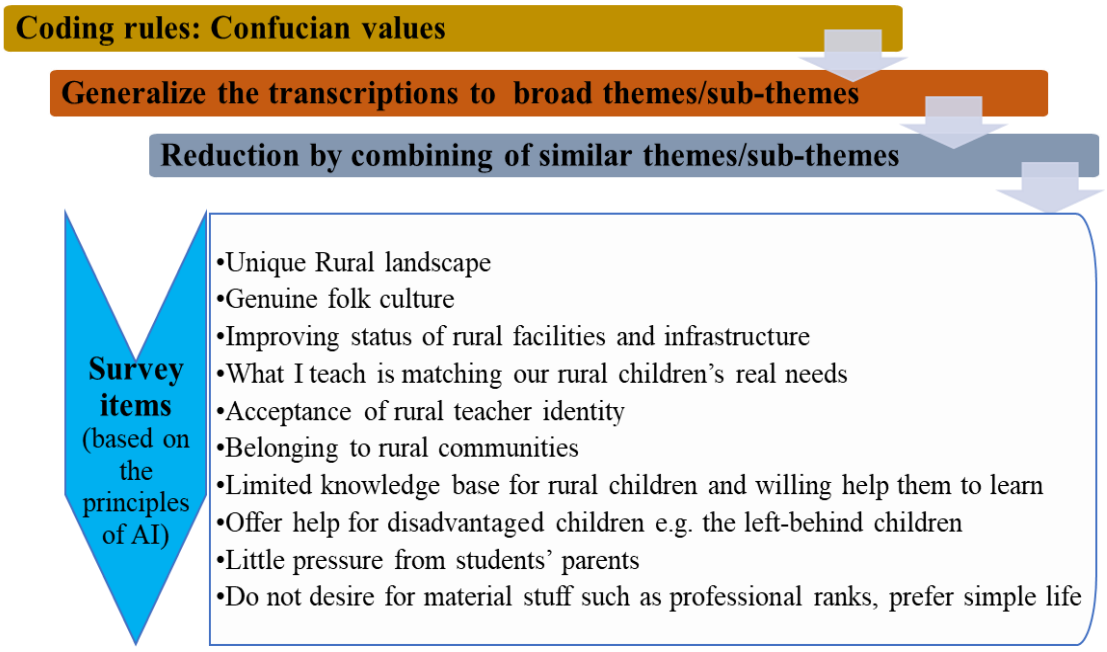

Figure 5.3. Procedures of producing self-composed survey items

Furthermore, Table 5.5 also illustrates the coding framework of the positive indicators which further informed the on-line survey items. The first column in Table 5.5 categorizes

the participants' interview data into rurality factors and Confucian values. The second column provides some choice quotations from participants to illustrate these values and themes. Under these categories, the third column summarizes participants' quotes related to teacher wellbeing within the Confucian cultural context for the survey items used in phase 2.

Table 5.5

Rurality and Confucian value coding framework

Confucian Analects / Values and Rurality factors	Participants' brief quotation	Interpreted as thematic statements and will be used in phase 2 survey study
Unique rurality relevant factors related.	Beautiful countryside scenery; Rural children are unsophisticated. The rural environment is simple not affected by the sophisticated busy world. The pressure in rural school is less. I am coming from rural family and familiar with rural environment. Deal with students and their parents as well as my colleagues, sounds like dealing with my family members. Rural children do not have as broad knowledge as urban children, so I have to prepare the class with bigger effort. Rural facilities are worse than urban cities, but much better than before.	Rural landscape; Genuine and simple folk culture; Little pressure from rural children's parents; I have rural background; Able to offer meaningful help the left-behind children; Limited knowledge base for rural children and motivated to help; Deal with rural children and their parents feel like family members; Improved rural facilities and infrastructure.
Flourishing or happiness is a simple life style (Confucius, 1979).	Before I think I deserve more (than being a rural teacher), now I get used to the country life and enjoy it.	I do not desire more; I prefer simple life.
A lifestyle conforms to ethical norms is preferable to wealth and social status (Confucius, 1979).	As a teacher, I am conscientious because I teach children;	I am a role model for my students.
Confucian value emphasizes the importance of role model through performing a role well to	One day is a teacher and life being a father; As a teacher I need to have high level of knowledge, ethical practice and virtue;	

Confucian Analects / Values and Rurality factors	Participants' brief quotation	Interpreted as thematic statements and will be used in phase 2 survey study
achieve happiness (Fraser, 2013). Confucian contends to achieve social good without the indulgence of human nature (性) but pay full attention to Dao (道) (Confucius, 1979).	I need to be my students' role model, knowledge and ethical standards are both crucial for me.	
Confucian value 'Te' is particular excellence of an individual within his or her context, not as an essential given but as a realized perspective upon things which at one and the same time centers the individual and focuses his or her context (Hall & Ames, 1987, p. 248)	I need to be diligent, update my knowledge, better myself; I can use my self-composed slides at class, but I feel my knowledge base is limited.	I keep on improving myself to be a better teacher for my students.
Influenced by Confucian value, Chinese normally do not focus on the individual's happiness, so do not treat it as central or highest good (Fraser, 2013).	When I see my students are growing up, I feel really content;	I feel my career is so rewarding when I see my children growing up;
Focus on individual's role in the community, social order and control (Fraser, 2013).	I do not want to compare with urban teachers, because what I teach is matching our rural children's needs. As I do my job as a teacher, I have to love my job, based on this mindset, I become really love my teaching career.	What I teach is matching our rural children's needs
Ritual (礼) refers to the rules and conformity to everyday norms. Propriety (义) is the responsibilities and duties that social roles indicate focusing on appropriateness.	It is easier to look after my parents; Teacher is a stable job. When I see my students, I naturally feel happy. I need to take care of my children. Working in rural schools, make it convenient;	Teacher is a stable job which gives me security; As a teacher gives me benefits and convenience to take care of my children and parents.
Benevolence (仁) is about love, compassion and empathy, "Benevolence cannot do without love" (Zhu, 1986, p. 119). Fen (分) refers to the allotments of social roles and ranking.	The knowledge and experience gained from my teaching career, which makes it handy and beneficial to raise my own children; The rewards for my rural teaching career are: I fully	

Confucian Analects / Values and Rurality factors	Participants' brief quotation	Interpreted as thematic statements and will be used in phase 2 survey study
Yang (养) refers to the caring of children and aged parents. Both Fen and Yang are based on norms of propriety to achieve harmony and strength of society, so people can reside peacefully at homes, otherwise would incur conflicts and disorder (Confucius, 1979).	participated in my own child's growth because I know how to educate my own child;	
Devotion to Confucius value of ritual and propriety is the most effective way to achieve material provision resulting in the fulfilment of desires. Ritual and propriety also serve as an avenue to control the desires especially when they cannot be satisfied to avoid slaving people themselves to external material world (Fraser, 2013).	Although I have been working for more than 20 years and have not obtained the 'senior teacher' title, but I do not care.	I do not desire for material stuff such as professional ranks; I prefer simple life.
Confucian believes that not only goods material wealth but rather also social goods of security, which is most enjoyable, also honor and high social status contribute to individual wellbeing (Fraser, 2013).	I already live here for a long time, get used to the life here. As a rural teacher, my salary is the same as the urban teachers.	I get used to the life as a teacher in rural region.
Security (安) entails psychological contentment, sense of belonging and being at home (Confucius, 1979).	Instead of struggling, I choose to accept the situation and being happy.	I choose to accept my rural teacher identity.
"Gentleman" (君子) thrives through the devotion to collective communities' flourishing (Confucius, 1979).	I was born in rural region, so I wish to do something for my countryside folks.	I belong to rural communities and I wish to contribute to rural education.
Both Zhuangzi, an iconic Daoism philosopher, and Xunzi, one of the major Confucian philosophers contend practical mastery demands commitment and perseverance in order to	Some of my students keep in touch with me, they come back to the school to visit me and we go for restaurant and karaoke together, I feel I am so young again, and of course feel so content and rewarded	Some of my students keep in touch with me, so it is a respectful and rewarding career.

Confucian Analects / Values and Rurality factors	Participants' brief quotation	Interpreted as thematic statements and will be used in phase 2 survey study
achieve well-lived and being respected life (Fraser, 2013).	because they remember me as their teacher.	
In Confucianism, a happy life is a good life with the virtues of benevolence righteousness and propriety at the heart(Hwang, 2006), which accentuates the value of self-cultivation, self-discipline, self-abnegation and asceticism (Joshanloo, 2014).	I do not accept students' gift, especially some of them are poor, I even give them gifts sometimes, such as little paper notebooks.	I love my students and see them growing up is my upmost rewards.

The themes of the qualitative data revealed the sense of responsibility and harmony which are the core values of Confucianism, and the following examples from participants demonstrated their sense of wellbeing and how that was influenced by Confucian culture: Participant 3 said, "After years of teaching, I deeply feel, rural kids are very simple, they need me, to support them for a better life is what I can do, also I am from the countryside, to do something to repay my country folks is my will" (#3). Participant 5 highlighted that, "We need knowledgeable teachers stay here to enhance our student's outcomes" (#5). Participant 9 mentioned that, "As rural teacher, I think we have higher ethics and sense of responsibility than urban teachers, we are not affected by the complex social environment" (#9). On the other hand Participant 8 said, "If my colleagues wish to obtain an honourable teacher title, we are getting so well with each other, I would rather give up competing with them for that title" (#8).

After thematic analysis, what is critically important here is to understand how rural Chinese teachers made sense of their wellbeing within the rural Chinese social and cultural contexts. These culturally translated survey items construed Confucian cultural values and unique rurality features in rural China, and were hypothesized to positively predict rural teachers' wellbeing. The hypothesis and related survey items will be examined in the next chapter on quantitative analysis.

5.7 Summary

Through AI based interviews, the qualitative data revealed in this study provided a new interpretation about rural teachers' wellbeing. Rural Chinese teachers remained in their teaching positions despite the relative worse conditions in rural regions, because they did not care about the material side of life, and were more so altruistically motivated to help the children living in rural areas, many of whom were 'left-behind' (Lin et al., 2012). It was noteworthy that the living standards improved in rural regions of China, teachers' social status and wellbeing also changed accordingly.

Three main themes and relevant sub-themes were identified and translated into survey items based on Confucian culture and societal setting in rural China. Examples of rural teachers' success were revealed in the narratives. To recognize and generalize these strengths, a large-scale cross-sectional survey was also conducted, and quantitative modelling was then performed based on phase 2 data (n=1198) to validate and explore the unique cultural factors contributing to rural teachers' wellbeing based on SDT. This will be detailed in the following chapter (Chapter 6).

Chapter 6: Quantitative results

6.1 Introduction

This chapter describes the survey data from phase 2 of the mixed-methods study (see appendix G and appendix H), and explores the interrelations between conceptual constructs of basic psychological needs, teachers' wellbeing and Culture-rurality based on Self-Determination Theory (SDT). Both descriptive statistics and inferential statistical modelling were presented. It is hypothesized these constructs are essential to founding a multivariate understanding of Chinese rural teachers' wellbeing. Although the concepts of culture and SDT psychological needs were used above in the literature review to explore the status of wellbeing of teachers, no previous research has been done to integrate both in one theoretical framework to gain an in-depth understanding of rural teachers' wellbeing in a non-western societal and cultural setting.

This chapter builds on the results from phase 1 of the study to further explore this gap, and hypothesizes that culture and rurality can be an adequate answer to needs satisfaction which contributes to as well as construes optimal teacher wellbeing. The purpose of the analysis presented in this chapter is to examine the determinants of teacher wellbeing in rural China. Specifically, three research questions guide this chapter:

1) What is the structure of the latent constructs in the survey? (including self-composed survey items and existing scales);

2) What are the relations between socio-demographic variables, basic psychological needs and teachers' wellbeing?

3) What factors contribute to rural teachers' optimal wellbeing?

These three research questions guide further exploration of the nature of rural teachers' wellbeing within the Confucian cultural context of China, which scaffolds the overarching research questions of the present study, which will be examined in detail below. Figure 6.1

illustrates the methods used in analysing the quantitative data revealed by this present study.

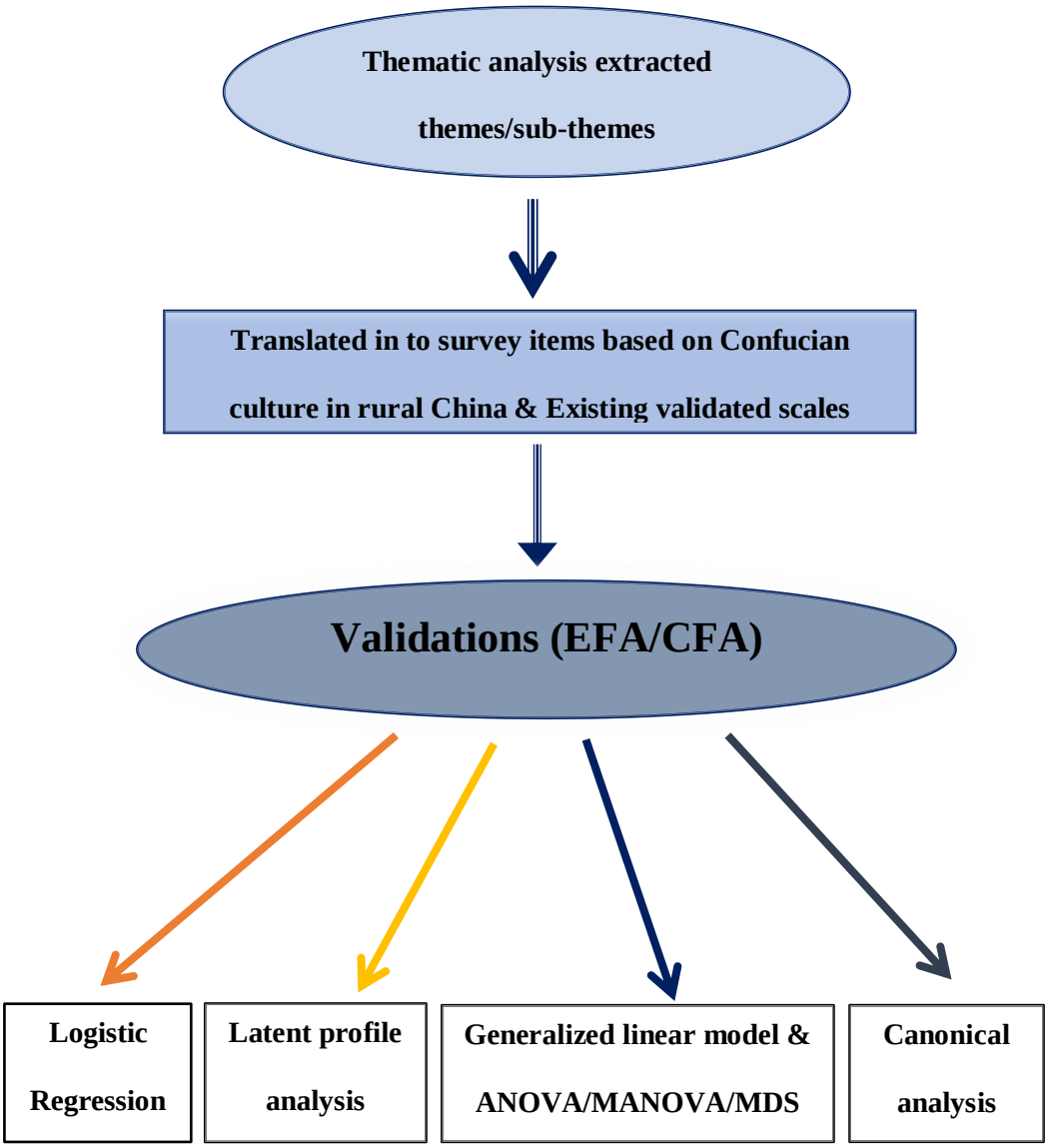

Figure 6.1. Statistical modelling procedures

6.2 Demographic and descriptive information

Teachers aged under 40 years accounted for 58.3% of the total of rural teachers in China (Chinese News Network, 2019). The online survey achieved the optimal sample size (after data cleaning of missing items) of N=1198. The surveyed sample showed a similar age

structure, as the proportion of the teachers under 40 years of age was 50.1%. This indicates the sample is representative of the population of rural teachers in Jilin Province, China, and thus produced results that are generalizable. This section therefore considers the sociodemographic background of the 1198 survey participants. The demographic information regarding teachers' ages, qualifications, subject majors, levels of teaching: Primary/Middle school years of teaching, years of stay in a rural region, types of teachers in charge of the class, teaching subjects and income per month (RMB). The descriptive statistics for all variables are presented below. Descriptive information about teachers' socio-demographic status is shown in Table 6.1 below:

Table 6.1

Sociodemographic characteristics of rural teacher (n=1198)

	Number	Percent
Gender		
Female	926	77.3%
Male	272	22.7%
Age		
18-29	156	13.0%
30-39	444	37.1%
40-49	388	32.4%
50-59	207	17.3%
60 and above	3	0.3%
Qualification		
below bachelor	261	21.8%
Bachelor degree	923	77.0%
Master and above	14	1.2%
Major		
Math	196	16.4%
Chinese	524	43.7%
English	96	8.0%
Arts	158	13.2%
Science	27	2.3%
others	197	16.4%
Years of living in rural		
less than 1 year	55	4.6%
1-4 years	133	11.1%
5-10 years	97	8.1%
more than 10 years	434	36.2%
since born	479	40.0%
Years of teaching		
0-4 years	147	12.3%
5-9 years	110	9.2%
10-19 years	438	36.6%
20-29 years	291	24.3%
30 years and more	212	17.7%
Income		
below 2500RMB	34	2.8%
2500-5000	920	76.8%
more than 5000	171	14.3%
not disclose	73	6.1%

Table 6.1 shows that the majority of survey participants (77.3%) were female teachers, and teachers with a Chinese major (43.7%). More than 60% of the teachers had 10 or more years of rural teaching experiences, 77% of the participants had a bachelor's degree, and slightly less (76.8%) had salary between 2500 to 5000 RMB.

The descriptive statistics (Table 6.2) of self-composed survey items (details of the survey items are in appendix G) shows the highest score (=3.55) is on survey item Q14_12: I feel my career is so rewarding when I see my students growing up. The lowest score (=2.69) is on survey item Q14_3: Little pressure from students' parents. The study adopted the thresholds of skewness and Kurtosis which were set by Bulmer (1967). If the skewness is between -0.5 and 0.5, the data are fairly symmetrical. If the skewness is between -1 and –0.5, the data are moderately skewed. Table 6.2 also shows that the data of the self-composed items are either symmetric or negatively skewed because the statistics of skew are between -1 and 0. The data also shows that the left-hand tail is longer than the right-hand tail. Kurtosis statistics are all less than 3 which indicate that the spread of the data differed from a normal distribution and characterized by a fatter tail. By conducting Shapiro-Wilks normality test, the results showed that all items' P values are less than 0.05, which further indicated that the data are not normally distributed.

Table 6.2

Descriptive statistics for self-composed survey items/scales

n=1198 Number of variables=23	mean	standard deviation	skew	kurtosis
Unique Rural landscape	2.93	0.89	-0.47	-0.54
Genuine folk culture	3.09	0.8	-0.72	0.2
Little pressure from students' parents	2.69	0.94	-0.18	-0.88
I have rural background	3.18	0.84	-0.92	0.39
Help rural children to learn	3.38	0.66	-0.97	1.43
Deal with rural children, their parents and my colleagues feel like family members	3.31	0.71	-0.89	0.75
Rural facilities and infrastructure	3.28	0.67	-0.79	1
Limited knowledge base for rural children	3.37	0.62	-0.76	0.97
Offer meaningful help for the left-behind children or other disadvantaged children	3.36	0.63	-0.77	0.95
I am a role model for my students	3.38	0.62	-0.72	0.81
I am able to keep on improving myself to be a better teacher for my students	3.5	0.58	-0.91	1.08
I feel my career is so rewarding when I see my children growing up	3.55	0.57	-1.12	1.85
What I teach is matching our rural children’s real needs	3.3	0.62	-0.56	0.63
Teacher is a stable job which gives me sense of security	3.23	0.74	-0.85	0.68
As a teacher gives me benefits and convenience to take care of my children and parents	3.13	0.82	-0.78	0.17
I do not desire for material stuff such as professional ranks, I prefer simple life	3.08	0.84	-0.7	-0.06
I get used to the life as a teacher in rural region	3.21	0.73	-0.82	0.78
I accept my rural teacher identity	3.24	0.73	-0.9	0.99
I belong to rural communities	3.12	0.77	-0.71	0.33
Close relationship with my students and they keep in touch with me	3.33	0.62	-0.64	0.77
I can take control of my job	3.21	0.7	-0.65	0.45
My students are passionate for knowledge and eager to learn	3.29	0.66	-0.72	0.82
Improving school facilities	3.33	0.61	-0.67	1.09

Responses to the questionnaires were scored on a 4-point Likert-type scaled ranging from strongly disagree (scored as 1) to strongly agree (scored as 4). Figure 6.2 below shows the majority of participants agreed or strongly agreed the positive indicators of teacher wellbeing. It appeared that item Q14_3 attracts largest proportion of strongly disagree and disagree, which conforms to the lowest mean score of all self-composed items based on table 6.2 (as seen above).

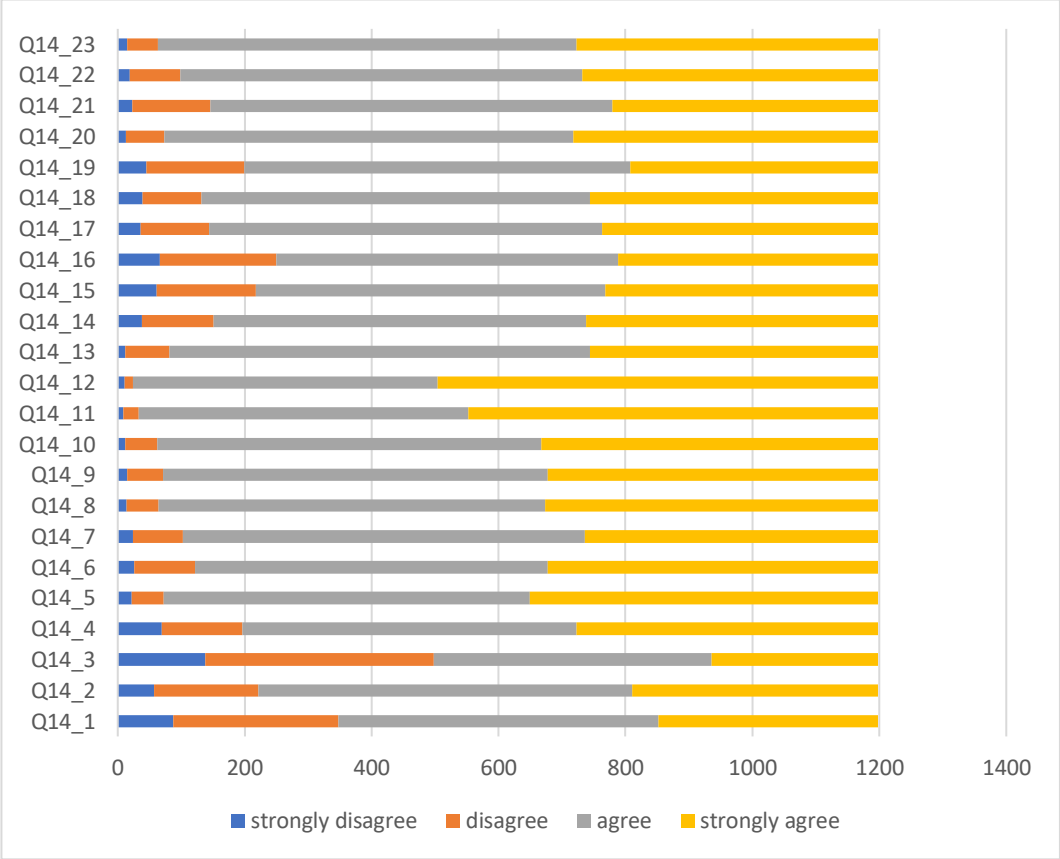

Figure 6.2. Frequency for self-composed scale.

The following tables (Table 6.3 to Table 6.9) indicate that data (utilizing existing scales including eight constructs) are either symmetric for the construct of Efficacy and items Q12_4, Q12_9, Q12_11, Q12_18, or negatively skewed for the rest of the items of the constructs. Kurtosis statistics indicate the distributions of the survey data have thinner tails and lower peaks. This means that data are absent of outliers. Table 6.3 shows the

highest average score for the construct Efficacy is 3.37 (item 13_4), which is all about how teachers feel about how good they are at helping students learn new things.

Table 6.4 illustrates the highest average score for the construct of Thriving at work is Q12_13 (=3.38) which is about whether teachers like their rural teaching job, Q12_6 scores slightly lower (=3.37) which reflects teachers' feeling the work is meaningful.

Table 6.3

Descriptive statistics for construct Efficacy and School connectedness

Efficacy & School Connectedness	mean	Sd (standard Deviation)	median	skew	kurtosis	Shapiro-Wilks test for normality (P value)
Q13_2	2.97	0.9	3	-0.27	-1.08	2.445462e-33
Q13_4	3.37	0.69	3	-0.7	-0.43	2.200208e-38
Q13_6	2.73	0.99	3	-0.07	-1.15	1.845288e-31
Q13_8	3.17	0.76	3	-0.37	-0.98	1.476551e-35
Q13_1	3.36	0.82	3	-0.78	-0.37	6.008267e-37
Q13_3	3.36	0.8	3	-0.8	-0.14	1.344519e-36
Q13_5	3.19	0.85	3	-0.45	-0.97	3.789804e-35
Q13_7	3.3	0.8	3	-0.64	-0.49	9.009185e-36

Table 6.4

Descriptive statistics for construct Thriving at work

Thriving at work	mean	sd	median	skew	kurtosis	Shapiro-Wilks test for normality (P value)
Q12_1	2.96	0.87	3	-0.08	-1.34	6.676981e-35
Q12_13	3.38	0.77	4	-0.96	-0.09	2.378346e-39
Q12_4	3.03	0.96	3	-0.5	-0.95	2.242728e-34
Q12_6	3.37	0.75	4	-0.88	-0.14	1.08775e-38
Q12_14	3.15	0.91	3	-0.7	-0.58	1.460742e-35

Table 6.5 shows the highest average score for the construct of Perceived recognition is on item Q12_15 with a score of 3.38, which reflects teachers' trust on their colleagues.

Table 6.5

Descriptive statistics for construct Perceived recognition

Perceived recognition	mean	sd	median	skew	kurtosis	Shapiro-Wilks test for normality (P value)
Q12_10	3.23	0.81	3	-0.64	-0.65	2.359397e-36
Q12_9	3.14	0.85	3	-0.48	-0.94	2.71064e-35
Q12_15	3.38	0.71	4	-0.83	-0.09	1.711266e-38
Q12_16	3.18	0.88	3	-0.69	-0.56	8.910866e-36

Table 6.6 demonstrates clearly that the highest average score for the construct of Desired involvement is for item Q12_19 (=3.41), which is about teachers' commitments to the school's vision.

Table 6.6

Descriptive statistics for Desired involvement

Desired involvement	mean	sd	median	skew	kurtosis	Shapiro-Wilks test for normality(P value)
Q12_11	3.05	0.88	3	-0.47	-0.75	2.145743e-33
Q12_17	3.38	0.73	4	-0.92	0.11	9.933279e-39
Q12_18	3.03	0.89	3	-0.35	-1.04	5.038535e-34
Q12_19	3.41	0.71	4	-0.91	0	2.496216e-39

Table 6.7 shows the highest average score for the construct of Self efficacy is on item Q15_14 (=3.37), which reflects teachers' confidence on interacting with rural students and their parents.

Table 6.7

Descriptive statistics for Self-efficacy

Self-efficacy	mean	sd	median	skew	kurtosis	Shapiro-Wilks test for normality(P value)
Q15_1	3.31	0.68	3	-0.53	-0.52	2.514386e-37
Q15_12	3.33	0.66	3	-0.58	-0.21	6.805016e-38
Q15_13	3.31	0.68	3	-0.54	-0.53	2.389975e-37
Q15_14	3.37	0.65	3	-0.66	-0.11	1.66487e-38

Table 6.8 illustrates the highest average score for the construct of Recognition is on item Q15_10 (=3.24), this item indicates that teachers feel being recognized because of their teaching excellence.

Table 6.8

Descriptive statistics for Recognition

Recognition	mean	sd	median	skew	kurtosis	Shapiro-Wilks test for normality (P value)
Q15_3	3.19	0.76	3	-0.57	-0.35	2.919314e-35
Q15_10	3.24	0.72	3	-0.54	-0.37	3.652685e-36
Q15_11	3.21	0.76	3	-0.57	-0.41	1.870776e-35

Table 6.9 manifests the highest average score for the construct of Job satisfaction lies on item Q15_9 which indicates the colleagues and school's willingness to help.

Table 6.9

Descriptive statistics for Job satisfaction

Job satisfaction	mean	sd	median	skew	kurtosis	Shapiro-Wilks test for normality (P value)
Q15_2	3.24	0.73	3	-0.55	-0.44	4.25984e-36
Q15_5	3.2	0.75	3	-0.56	-0.38	2.131142e-35
Q15_4	3.21	0.75	3	-0.6	-0.29	1.360929e-35
Q15_6	3.26	0.7	3	-0.52	-0.47	1.345398e-36
Q15_9	3.33	0.67	3	-0.62	-0.11	9.259321e-38

Therefore, tables 6.3 to 6.9 have all shown that all of the items' P values are less than 0.05 based on Shapiro-Wilks normality test, which means that we have to reject the hypothesis that data are normally distributed. According to Las Hayas et al. (2011), there are two potential approaches in terms of Rasch scoring and factor scoring for data normalization, for cross-sectional survey research, both scoring systems show the similarity on precision.

Because of the adoption of Confirmative Factor Analysis (CFA) modelling, factor scoring was employed to normalize the scale scores of the teacher wellbeing constructs and self-composed scale. As such, statistical modelling strategies of latent profile analysis, multi-dimensional scaling, linear regression, multi-dimensional Scaling (MDS) and canonical analysis with assumptions of normality can be applied to examine the

relationships among demographic variables, wellbeing constructs and latent variables towards rural teachers' wellbeing. By using a factor scoring approach to transform ordinal scales into interval measures, the transformed scores can be used in parametric statistical analyses. Factor scores were obtained through the CFA modelling of teachers' subjective, psychological and professional wellbeing as first order constructs, and overall wellbeing, personal wellbeing and Culture-rurality as second-order latent constructs. This will be detailed below in Section 6.3.

The following figures illustrate the interesting patterns noted between gender, school level and teaching experience. Figure 6.3 shows that the proportion of male teachers there is a slightly upwards trend as their years of teaching increase, and these figures surge for those who teach in the rural for more than 30 years. Whereas, the opposite appears to be the case for women teachers, whose numbers decrease the longer they are in that role. If teaching experience is less than 20 years, there is a greater proportion of primary school teachers, whereas when teachers' experiences are more than 20 years, the trend reversed between primary and secondary school teachers (Figure 6.4). This may reflect that secondary school teachers tend to have more mobility among less experienced rural teachers, in contrast to mid to end career primary school teachers who tend to be more mobile.

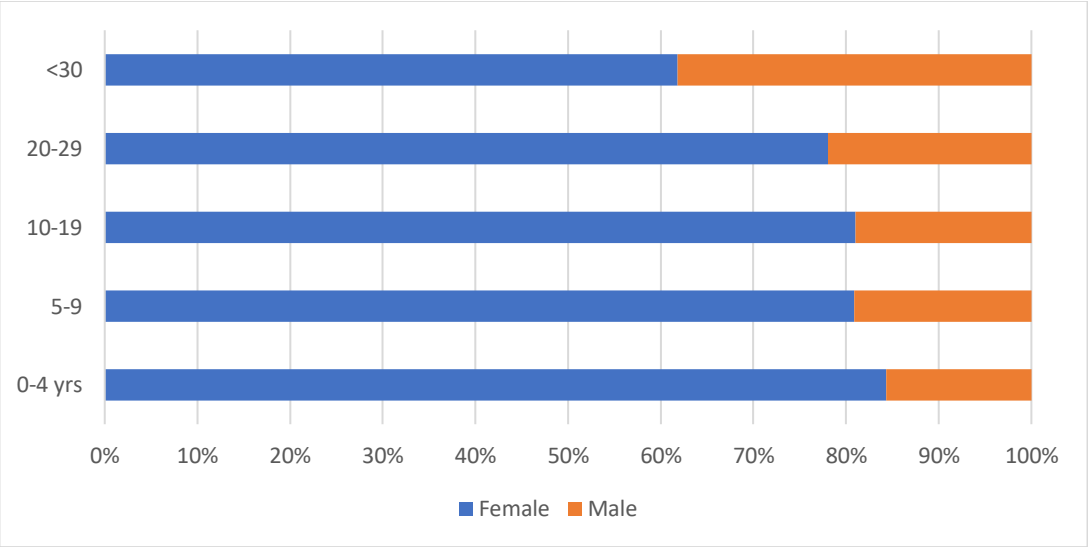

Figure 6.3. Gender vs years of teaching

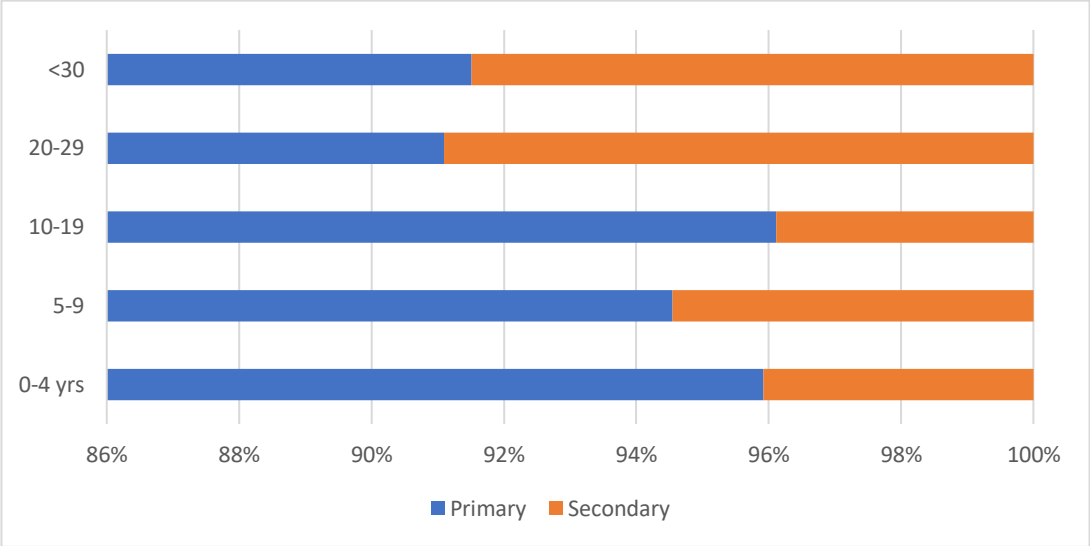

Figure 6.4. School level vs years of teaching

6.3 Validation of teacher wellbeing constructs

The study adopted existing validated scales (teacher subjective wellbeing, psychological wellbeing and professional wellbeing scales) with certain variations and adaptations based on rural teaching situations in China (see appendix G). The questionnaire contained a self-composed scale, which included 23 items derived from the phase 1 appreciative interviews (see appendix G). These items were framed under Confucian cultural values. The validations of the self-composed and existing survey scales are detailed below.

6.3.1 Validation of teachers' subjective, psychological, professional, personal and overall wellbeing constructs

The theoretical framework adopted by this study used a combination of Hedonic and Eudaimonic aspects of wellbeing. This approach was pioneered by Keyes et al. (2002a), Seligman (2004), and Tennant et al. (2007). This was used as the theoretical foundation for the Teacher personal wellbeing latent variable. Teachers' personal wellbeing was hypothesized as a second order latent variable by combining subjective wellbeing and psychological wellbeing scales.

To be specific, teachers' subjective and psychological wellbeing elucidates teacher personal or general wellbeing which is distinct from teachers' professional wellbeing (Collie et al., 2016). Personal wellbeing is defined as emotionally and psychologically healthy (Yildirim, 2015). This complements teachers' professional wellbeing focusing on competence and agency of the teaching profession (Baldschun, 2014). As such, a construct embracing the dimensions of teachers' subjective, psychological and professional wellbeing construed teachers' overall wellbeing for the present study.

This study employed confirmatory factor analysis (CFA). This was established by Jöreskog (1969) to describe and validate the latent structures of wellbeing against the sample data. CFA explains that the relationship among the "observed variables can be explained by the factors" (Stevens, 2001, p. 429), and was employed to validate the hypothesized relationships among indicators.

CFA does not have an agreed preferred sample size; however, the Chi squared test statistic is favourably affected by having large sample size that is N>200 (Gerbing & Anderson, 1993; Hoyle, 1999). The maximum likelihood (ML) estimator is used in the CFA is asymptotically normal. This implies that ML would be efficient and consistent if sample size is large enough (Long, 2006, p. 77). This indicates that the larger sample size of the present study (N=1198) has its advantage through a ML approach for parameter estimation. The fitness indices of CFA models are presented in Tables 6.10 to 6.14, and the structure of the constructs are illustrated in Figures 6.5 to 6.9:

Table 6.10

CFA Model fit for teacher subjective wellbeing

Number of free parameters	22
Number of observations	1198
Estimator	Maximum likelihood
Comparative Fit Index (CFI)	0.977
RMSEA	0.092

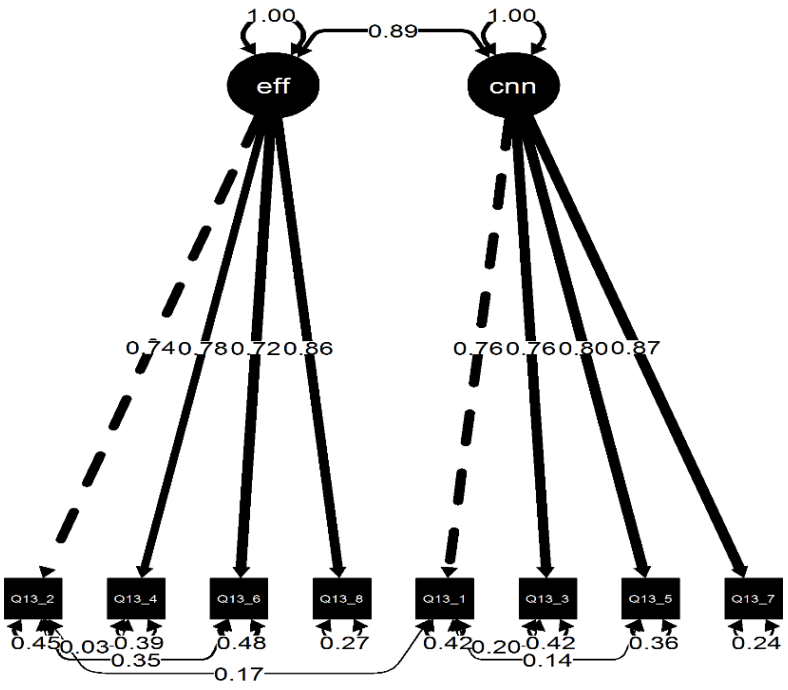

Figure 6.5. Diagram of CFA model for teacher subjective wellbeing*
*Cnn=school connectedness; eff=teaching efficacy;

Table 6.11

CFA Model fit for teacher psychological wellbeing

Number of free parameters	38
Number of observations	1198
Estimator	Maximum likelihood
Comparative Fit Index (CFI)	0.998
RMSEA	0.053

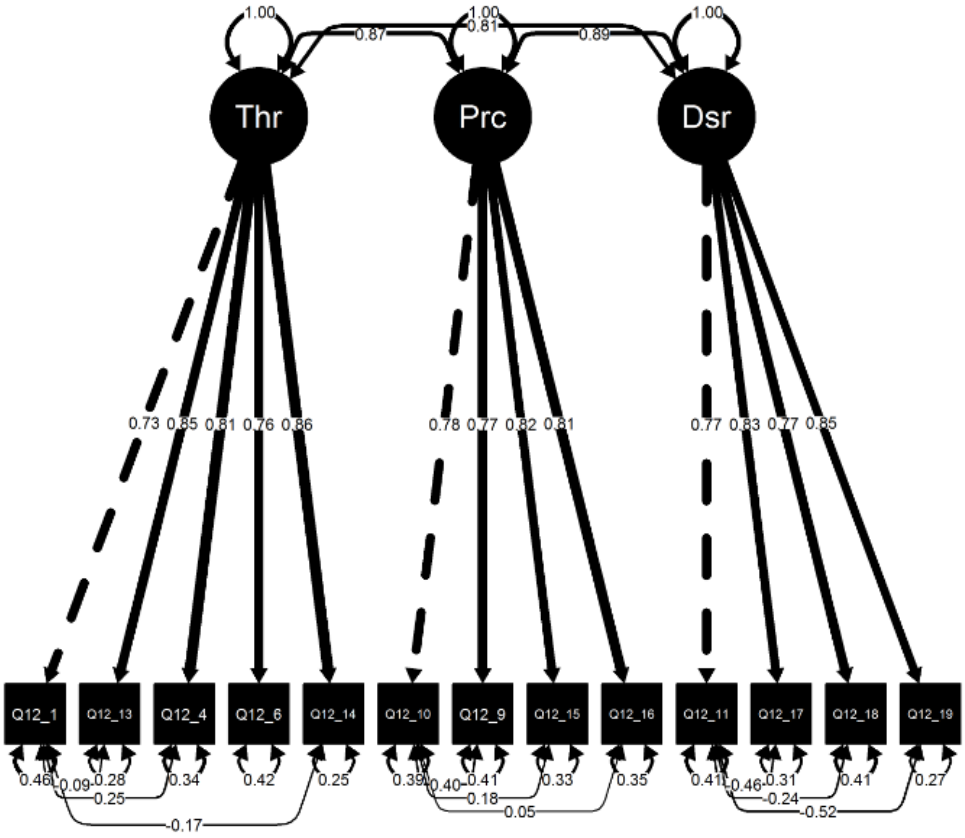

Figure 6.6. Diagram of CFA model for teacher psychological wellbeing*.
*Thr=thrive at wok; Prc=perceived recognition; Dsr=desired involvement;

Table 6.12

CFA Model fit for teacher professional wellbeing

Number of free parameters	27
Number of observations	1198
Estimator	Maximum likelihood
Comparative Fit Index (CFI)	0.963
RMSEA	0.088

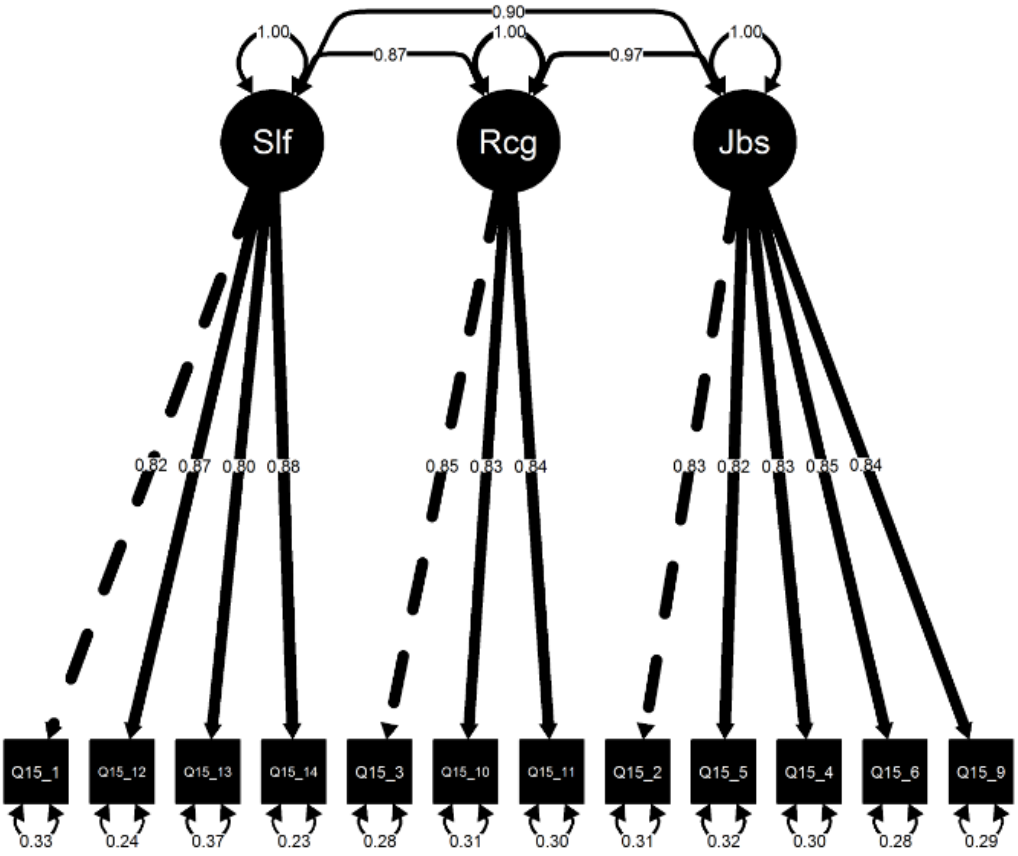

Figure 6.7. Diagram of CFA model for professional wellbeing*.
*Slf=self-efficacy; Rcg=recognition; Jbs=job satisfaction;

Table 6.13

CFA Model fit for teacher personal wellbeing

Number of free parameters	12
Number of observations	1198
Estimator	Maximum likelihood
Comparative Fit Index (CFI)	0.998
RMSEA	0.053

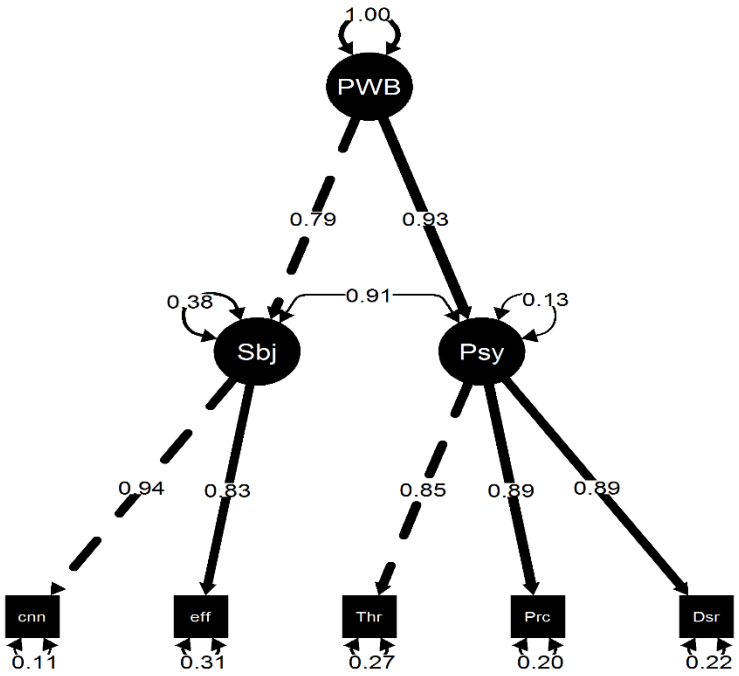

Figure 6.8. Diagram of CFA model for teacher personal wellbeing*.

*PWB=personal wellbeing; Sbj=subjective wellbeing; Psy=psychological wellbeing;

Table 6.14

CFA Model fit for teacher overall wellbeing

Number of free parameters	19
Number of observations	1198
Estimator	Maximum likelihood
Comparative Fit Index (CFI)	0.980
RMSEA	0.097

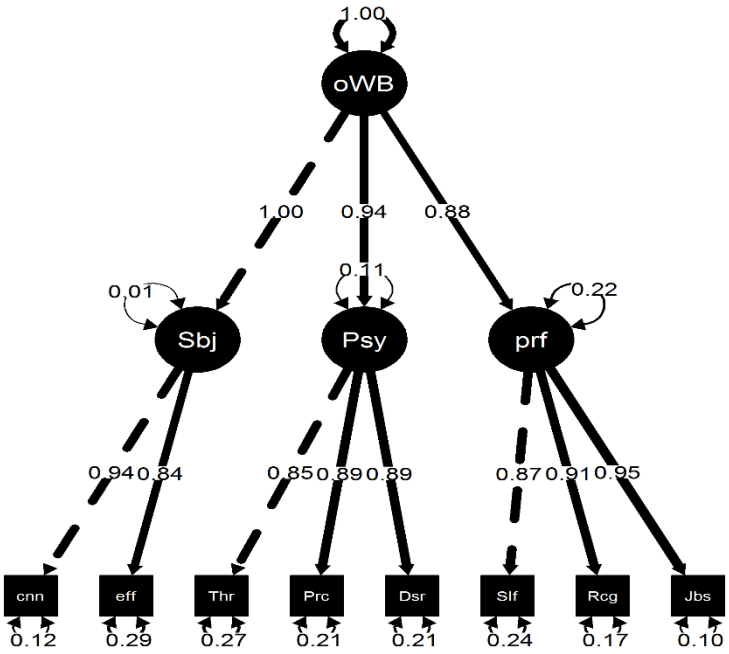

Figure 6.9. Diagram of CFA model for teacher overall wellbeing*.
*oWB=teacher overall wellbeing; prf=professional wellbeing;

A maximum cut-off of 0.1 for root mean square error of approximation (RMSEA) and minimum cut off of 0.9 for Comparative Fit Index (CFI) (Kenny, Kaniskan, & McCoach, 2015; Nagabhushan, 2012) was adopted for gauging the goodness of fit for the CFA models. The above results (table 6.10 to 6.14 and figure 6.5 to 6.9) manifested an acceptable fit of the existing scales adopted in the present study because all constructs' RMSEAs are less than 0.1 and CFIs are greater than 0.9. Thus, it can be concluded that the CFA models provide a satisfactory solution for the adopted existing scales in the survey. The hypothesized constructs in terms of teachers' personal and overall wellbeing based on the dimensions of subjective, psychological and professional wellbeing were confirmed. Sections 6.3.2 and 6.3.3 will present the validation processes for the self-composed scale of this study.

6.3.2 Exploratory factor analysis for self-composed scale

By examining the quality of measured constructs of the present study including self-composed indicators of teacher wellbeing as second-order latent variable Culture-rurality, a reliability test was initially conducted. Cronbach alpha (in Table 6.15) shows an excellent reliability (all>0.80), also indicated a convergent validity of the self-composed scale (Sandilya & Shahnawaz, 2018, p. 180).

Table 6.15

Reliability test for the constructs

Constructs	Cronbach alpha
Connectedness	0.89
Efficacy	0.86
Thriving at work	0.9
Perceived recognition	0.89
Desire involvement	0.83
Self-efficacy	0.91
Recognition	0.88
Job satisfaction	0.92
Relatedness	0.89
Competence	0.93
Autonomy	0.89
Culture-rurality (second-order factor based on three SDT psychological needs)	0.96

	Dimension of subjective wellbeing
	Dimension of psychological wellbeing
	Dimension of professional wellbeing
	Basic needs based on SDT

However, it may not be sufficient to verify its quality, because Cronbach alpha may have a high score even if the inter item correlation is small due to the large number of items in the scale (Agbo, 2010). The self-composed scale contains 23 items. This may cause the problem of a false high score. Thus, it is necessary to examine the Kaiser-Meyer-Olkin factor adequacy and check the data's suitability for further sophisticated analysis (Ryan, 1995a, pp. 255-256). The Kaiser-Meyer-Olkin Measure of Sampling Adequacy for the survey data is 0.965 (close to 1), which indicates the data is "useful" and practical for factor analysis (Singh, Junnarkar, & Kaur, 2016, p. 24). The Barrlett sphericity test approximated a Chi-Square=22941, degree of freedom (df) =253, and significance=0. The results were significant and indicate excellent correlations.

By performing a Principal component analysis (Table 6.16), the initial eigenvalues of the three extracted factors were greater than 1. This explained variations of 56%, 6% and 4%, respectively. The cumulative explained variation was 67%, showing that the three extracted factors explained around two thirds of the variations.

Table 6.16

Extraction of three principal components

Survey items	Factor 1	Factor 2	Factor 3
Q14_1	0.297	0.324	0.726
Q14_2	0.358	0.339	0.704
Q14_3	0.075	0.256	0.709
Q14_4	0.172	0.237	0.606
Q14_5	0.624	0.215	0.51
Q14_6	0.509	0.356	0.497
Q14_7	0.505	0.401	0.425
Q14_8	0.735	0.284	0.323
Q14_9	0.738	0.315	0.311
Q14_10	0.751	0.352	0.208
Q14_11	0.85	0.246	0.164
Q14_12	0.833	0.245	0.118
Q14_13	0.624	0.474	0.198
Q14_14	0.271	0.708	0.29
Q14_15	0.221	0.675	0.33
Q14_16	0.249	0.679	0.262
Q14_17	0.3	0.704	0.332
Q14_18	0.35	0.749	0.277
Q14_19	0.253	0.7	0.417
Q14_20	0.547	0.558	0.161
Q14_21	0.38	0.616	0.245
Q14_22	0.538	0.56	0.219
Q14_23	0.514	0.574	0.237

By ranking the factor loadings of all items corresponding to each factor with the coloured coding (Table 6.15), it shows factor 1 could be plausibly explained by the inclusion of 6 items (Q14_8, Q14_9, Q14_10, Q14_11, Q14_12 and Q14_13). Correspondingly, factor 2 includes 7 items (Q14_14, Q14_15, Q14_16, Q14_17, Q14_18, Q14_19 and Q14_21). Factor 3 includes 6 items (Q14_1, Q14_2, Q14_3, Q14_4, Q14_6, Q14_5). Based on the

theoretical lens of SDT, it may be interpreted as measuring, in some sense, factor 1 manifested the construct of needs for competency. Accordingly, factor 2 is about needs for autonomy, factor 3 underscores the needs of relatedness. All factor loadings were greater than 0.5. This supports the plausibility of delineation of the basic needs factors based on SDT. Following EFA, CFA were performed to further validate the latent structure of the self-composed survey items.

6.3.3 Confirmative factor analysis of self-composed scale

According to Gerbing (1994, p. 880), "The modelling of the constructs of interest as second-order factors permits broad, more interesting constructs to be included in the model and yet accommodates the rigorous evaluation of uni-dimensionality that follows from the specification of a multiple-indicator measurement model", and thus the first-order factors from this CFA model become the facets that "correspond to the domains of content used to operationalize the constructs". Self-composed survey items showed a hierarchical structure (Figure 6.10). The second-order variable emerged in the CFA was named as Culture-rurality. This was because the self-composed items were derived from the Confucian values and rurality features' framework based on phase 1 of the present study (see Table 5.5). These items construed Confucian cultural values and unique rurality features in rural China. The hierarchical model incorporated a second order latent variable, this showed the adequate fit (Table 6.17), as indicated by TLI and CFI (both greater than 0.9). RMSEA is an important indicator of the CFA model fit, according to MacCallum, Browne, and Sugawara (1996) a RMSEA value of 0.05 to 0.1 was considered an indication of adequate fit. Kenny et al. (2015) also considered that $0.08 < RMSEA < 0.1$ an adequate fit. So, the study used a cut-off value of 0.1 as an acceptable fit of the model. CFI and TLI are greater than 0.9 indicate good fit, the factor loadings of all the latent variables were significant. The hierarchical structure of the CFA model showed its validity because using a second order latent variable structure showed a good fit of the data, which indicated the parsimony and practicality of the CFA model (Nagabhushan, 2012). Chi-square statistic is significant

(P<0.01), which does not affect the goodness of the model fit because Chi-square statistic is easily affected by a large sample size (Kline, 2016).

Table 6.17

Model fit index

Ended normally after 82 iterations	
Number of free parameters	57
Number of observations	1198
Estimator	Maximum likelihood
Comparative Fit Index (CFI)	0.929
RMSEA	0.078

The estimates in factor loading with respect to one second-order factor and three first-order factors in the model are illustrated in Table 6.18 (columns of s.e. and Std.lv indicate the standard errors and variances of the latent variables) and Figure 6.10. The results show that all the manifesting indicators are significantly loaded on their respective latent variables, which are all above 0.50 (according to the column of Std.all), indicating good explanation of each factor. A strong linkage between the theoretical construct of first and second order latent variables and the observable indicators manifests convergent validity among survey items (Mankin et al., 2017). The results indicated that first order factors act as indicators of the second order factors suggesting that Culture-rurality is an important outcome of basic SDT psychological needs fulfilment processes and can be suitable for the operationalization of teacher wellbeing.

Table 6.18

*CFA model parameters**

**s.e.=standard error, Std.all=standardized all*

Latent Variables:	Estimate	s.e.	z-value	P(>|z|)	Std.lv	Std.all
Comp =~						
Q14_8	1				0.51	0.819
Q14_9	1.038	0.024	42.75	0	0.529	0.837
Q14_10	1.037	0.029	35.82	0	0.529	0.858
Q14_11	0.991	0.027	36.798	0	0.505	0.873
Q14_12	0.933	0.027	34.408	0	0.476	0.835
Q14_13	0.955	0.03	31.358	0	0.487	0.784
Auto =~						
Q14_14	1				0.567	0.762
Q14_15	1.036	0.034	30.512	0	0.587	0.713
Q14_16	1.082	0.041	26.258	0	0.614	0.728
Q14_17	1.079	0.035	31.147	0	0.612	0.842
Q14_18	1.129	0.034	32.818	0	0.64	0.879
Q14_19	1.135	0.036	31.112	0	0.643	0.84
Q14_21	0.874	0.034	25.532	0	0.495	0.711
Relt =~						
Q14_1	1				0.663	0.745
Q14_2	0.97	0.025	39.437	0	0.643	0.801
Q14_3	0.808	0.042	19.028	0	0.535	0.57
Q14_4	0.691	0.037	18.494	0	0.458	0.546
Q14_6	0.879	0.031	28.24	0	0.583	0.82
Q14_5	0.786	0.029	27.455	0	0.521	0.795
Rurality =~						
Q14_7	1				0.499	0.742
Q14_20	0.989	0.036	27.595	0	0.494	0.795
Q14_22	1.094	0.038	28.841	0	0.546	0.828
Q14_23	1.012	0.032	31.566	0	0.505	0.823
RuC =~						
Relt	1				0.915	0.91
Comp	0.74	0.031	24.13	0	0.881	0.88
Auto	0.848	0.037	23.209	0	0.907	0.90
Rurality	0.799	0.034	23.402	0	0.971	0.97

For all indicators (Table 6.19), more than two thirds of the variance were explained by the latent variables, relatedness (0.82), autonomy (0.81), and competency (0.77), which suggested that the CFA model explained the observed correlations adequately (Kline, 2016).

Table 6.19

R^2 for the CFA model

R-Square:	Estimate
Q14_8	0.671
Q14_9	0.7
Q14_10	0.736
Q14_11	0.762
Q14_12	0.698
Q14_13	0.614
Q14_14	0.58
Q14_15	0.509
Q14_16	0.53
Q14_17	0.708
Q14_18	0.773
Q14_19	0.706
Q14_21	0.505
Q14_1	0.555
Q14_2	0.642
Q14_3	0.325
Q14_4	0.299
Q14_6	0.673
Q14_5	0.632
Q14_7	0.55
Q14_20	0.632
Q14_22	0.686
Q14_23	0.677
Comp	0.776
Auto	0.823
Relt	0.838
Rurality	0.942

As illustrated in Figure 6.10, there are four indicators (Q14_7, Q14_20, Q14_22, Q14_23, and their details in Appendix G) supporting the aspect of rurality in China apart from the psychological needs' indicators. By triangulating these four indicators with the interview narratives, the four indicators highlighted the rural teachers' sense of belonging to rural communities. The standardized coefficients of the higher order factor Culture-rurality indicated that it had significant effects on psychological needs towards the indicators (refer to Table 6.17, all p values<.05). The CFA results illustrated that the higher-order Culture-rurality factor is likely to indicate rural teacher wellbeing. This may be the most robust and powerful predictor of wellbeing. This was further verified in the general

linear model analysis (see Table 6.21 and Figure 6.13), which will be presented in the next section (Section 6.4).

As established in sections 6.3.2 and 6.3.3, the higher-order model was deemed to be an adequate model-data fit. The hierarchical CFA model showed that the second order factor Culture-rurality strongly influenced the first order factor (basic psychological needs). This manifested the result that overall perceived culture and rurality concept measured by the scale was a more robust factor than SDT basic needs based on the data. The model showed there was a strong linkage between the theoretical construct of basic psychological needs and the observable indicators. The adequate fit statistics of the second order latent variable further suggested that the basic human needs were close to the essence of Confucian culture and rurality. It thus can be concluded that the hierarchical CFA model (Figure 6.10) provided a satisfactory solution to the self-composed teacher wellbeing items.

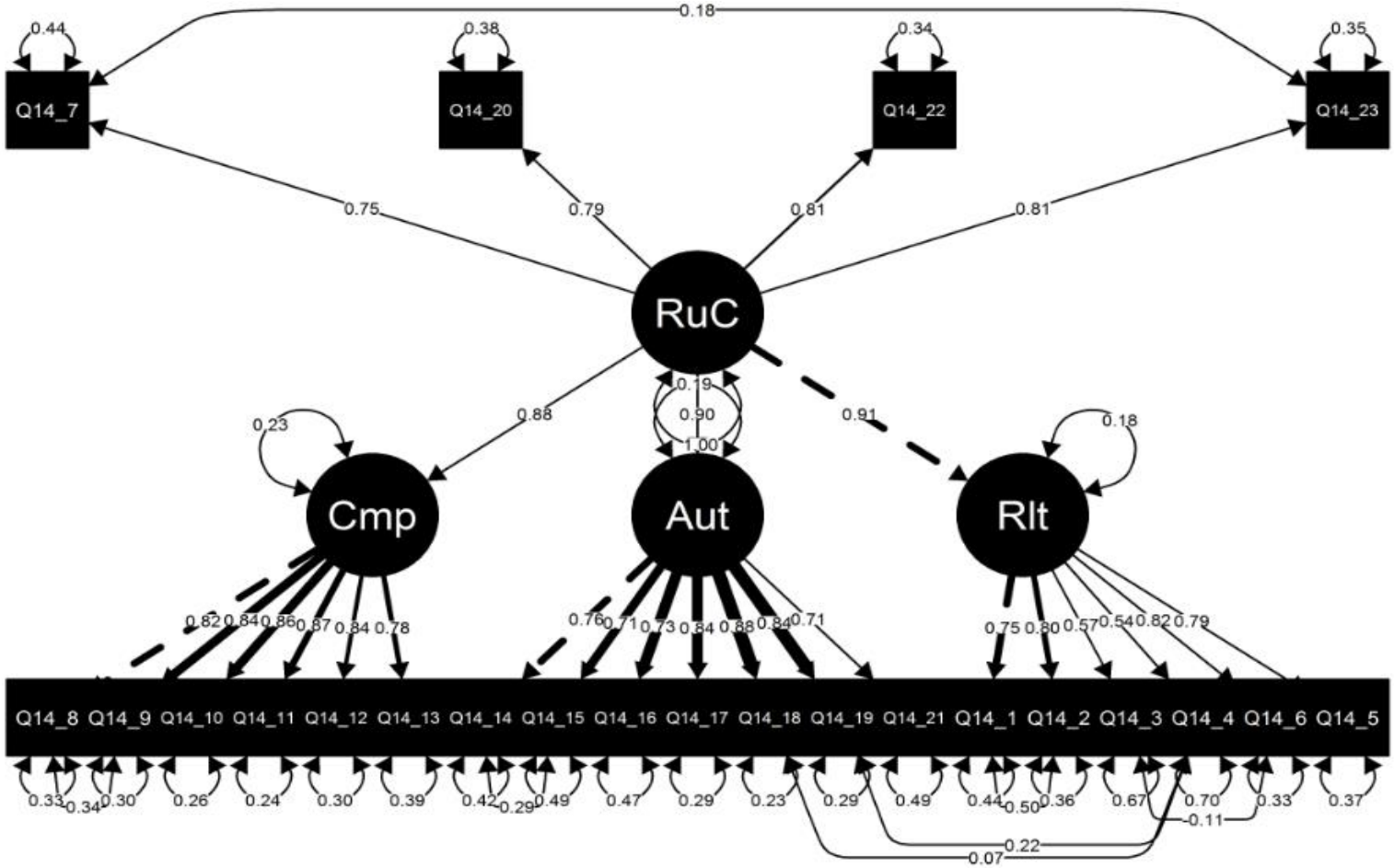

Figure 6.10. Diagram for the Hierarchical CFA model for teacher wellbeing*
*Notes: RuC=Culture-rurality; Cmp=competency; Aut=autonomy; Rlt=relatedness;

The standardized loadings of the second order factor were all very high for three basic psychological needs autonomy (0.90), relatedness (0.91) and competency (0.88). This meant that for each one standard deviation change of Culture-rurality factors of autonomy, relatedness and competency should change by 0.91, 0.92 and 0.88 of a standard deviation, other things being equal. This indicated that Culture-rurality measured by the self-composed scale reflected more relatedness than competency and autonomy in the sample.

To further assess external validity of the latent factor of Culture-rurality, a multiple indicator, multiple causes (MIMIC) model which belongs to CFA was adopted using the maximum likelihood (MLE) procedure (Collie, Shapka, Perry, & Martin, 2015b; Teo, Milutinović, & Zhou, 2016). MIMIC tested for the significance of rural Chinese teachers' wellbeing based on a self-composed scale by gender, age, educational attainment, level of teaching, remuneration, years of experience and position of teaching (whether the teacher is in charge of a class). The MIMIC models yielded an adequate fit to the data, $\chi 2$ (352) = 2124.922, $p < .0001$, RMSEA = .065, and CFI = .921. Table 6.20 shows the beta coefficients from these analyses. Results indicated very limited differences among sociodemographic variables with only two significant effects (out of six effects). Male teachers (Q2) showed significantly lower Culture-rurality than female teachers ($\beta = -.066$, $p = .035$), and for the rural teachers with higher qualifications, their Culture-rurality is lower ($\beta = -.1$, $p = .004$). The analysis results supported the validity of higher order latent construct, Culture-rurality.

Table 6.20

MIMIC CFA model results

	Estimate	Standard error	z-value	P(>|z|)	Std.all
Q1	0.009	0.024	0.374	0.708	0.014
Q2	-0.094	0.045	-2.109	0.035	-0.066
Q3	-0.139	0.048	-2.869	0.004	-0.1
Q8	-0.065	0.037	-1.749	0.08	-0.054
Q9	0.041	0.075	0.555	0.579	0.016
Q11	0.084	0.046	1.851	0.064	0.062

6.4 Correlation and regression analyses

Despite the agreement between human needs and wellbeing, their conceptual origins are different (Gough & McGregor, 2007). So, the study interrogated the correlation between the existing wellbeing scales and a culturally translated needs satisfaction measure, to find out their conceptual and operational congruences. The following correlation and regression analyses explore to what extent, the hierarchical factors and variables contribute to teacher flourishing in rural China. By examining the correlation matrices, Figure 6.11 shows that all of the constructs in the survey are highly correlated (>0.6). The highest correlation is between Job satisfaction and Perceived recognition.

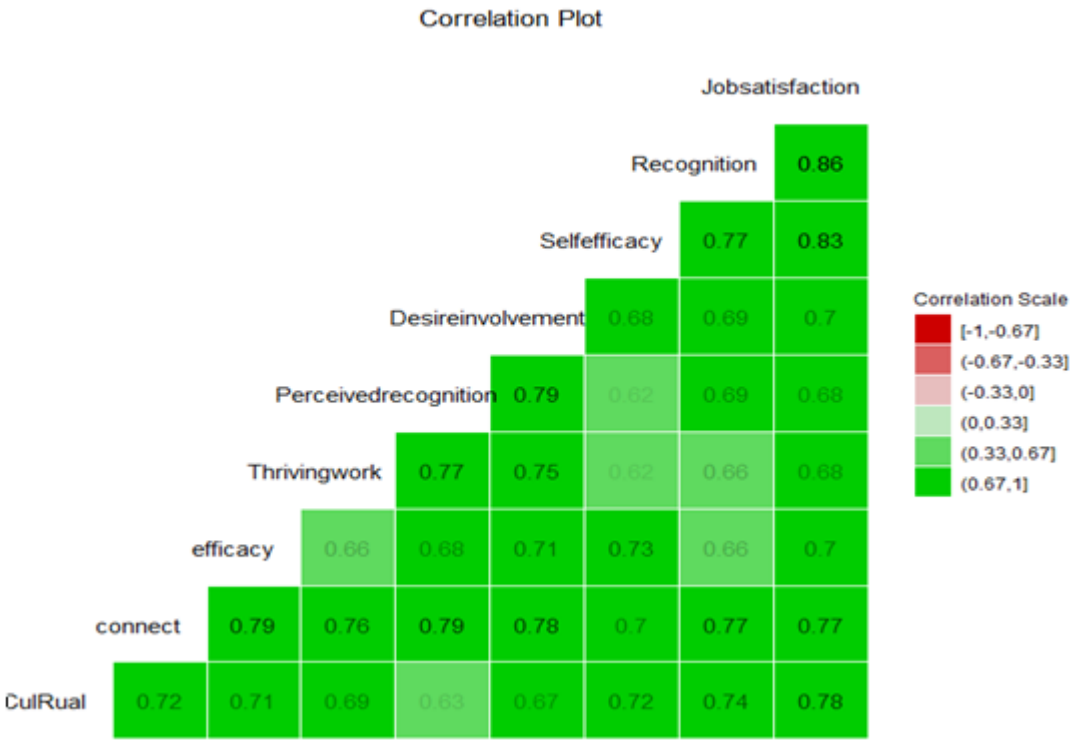

Figure 6.11. Correlation matrix for constructs of teacher wellbeing and CulRual*
*perceivedrecognition=perceived recognition; CulRual=Culture-rurality;
Thrivingwork=thriving at work; Desireinvolvement=Desired involvement;
Jobsatisfaction=Job satisfaction;

Figure 6.12 manifests that Culture-rurality is highly correlated with teacher wellbeing (=0.81). This indicates that Culture-rurality can be a sufficient indicator of teachers' overall wellbeing. Teachers' overall wellbeing was combined with the components of teachers' subjective, psychological and professional wellbeing by adding up normalized scale score through factor scoring.

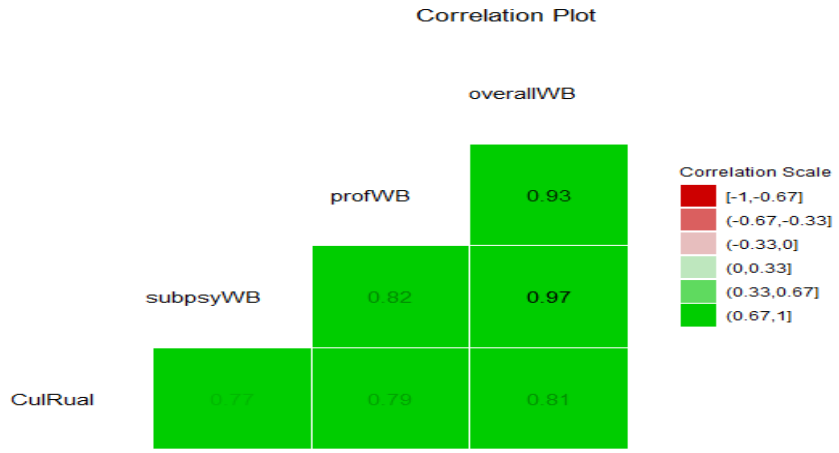

Figure 6.12. Correlation matrix for domains of teacher wellbeing and CulRual*
* subpsyWB=subjective and psychological wellbeing (personal wellbeing);
profWB=Professional wellbeing; overallWB=overall wellbeing; CulRual=Culture-rurality;

Generalized linear regression was performed to explore the relationships between first and second order latent variables. This was based on CFA and teachers' overall wellbeing (Table 6.21 and Figure 6.13). The standardized linear regression results indicated that the standardized loadings of Competency, Autonomy, Relatedness and Cultural-rurality are 0.38, 0.27, 0.23 and 0.81. This meant that for each one standard deviation change of Competency, Autonomy, Relatedness and Culture-rurality should change overall teacher wellbeing by 0.38, 0.27, 0.23 and 0.81 of a standard deviation, all other things being equal. The 3D plot (Figure 6.14) manifested that the psychological needs are positive predictors of teacher wellbeing.

The regression results demonstrated that the second order latent variable Culture-rurality is a robust predictor of rural teachers' wellbeing (regression coefficient=0.81), in comparison with the correlation analysis results, which reveals that the demographic variables are insignificant because although the regression controls the demographic variables, the results are the same (both equals 0.81).

Table 6.21

Generalized linear regression results

	Estimate	**Std. Error**	**t value**	**Pr(>|t|)**	**Standardized Coefficients**	
Basic needs as predictors (socio-demographic variables are non-significant)						
(Intercept)	0.0003921	0.1073113	0.004	0.997		
Comp	2.6585571	0.1903897	13.964	< 2e-16	0.3842303	***
Auto	1.8543674	0.2048513	9.052	< 2e-16	0.2732168	***
Relt	1.5679261	0.1973091	7.947	4.41e-15	0.2298739	***
Culture and Rurality as predictor (socio-demographic variables are non-significant)						
(Intercept)	0.003374	0.108090	0.031	0.975		
CulRual	5.359751	0.111736	47.968	<2e-16	0.811164	***
Significance level:	**'***'**	**0.001**	**'**'**	**0.01**	**'*'**	**0.05**	**'.'**	**0.1**

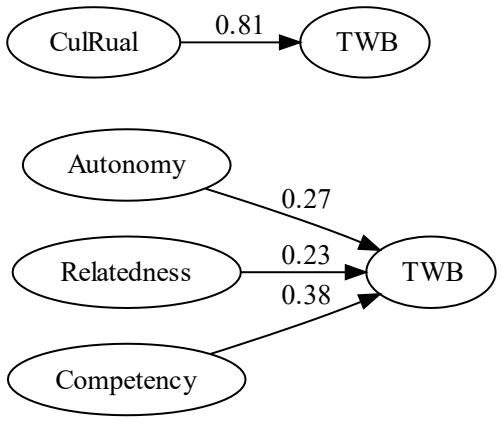

Figure 6.13. Factors' relations with teacher wellbeing*

*CulRural=Culture-rurality, TWB=teacher wellbeing;

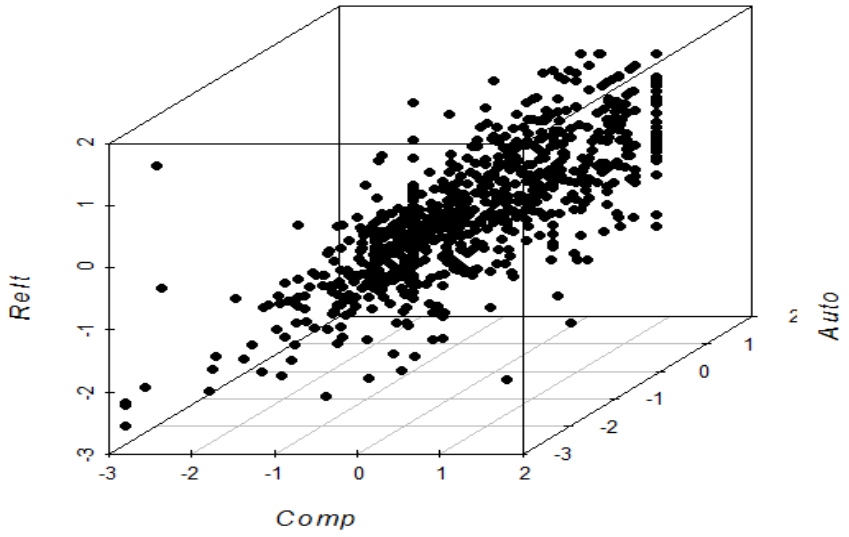

Figure 6.14. Visualization of SDT psychological needs on teacher wellbeing

According to the CFA and regression analysis, all three latent traits of SDT psychological needs in terms of relatedness, autonomy and competency were significantly loaded on the higher order factor Culture-rurality with high factor loading (all>0.8). According to Figure 6.13, the standardized regression coefficient of Culture-rurality is more robust than individual needs predicting teacher wellbeing. The standardized coefficient of the second order latent variable for Culture-rurality shows that it has a very strong effect (=.81) on teacher wellbeing. These findings suggest that there is a strong foundation for this overarching latent variable that Culture-rurality affects rural teachers' wellbeing. They also indicate that the manifested traits of Culture-rurality would be reaching a greater extent with satisfied SDT basic needs and consequentially fostering teacher wellbeing.

6.5 Latent profile analysis

Wellbeing science is at its "relative early stage, and we know almost nothing about the upper end of the wellbeing spectrum" (Huppert & So, 2013, p. 854). The traditional approach of comparing average scoring would provide little information on people who have very high (or very low) levels of wellbeing (Huppert & So, 2013). Thus, the present study used latent profile analysis to explore the phenomena of teacher wellbeing and psychological needs fulfilment. By using the latent profile analysis to identify latent structures (Marsh, Lüdtke, Trautwein, & Morin, 2009) based on the relations of multiple variables, the sampled rural teachers can be classified into five profiles (Figure 6.15).

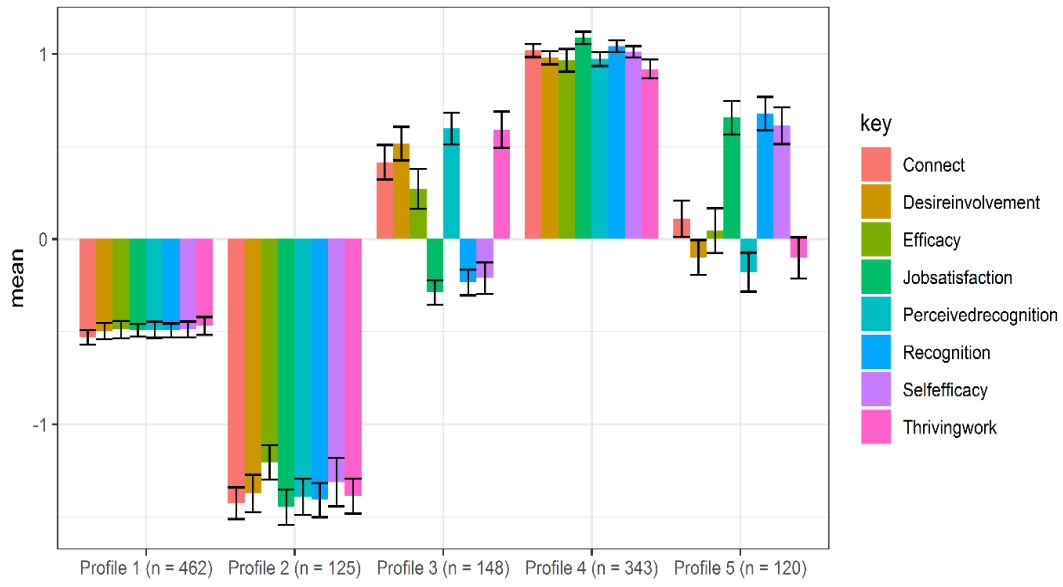

Figure 6.15. Latent profile analysis results on teacher wellbeing.

The first and fifth profiles are labelled as Languishing and Thriving rural teachers. Languishing is negatively associated with psychosocial functioning and emotional health, whereas flourishing and moderate mental health are positively associated with wellbeing (Keyes, 2002a). Thriving teachers had high positive scores across all general teacher wellbeing and professional wellbeing dimensions, whereas the profile of languishing teachers had high negative scores on all eight constructs of teacher wellbeing. This latter group was

most at risk of attrition, that is, they were more likely to leave rural schools or even leave the teaching profession completely. This suggested that this profile of teachers need more consideration on ameliorating all aspects of their wellbeing.

The second profile was personal wellbeing driven teachers who scored high or positive on general personal wellbeing constructs (connect, desiring of involvement, efficacy, thriving at work, perceived recognition). These form the dimensions of teachers' subjective and psychological wellbeing; but, had negative scores on the constructs of teaching efficacy. Recognition (being recognized as a highly skilled teacher) and teaching job satisfaction belong to the dimension of teachers' professional wellbeing. This profile of rural teachers suggested that they were more likely to stay in the rural schools for many years or even decades, because they established good rapport with colleagues, students and parents. They were respected as quality teachers; they were content with the standard of their professional practice; and they lost the passion to improve their professional learning. For example, some teachers felt that information technology, multi-media education technology or modern teaching pedagogy and curriculum were too overwhelming for them. They were satisfied with the traditional teaching methods which they were used to and had little motivation for teacher professional excellence. However, they got used to and enjoy rural life, which was the motivation for them to stay and teach in rural areas, despite the challenges.

The third profile (surviving teachers) of teachers remaining in the rural areas had slightly negative scores across all dimensions of teacher wellbeing. It is possible to conclude they may have been considered as mediocre teachers, however, after years of teaching in a rural school they tended to lose their passion. However, with solid rural teaching experience, they were also considered very professional and effective teachers in rural schools. This profile needs special attention, as teachers in this profile may slide into the low wellbeing group, but if properly managed, they could thrive as teachers, especially with additional years of teaching experience in rural schools, they were considered valuable to rural education.

The fourth profile of teachers was Career driven teachers. This is because they scored relatively high on the three constructs that belonged to teachers' professional wellbeing, with much lower efficacy and connectedness as part of their subjective wellbeing dimension, and even lower scores (negative) on their psychological wellbeing dimension for Desiring of involvement, Thriving at work and Perceived recognition. They had slightly higher scores on the subjective wellbeing side. This may have been because of the way they became highly skilled professional teachers, and they may have felt good about themselves; but, they were struggling to find meaningfulness in their teaching careers in the rural schools. This could be explained by the length of teaching time, because after years of teaching they gradually lost their passion, but compared to teachers who remained in the rural areas and who scored negative for all personal wellbeing and professional wellbeing dimensions (surviving teachers), career driven teachers were still pursuing teaching excellence.

Another possible interpretation was that they were special post teachers having just graduated from university, they had little teaching experience and chose to start their teaching careers in rural schools, even though they are not happy to stay in the rural areas to teach. However, they were eager to improve their teaching skills and effectiveness, they were very goal focused, and likely plan to leave the rural school for better conditions at more urban schools, but only after they obtained some teaching experiences.

The largest group of teachers are teachers who remained in the rural areas, 'surviving teachers' (Table 6.22), followed by 'Thriving teachers', 'Languishing teachers', 'Personal wellbeing driven teachers' and 'Career driven teachers' the latter all of whom had relative equal weightings. This appreciative study uncovered what factors contributed to the flourishing of teachers in rural schools, thus the focus of the analysis was on profile 5: Thriving teachers. A logistic regression was performed based on the profile of thriving teachers and will be discussed in section 6.7.

Table 6.22

Profiling of teacher wellbeing based on Latent Profile Analysis

Profile of teachers	Definition	Count	Percentage
Surviving teachers	Relative low scores (slightly negative >-0.5 on all eight constructs of wellbeing)	462	38.6%
Thriving teachers	High scores (positive: close to +1) on all eight constructs of wellbeing	343	28.6%
Personally surviving teachers	Low (<0) in job satisfaction, recognition and self-efficacy (within the dimension of professional wellbeing), in comparison, the rest of the constructs >0	148	12.4%
Languishing teachers	Low scores (negative:<-1) on all eight constructs of wellbeing	125	10.4%
Career driven teachers	Low (<0) in desired involvement, thriving and perceived recognition (within the dimension of psychological wellbeing), in contrast, the rest of the constructs >0	120	10.0%

The choice of these five profiles as illustrated in Table 6.22 is based on the BIC statistics (as seen in Figure 6.16), the Y axis indicates the BIC values, and the X axis specifies the number of profiles. According to varying variance covariance structures of the data, the five profile model shows a significant drop of BIC values which indicates the model fits well. Also for pragmatic reasons, a five profile model is considered to be capable of elucidating a meaningful and manageable explanation of the profiling of rural teachers' wellbeing.

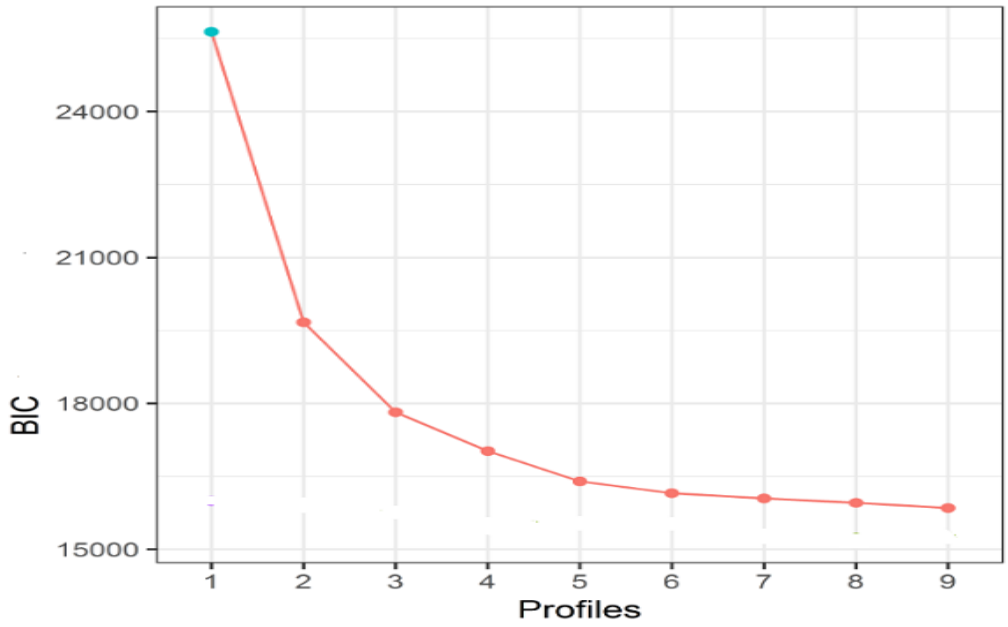

Figure 6.16. Latent profile analysis model fit

Another latent profile analysis was performed based on SDT psychological needs. The sampled teachers can be classified into 3 profiles (see Figure 6.17 and 6.18). Profile 1 indicated that teachers have slightly low scores (between -0.5 and 0) in terms of the psychological needs: autonomy, competency and relatedness. Profile 2 showed highly negative scores on the psychological needs (<-1). Profile 3 teachers had high positive scores (>1) on basic psychological needs. According to the diagnostic BIC graph, 3 profiles can be an adequate solution based on SDT psychological needs. So, profile 1 is named as Needs not well met teachers, profile 2 is needs unsatisfied teachers, profile 3 is needs fulfilled teachers.

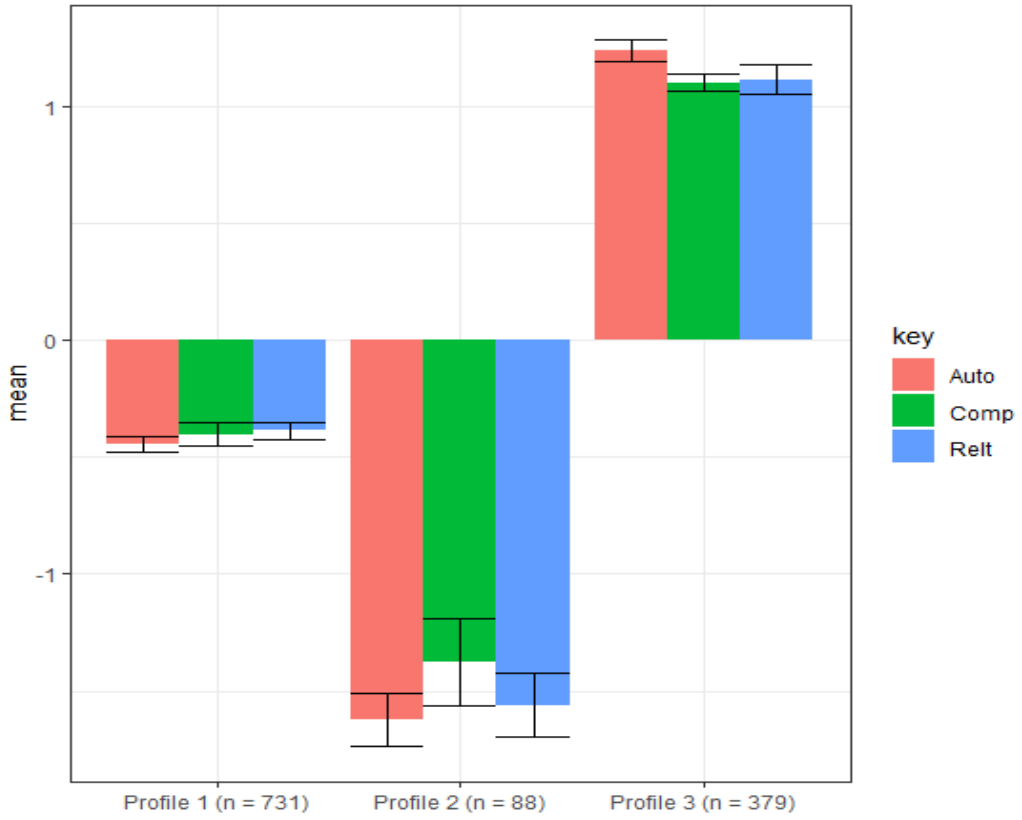

Figure 6.17. Latent profile analysis on SDT psychological needs fulfilment

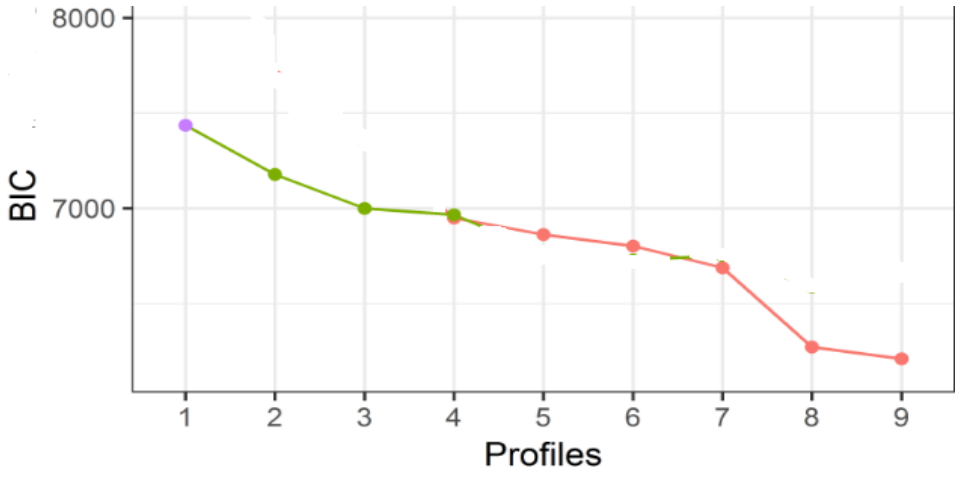

Figure 6.18. Model fit

6.6 ANOVA and MANOVA analyses

The ANOVA results (Figure 6.19 and 6.20) for overall teacher wellbeing and Culture-rurality followed the exact same pattern as teachers with 5-9 years of experience. This showed the lowest level of wellbeing and Culture-rurality, whereas teachers with 30 years or more of experience showed the highest levels of wellbeing and cultural-rurality. Post hoc test (Table 6.23 and 6.24) showed that teachers with 30 years or more teaching experience were significantly different from other groups in relation to teachers' Culture-rurality and overall wellbeing.

Table 6.23

*ANOVA Post hoc analysis for Culture-rurality**

**Lwr=lower bound, upr=upper bound*

	diff	lwr	upr	p value
2-1	-0.18504	-0.51548	0.145392	0.54314
3-1	0.028663	-0.22117	0.2785	0.997908
4-1	-0.05128	-0.3165	0.213936	0.984471
5-1	0.303796	0.02248	0.585113	0.026784
3-2	0.213706	-0.06583	0.493237	0.225603
4-2	0.133759	-0.1596	0.427121	0.724497
5-2	0.488839	0.180848	0.79683	0.000153
4-3	-0.07995	-0.27817	0.118276	0.80562
5-3	0.275133	0.05584	0.494427	0.005676
5-4	0.35508	0.11841	0.591751	0.000426

Table 6.24

ANOVA Post hoc analysis for overall wellbeing

**Lwr=lower bound, upr=upper bound*

	diff	lwr	upr	p value
2-1	-0.70304	-2.88685	1.480765	0.904479
3-1	0.490988	-1.16015	2.142131	0.926879
4-1	-0.09496	-1.84776	1.657851	0.999892
5-1	2.297715	0.438528	4.156901	0.006786
3-2	1.194029	-0.65336	3.041422	0.394221
4-2	0.608084	-1.33071	2.546878	0.912439
5-2	3.000755	0.965279	5.036232	0.000573
4-3	-0.58595	-1.89598	0.724089	0.738601
5-3	1.806726	0.35744	3.256012	0.006128
5-4	2.392671	0.828545	3.956798	0.000303

The MANOVA results (see Figure 6.19, 6.20, 6.21, 6.22 and Table 6.26, 6.27, 6.28) manifested similarly that teachers with 5-9 years of experiences showed the lowest levels of basic psychological needs fulfilment. In contrast, teachers' needs were more satisfied with the highly experienced teacher (>=30 years). However, teachers with 20-29 years of experience did not follow the psychological needs fulfilment status of teachers with more than 30 years' experience. Their psychological needs satisfaction level was lower than teachers with 10-19 years of experience, and not higher than teachers with 0-4 years of experience.

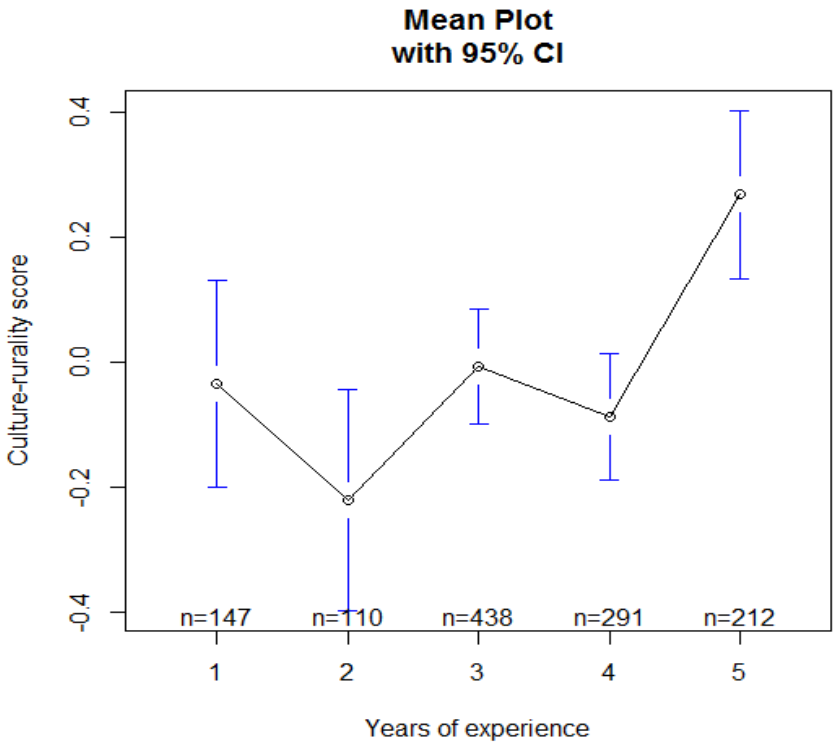

Figure 6.19. ANOVA analysis for years of experience on Culture-rurality.

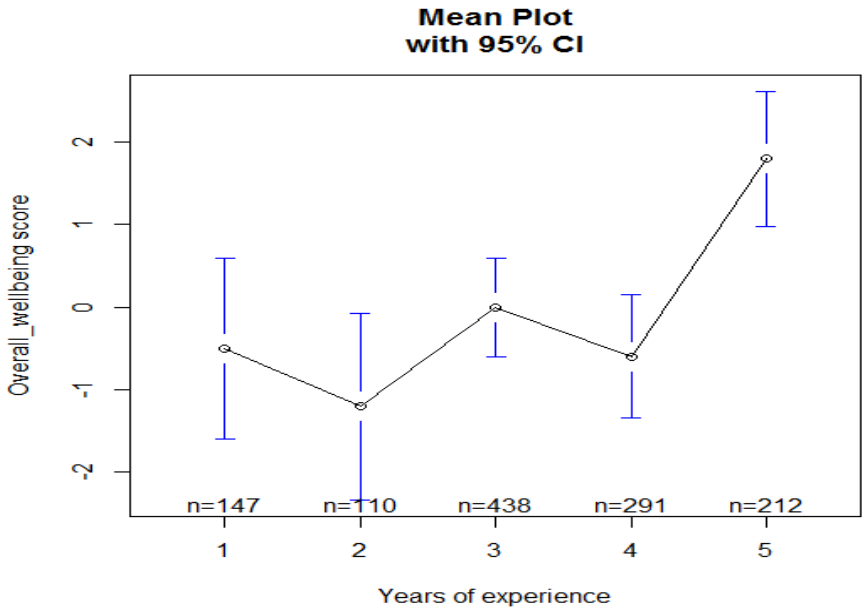

Figure 6.20. ANOVA analysis for years of experience on teacher overall-wellbeing.

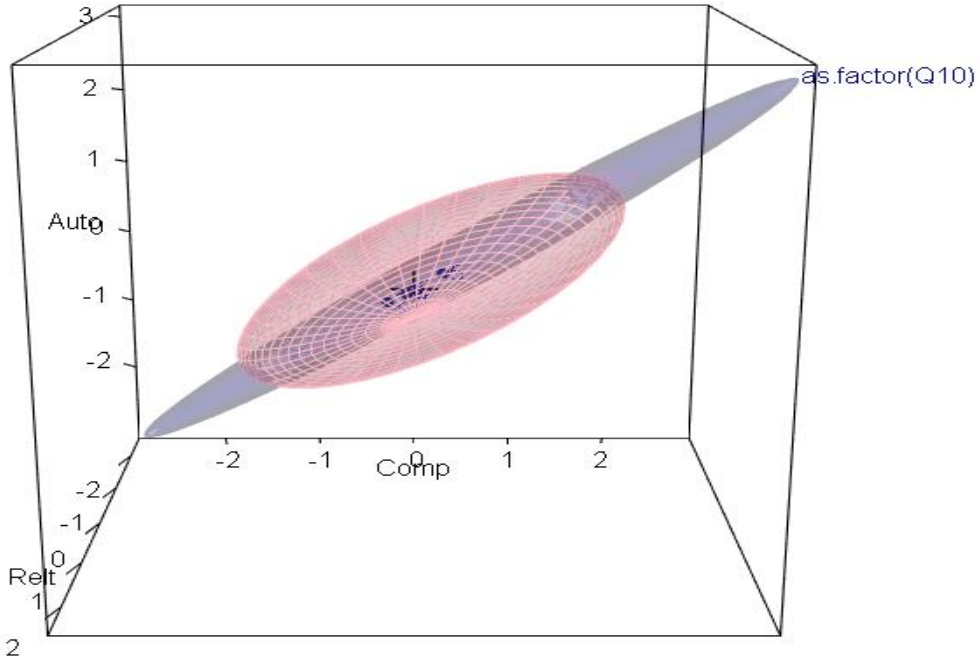

Figure 6.21. 3D plot of MANOVA results on teaching experiences and basic needs*
*Relt=relatedness; Auto=autonomy; Comp=competence;

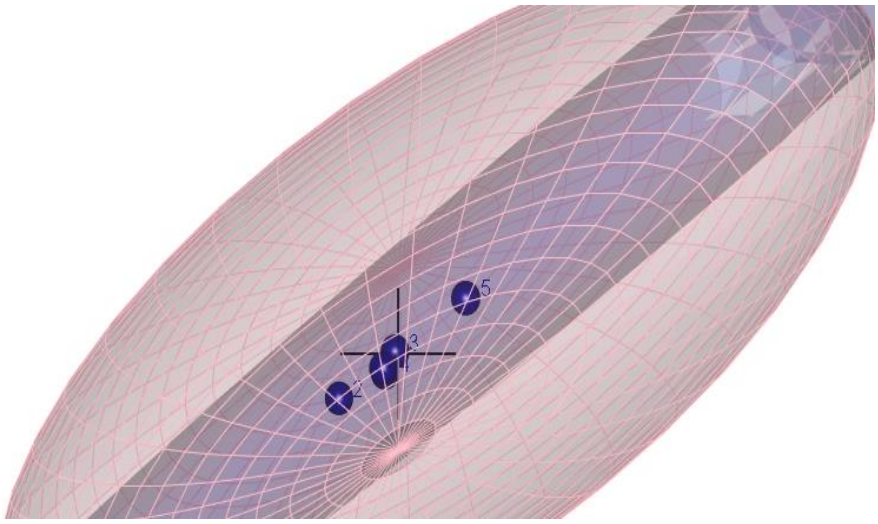

Figure 6.22. Zoom in 3D MANOVA plot*
*As.factor(Q10): years of experience (1: 0-4; 2:5-9; 3:10-19; 4:20-29; 5:>30)

Figure 6.23 (in two dimensions of personal/subpsyWB and professional/profWB wellbeing) demonstrates that rural teachers with 30 years or more experiences possessed higher level of subjective, psychological wellbeing and professional wellbeing in comparison to less experienced

rural teachers. Figure 6.24 shows that teachers' professional, psychological and subjective wellbeing for teacher in charge of a class was higher than other teachers.

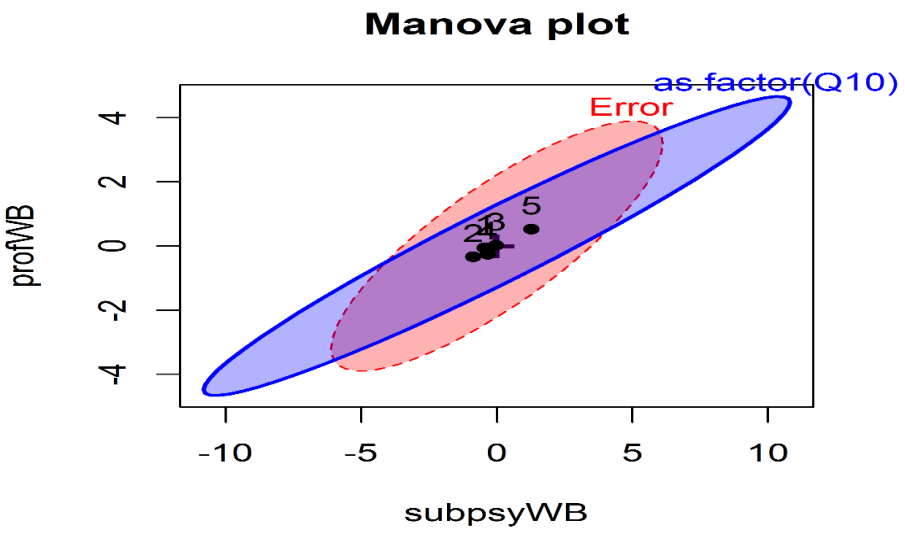

Figure 6.23. MANOVA plot on teaching experience*
*Q10: experience of teachers, 5 denotes 30 years or more experiences

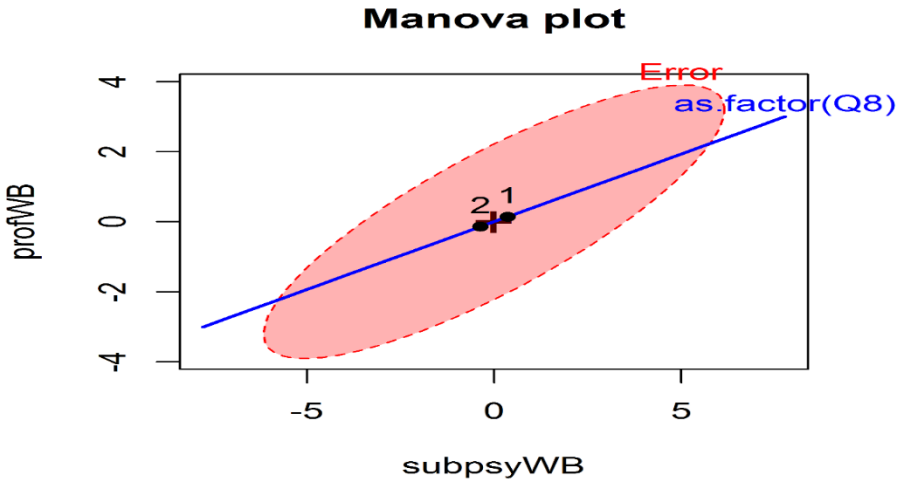

Figure 6.24. MANOVA plot on teaching role*
* Q8: whether the survey participant is a teacher in charge of a class, 1=teacher in charge of a class

Table 6.25 shows that the results for Q10: years of experience is a significant factor for the differences of teacher wellbeing and Culture-rurality. Three tables (Table 6.26, 6.27 and 6.28)

indicate that teachers with more than 30 years of experience were a robust positive predictor of the SDT psychological needs of competency and autonomy; however, it was not significant for the factor of relatedness, notably, rural teachers with 5-9 years of experience being a significant indicator that negatively predicted rural teachers' sense of relatedness.

Table 6.25

ANOVA results

	Df	Pr(>F)	Significance
as.factor(Q10)	4	0.000484	***
Residuals	1193		

Table 6.26

MANOVA results for Competency

Response variable: Competency				
Coefficients:	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-0.058261	0.075532	-0.771	0.44066
as.factor(Q10)2	-0.178177	0.115452	-1.543	0.12302
as.factor(Q10)3	0.04557	0.087292	0.522	0.60174
as.factor(Q10)4	0.005646	0.092667	0.061	0.95143
as.factor(Q10)5	0.318335	0.098291	3.239	0.00123 **

Table 6.27

MANOVA results for Autonomy

Response variable: Autonomy				
Coefficients:	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-0.04203	0.07694	-0.546	0.58499
as.factor(Q10)2	-0.1998	0.1176	-1.699	0.08959
as.factor(Q10)3	0.04868	0.08892	0.547	0.58414
as.factor(Q10)4	-0.05107	0.09439	-0.541	0.58857
as.factor(Q10)5	0.30979	0.10012	3.094	0.00202 **

Table 6.28

MANOVA results for Relatedness

Response variable: Relatedness				
Coefficients:	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	0.03125	0.07681	0.407	0.6842
as.factor(Q10)2	-0.26829	0.11741	-2.285	0.0225 *
as.factor(Q10)3	-0.03815	0.08877	-0.43	0.6675
as.factor(Q10)4	-0.10356	0.09424	-1.099	0.272
as.factor(Q10)5	0.18042	0.09996	1.805	0.0713

6.7 Logistic regression

Logistic regression was adopted to assess the relations among different constructs of teacher wellbeing measures based on the profile analyses and the second-order variable of Culture-rurality. The logistic regression analyses aimed to gain an understanding about "what varieties of positive feelings are most beneficial to health, and at what levels" (Diener & Chan, 2011, p. 26). According to the latent profile analysis, profile 5 (thriving teachers) indicated the cohort rural teachers with optimal level of wellbeing, and guided by the research questions, the logistic regression analysis identified the factors that contributed to rural teacher flourishing.

A Multinomial logistic regression was also conducted. The results indicated the variable of age (50 and above age group) was the only significant socio-demographic variable that contributed to the status of thriving, and it was the only socio-demographic variable that

significantly impacted all of the five teacher wellbeing profiles (see Table 6.29). The highlighted cells with their p values less than 0.05 was considered as statistically significant. Logistic regression analysis indicated the following significant Confucian culture and rurality related factors contributed to rural teachers flourishing: Genuine folk culture (Q14_2), I have rural background (Q14_4), deal with rural children, their parents and my colleagues feel like family members (Q14_6), I feel my career is so rewarding when I see my students growing up (Q14_12), what I teach is matching our rural children's real needs (Q14_13), I do not desire for material stuff such as professional ranks, I prefer simple life (Q14_16), Close relationship with my students and they keep in touch with me (Q14_20), I can take control of my job (Q14_21), My students are passionate for knowledge and eager to learn (Q14_22). These significant indicators delineated the aspects of Culture-rurality predicting optimal functioning of rural teachers.

Table 6.30 reports the logistic regression coefficients, which are log odds of relevant factors in relation to profiles of teachers' wellbeing. For example, if teachers are in the 50 and over age group, they are 20 times more likely in profile of thriving than profile of languishing.

Table 6.29

*Significance of variables for logistic regression analysis**

** (Q1)4=age over 50*

as.factor(Q1)2	as.factor(Q1)3	as.factor(Q1)4			
0.03371407	0.007251815	0.000531809			
0.03727676	0.010941524	0.001133917			
0.02498876	0.001821037	0.014129254			
0.09049904	0.079987124	0.038512715			
as.factor(Q3)2	**as.factor(Q3)3**	**as.factor(Q4)2**	**as.factor(Q4)3**		
0.92714466	0.7519235	0.08476391	0.142133		
0.13973257	0.8159698	0.09385408	0.279808		
0.16410171	0.4128435	0.01273433	0.0833832		
0.05576411	0.8322303	0.09794744	0.6085824		
as.factor(Q4)5	**as.factor(Q4)6**	**as.factor(Q6)2**	**as.factor(Q6)3**		
0.0848718	0.023945613	0.2537062	0.4175714		
0.1313427	0.002796507	0.5699955	0.946045		
0.3253904	0.002399599	0.4762594	0.6608986		
0.4263282	0.086383451	0.8589992	0.9825459		
as.factor(Q6)5	**as.factor(Q8)2**	**as.factor(Q9)2**			
0.508177	0.3949401	0.22277301			
0.5555396	0.4501316	0.16664236			
0.6424252	0.4905354	0.09619316			
0.7248833	0.2179257	0.15667272			
as.factor(Q10)3	**as.factor(Q10)4**	**as.factor(Q10)5**			
0.6166448	0.10526153	0.18199244			
0.3677172	0.10688514	0.07055065			
0.4266005	0.05240971	0.15148491			
0.7694526	0.40418814	0.21600631			
as.factor(Q11)3	**as.factor(Q11)4**	**Q14_1**	**Q14_2**		
0.8275042	0.295588	0.09548006	0.01931937		
0.8076242	0.2291258	0.09344356	0.19686895		
0.9043639	0.4039096	0.04289113	0.51460298		
0.862445	0.4075887	0.22576925	0.02397316		
Q14_4	**Q14_5**	**Q14_6**	**Q14_7**	**Q14_8**	**Q14_9**
0.0388495	0.6331193	1.53E-08	0.03282038	0.2326809	0.261193
0.06559928	0.1219948	6.42E-04	0.07643909	0.7212025	0.906452
0.17161254	0.2038962	1.31E-07	0.15537266	0.6389779	0.731554
0.03443878	0.3249171	3.53E-07	0.36098394	0.5416598	0.843818
Q14_11	**Q14_12**	**Q14_13**	**Q14_14**	**Q14_15**	**Q14_16**
0.0757462	0.04709186	0.62069406	0.8549955	0.839473	0.1102
0.3700984	0.0307309	0.12550834	0.1249377	0.4634167	0.448338
0.7720382	0.03906518	0.50604942	0.7918992	0.2068197	0.657521
0.3227103	0.46489571	0.02008147	0.5394569	0.5165728	0.021543
Q14_18	**Q14_19**	**Q14_20**	**Q14_21**	**Q14_22**	**Q14_23**
0.80228481	0.8670409	0.735861613	0.045231204	3.85E-02	0.1026028
0.14429231	0.8021553	0.48747824	0.07351927	9.03E-03	0.3780843
0.08835861	0.9047322	0.028413565	0.046473422	2.82E-03	0.0465882
0.17188865	0.975341	0.006693054	0.000290715	5.15E-05	0.1935034

Table 6.30

Logistic regression coefficients

Profiles	**(Intercept)**	**as.factor(Q1)2**	**as.factor(Q1)3**	**as.factor(Q1)4**			
2	-21.3198	1.671165	2.405886	4.778074			
3	-12.65087	1.386792	1.924572	3.970738			
4	-26.98757	1.893002	2.977188	3.637433			
5	-35.94951	1.467659	1.710044	3.014212			
	as.factor(Q2)2	**as.factor(Q3)2**	**as.factor(Q3)3**	**as.factor(Q4)2**	**as.factor(Q4)3**		
2	-0.48535045	-0.05447458	0.5459558	-1.037138	-1.152987		
3	-0.4967306	-0.73865155	0.3030066	-0.9035572	-0.7019916		
4	-0.57662687	-0.88482446	1.3028081	-1.5530804	-1.4134318		
5	-0.07194684	-1.18121563	0.3977853	-1.0361266	-0.4250258		
	as.factor(Q4)4	**as.factor(Q4)5**	**as.factor(Q4)6**	**as.factor(Q6)2**	**as.factor(Q6)3**		
2	-1.35148	-2.573722	-1.430488	-0.977602	-0.94505114		
3	-1.090444	-1.616599	-1.671491	-0.4164627	0.06701506		
4	-1.528498	-1.296071	-2.084118	-0.7028835	-0.5472114		
5	-1.184464	-1.087154	-1.161045	0.1712105	0.02771205		
	as.factor(Q6)4	**as.factor(Q6)5**	**as.factor(Q8)2**	**as.factor(Q9)2**			
2	-1.3023019	-0.6632418	-0.3218073	-0.8865116			
3	-0.15361831	0.5141014	-0.2371849	-0.8594151			
4	-0.16969177	0.5136213	-0.2791292	-1.3166668			
5	0.08775854	0.391024	-0.4965626	-1.1208949			
	as.factor(Q10)2	**as.factor(Q10)3**	**as.factor(Q10)4**	**as.factor(Q10)5**			
2	0.05312722	-0.4788992	-1.6604069	-1.687069			
3	0.15208014	-0.7370582	-1.400284	-1.943251			
4	0.85051746	-0.818866	-2.1350178	-1.919268			
5	-0.04309988	-0.3034824	-0.9142477	-1.640052			
	as.factor(Q11)2	**as.factor(Q11)3**	**as.factor(Q11)4**	**Q14_1**	**Q14_2**		
2	0.39683642	0.2870714	1.372362	0.5107897	0.8448722		
3	0.39379645	0.2812524	1.364794	0.4410707	0.3789818		
4	0.15594397	-0.1639094	1.133841	0.7034897	0.2544118		
5	-0.07802893	-0.2329221	1.112481	0.4070949	0.8823657		
	Q14_3	**Q14_4**	**Q14_5**	**Q14_6**	**Q14_7**	**Q14_8**	**Q14_9**
2	-0.2844604	-0.5393267	0.1865728	1.9906747	-0.8239608	0.563374	-0.53116
3	-0.1449668	-0.4046681	0.4853602	0.9414607	-0.5751257	0.138009	-0.04608
4	-0.3628965	-0.3865842	0.537506	2.0072631	-0.5939533	0.234362	0.175718
5	-0.1527008	-0.5876391	0.4257519	2.011815	-0.3838549	0.306859	0.100739
	Q14_10	**Q14_11**	**Q14_12**	**Q14_13**	**Q14_14**	**Q14_15**	**Q14_16**
2	0.4251974	0.9618362	1.0177906	0.205653	-0.06291412	-0.06069	0.444172
3	-0.2481266	0.3822434	0.8686121	0.5303572	-0.43631758	0.185386	0.174516
4	0.2466029	0.170896	1.1441156	0.298226	0.09694275	0.413102	0.127474
5	0.6688604	0.6357173	0.4540084	1.039804	0.22502557	-0.20974	0.675209
	Q14_17	**Q14_18**	**Q14_19**	**Q14_20**	**Q14_21**	**Q14_22**	**Q14_23**
2	0.17457494	0.1039564	-0.06096845	0.1336047	0.7068078	0.821914	0.762853
3	0.14446173	0.5007837	-0.07535654	0.2229452	0.5174805	0.839002	0.347553
4	-0.62750544	0.7759897	0.04802641	0.9456534	0.7408831	1.314116	0.986698
5	-0.08096128	0.6096874	0.0122914	1.1955363	1.3532574	1.812601	0.646348

The graph (Figure 6.25) shows teachers' ages (Q1: 1=18-29, 2=30-39,3=40-49, 4=50 and over; Q2: 1=Female, 2=Male) and predicts the decreasing probability of teachers being classified as languishing (denoted as 1= the first profile). But, there is an increasing probability of being classified as personal wellbeing driven (denoted as 2= the second profile) and thriving (denoted as 5= the fifth profile). For the profile of surviving teaches (denoted as 3= the third profile), it levels off for female teachers, whereas there is an upward trend for male teachers. For the profile of flourishing teachers, gender moderates the effect of age on flourishing, and this indicates that male rural teachers are more likely to be flourishing than female rural teachers when they are ageing.

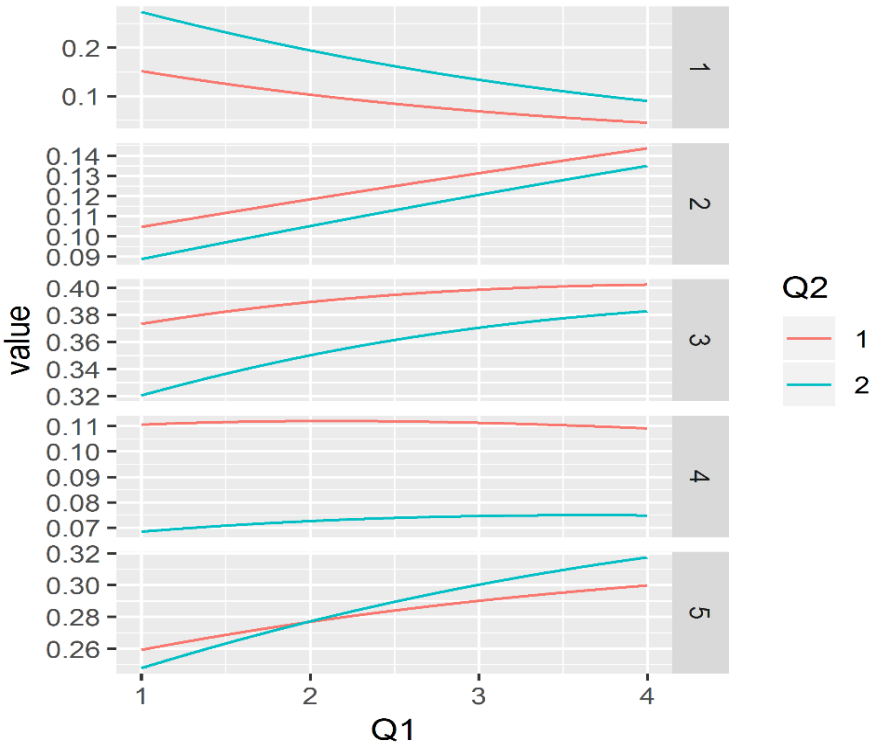

Figure 6.25. Plot predicted probabilities across values for age and gender

By testing the multinomial logistic regression model fitting, the Receiver Operating Characteristic (ROC) Curve (Figure 6.26) was adopted. This plotted the sensitivity (the proportion of true positives) versus 1- specificity (the proportion of true negatives). It indicated the ability of

the model to discriminate (Hosmer & Lemeshow, 2000). This was chosen as the global logistic regression performance indicator. The ROC illustrated that the area under the curve is 0.7742. This suggested an excellent application of this model. McFadden pseudo R^2 shows an excellent fit of the multinomial logistic regression. If pseudo R^2 in the range of 0.2 and 0.4 indicates an excellent fit (McFadden, 1977, p. 307). In addition, the output for McFadden pseudo R^2 is 0.39036 lies in the range.

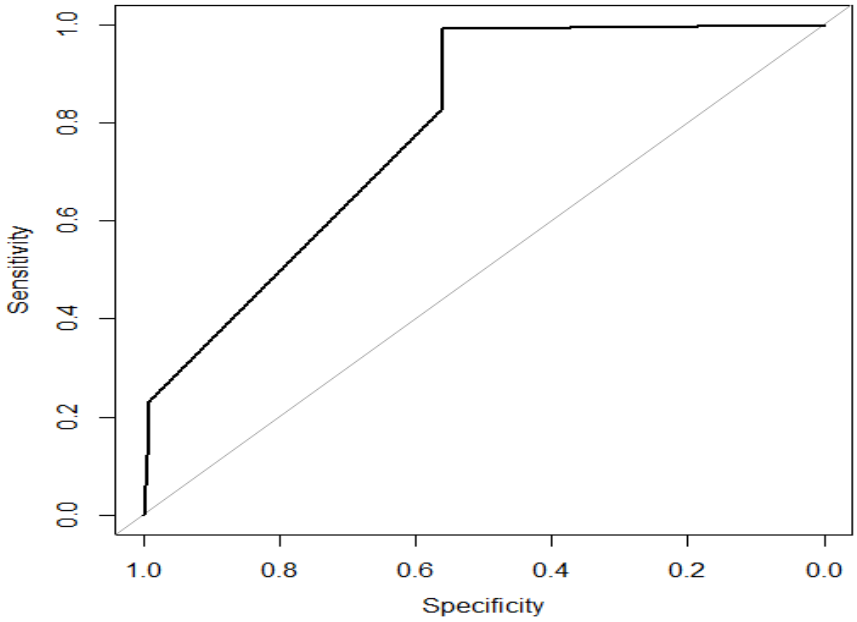

Figure 6.26. ROC curve

Another logistic regression was performed based on the two latent profile analyses of level of wellbeing and psychological needs fulfilment. The outcome variable was teachers who were in the profiles of Thriving and Fulfilled psychological needs of relatedness, autonomy and competency. Table 6.31 shows that Culture-rurality, Perceived recognition, Desired involvement, Self-efficacy, Recognition and Connectedness were significant predictors of teachers who were flourishing with satisfied SDT basic needs. Whereas, none of the socio-

demographic variables were statistically significant. The multi-class area under the ROC curve is 0.9981, demonstrates an excellent fit of this binomial logistic regression.

Table 6.31

Logistic regression for thriving teachers with fulfilled needs

Survey items	Estimate	Std. Error	z value	Pr(>|z|)
(Intercept)	-8.71105	2.90046	-3.003	0.00267 **
as.factor(Q1)2	-1.72299	1.40903	-1.223	0.2214
as.factor(Q1)3	-2.39322	1.68059	-1.424	0.15444
as.factor(Q1)4	-2.47084	1.95938	-1.261	0.2073
as.factor(Q2)2	-0.01453	0.75924	-0.019	0.98474
as.factor(Q3)2	-1.54092	0.84138	-1.831	0.06704
as.factor(Q3)3	3.83742	104.358	0.037	0.97067
as.factor(Q4)2	-0.91101	0.82363	-1.106	0.26868
as.factor(Q4)3	-0.96457	1.39869	-0.69	0.49043
as.factor(Q4)4	-1.97964	1.08139	-1.831	0.06715
as.factor(Q4)5	-1.75348	1.48645	-1.18	0.23814
as.factor(Q4)6	0.43528	1.15143	0.378	0.70541
as.factor(Q6)2	-1.39038	2.04578	-0.68	0.49674
as.factor(Q6)3	-1.29515	2.15382	-0.601	0.54762
as.factor(Q6)4	-0.45387	2.00298	-0.227	0.82074
as.factor(Q6)5	0.04906	1.89782	0.026	0.97938
as.factor(Q8)2	0.1814	0.71979	0.252	0.80103
as.factor(Q9)2	0.79799	1.2303	0.649	0.51659
as.factor(Q10)2	-3.00434	2.07277	-1.449	0.14722
as.factor(Q10)3	0.90411	1.48891	0.607	0.5437
as.factor(Q10)4	1.27055	1.72884	0.735	0.46239
as.factor(Q10)5	-0.37605	1.79218	-0.21	0.8338
as.factor(Q11)2	-0.62506	1.53496	-0.407	0.68385
as.factor(Q11)3	1.14807	1.79105	0.641	0.52152
as.factor(Q11)4	-0.75457	1.72214	-0.438	0.66127
CulRual	5.99259	0.96381	6.218	5.05e-10 ***
Efficacy	-0.64653	0.48068	-1.345	0.17862
Thriving work	0.86876	0.55739	1.559	0.11908
Perceived recognition	3.26948	0.75145	4.351	1.36e-05 ***
Desire involvement	1.97832	0.6816	2.902	0.00370 **
Self-efficacy	2.30254	0.7577	3.039	0.00237 **
Recognition	1.5542	0.63076	2.464	0.01374 *
Job satisfaction	0.1521	0.63286	0.24	0.81007
Connect	1.89257	0.64174	2.949	0.00319 **

The following predicting curves of logistic regression (Figure 6.27 & 6.28) are served as an illustration to explore the distribution of dependent variable indicating teachers who were thriving with fulfilled SDT psychological needs. The independent variables 'connect' and 'self-efficacy' based on the level of Culture-rurality (denoted as X2_level) in terms of low, medium and high. It can be seen that high level of Culture-rurality associates the high likelihood that teachers would be in the profile of flourishing with fulfilled psychological needs. This implies that Culture-rurality is a factor that determines rural teachers' optimal level of functioning.

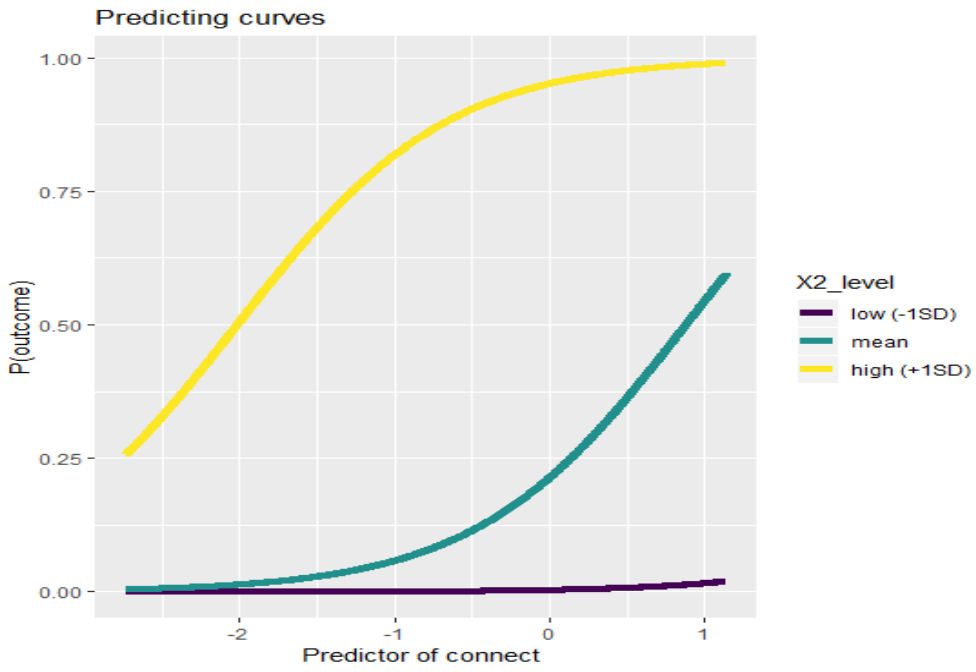

Figure 6.27. Logistic regression predicting curve for the construct of Connect

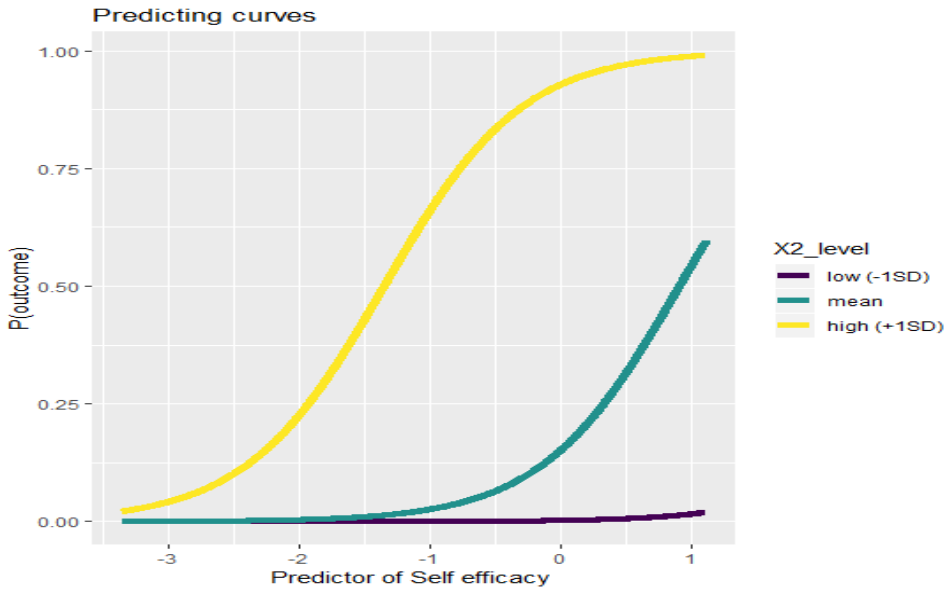

Figure 6.28. Logistic regression predicting curve for the construct of Self-efficacy

6.8 Canonical analysis and Multi-dimensional Scaling (MDS)

Canonical correlation analysis is a multivariate statistical approach. This was employed to examine the relations between the two sets of variables concerning wellbeing and basic needs. Canonical analysis was used to analyze the data due to its unique strengths, because Canonical analysis "unlike simple bi-variate correlation, canonical analysis can examine two sets of data. Unlike factors analysis, canonical correlation analysis establishes relationships between sets of data rather than within one set. Also, unlike multiple regression, canonical analysis is not restricted to single criterion variable" (Laessig & Duckett, 1979, p. 354).

Canonical analysis showed a 43% correlation between the two linear combinations of Socio-demographic variables and constructs of personal wellbeing (including the constructs of subjective and psychological wellbeing) and professional wellbeing (Table 6.32). Statistics showed the significance level of 1.71377E-05 which is less than 0.01 for the first variate.

Table 6.32

Canonical analysis results *

*subpsyWB=subjective and psychological wellbeing; profWB=Professional wellbeing

Wellbeing set	**Coefficients**
subpsyWB	-1.31308
profWB	0.414832
Socio-demographics set	
Q1	-0.29235
Q2	0.25198
Q3	0.518004
Q4	0.086026
Q8	0.455299
Q9	-0.03304
Q11	-0.27424

The results show relatively older (more experienced teachers), higher paid, rural teachers were positively associated with higher personal wellbeing; but, negatively associated with professional wellbeing. They indicate a higher overall wellbeing because the weights of personal wellbeing dominate the first set of canonical variate. Male teachers, with higher qualifications, and not being a teacher in charge of a class were negatively associated with personal wellbeing; whereas they were positively associated with professional wellbeing. They generally had lower overall wellbeing. In contrast, being a female teacher in charge of a class indicated a higher overall level of wellbeing.

The canonical analysis results (Table 6.33) for the eight constructs of subjective, psychological, professional wellbeing and socio-demographic variables indicated the first canonical correlation is 0.52 associated with p-value 1.62704E-09 which is less than 0.01, which shows strong evidence that the first canonical variate is significant.

Table 6.33

Canonical analysis results

Constructs of wellbeing set	**Coefficient**
Connect	0.613416
Efficacy	-1.27979
Thriving work	-0.46902
Perceived recognition	-0.46361
Desire involvement	0.588227
Self-efficacy	0.073268
Recognition	0.572709
Job satisfaction	-0.26211
Socio-demographics set	**Coefficient**
Q1	-0.72035
Q2	0.091845
Q3	0.217341
Q4	-0.02473
Q8	0.179076
Q9	-0.03903
Q11	-0.26718

The first pair relates age and efficacy. This indicates age was positively associated with efficacy; whereas, negatively associated with connectedness and recognition. Results show that a teacher's qualifications and if the teacher was in charge of a class had a positive relationship with connectedness, recognition and desired involvement. However, these were negatively associated with efficacy and thriving at work. This could be interpreted as higher qualifications were related to higher expectations of rural teaching roles, as age and income increased teachers tended to focus less on professional recognition, and more on personal flourishing. However, they also focused less on belonging and being respected.

The canonical analysis results (Table 6.34) for the basic psychological needs and socio-demographic variables indicate the first canonical correlation is 0.41 associated with p-value 0.0026. There was strong evidence that the first canonical variate is significant.

Table 6.34

Canonical analysis results

Needs	**Coefficient**
Comp	-0.8797186
Auto	-0.5830566
Relt	0.5326466
Socio-demographics set	**Coefficient**
Q1	-0.03900972
Q2	0.36996519
Q3	0.66894173
Q4	-0.33228973
Q8	0.25171805
Q9	-0.14259886
Q11	-0.19656111

The results indicate that teachers with higher qualifications, being a male rural teacher and in charge of a class, were negatively related to the needs of autonomy and competency; However, they were positively associated with relatedness. This resonated with the results of MIMIC (see Table 6.19). These results indicated that when a teachers' salary increased, they could feel less related but more accompanied with a stronger sense of competency and autonomy.

Finally, Multidimensional scaling (MDS) was performed to further investigate the conceptual similarities of the survey items. These included the adopted and self-composed instruments targeting rural teacher wellbeing. MDS plots can be seen as a 'map' that shows the spatial relationships among survey items, in which similar survey items are located proximal to one another (Hout, Papesh, & Goldinger, 2013), and MDS unfolding approach retains individuals' information within the data (Borg, Groenen, & Mair, 2018). Stress was adopted to examine the goodness of fit for MDS. It is calculated from a random permutation of dissimilarities which should be positive, and a smaller value is preferred (Borg et al., 2018). In this case, stress value is 0.142, and its p value is less than 0.001, H0 was rejected and

concluded that stress is obtained from something other than a random permutation of dissimilarities. This indicates an excellent goodness of fit for MDS.

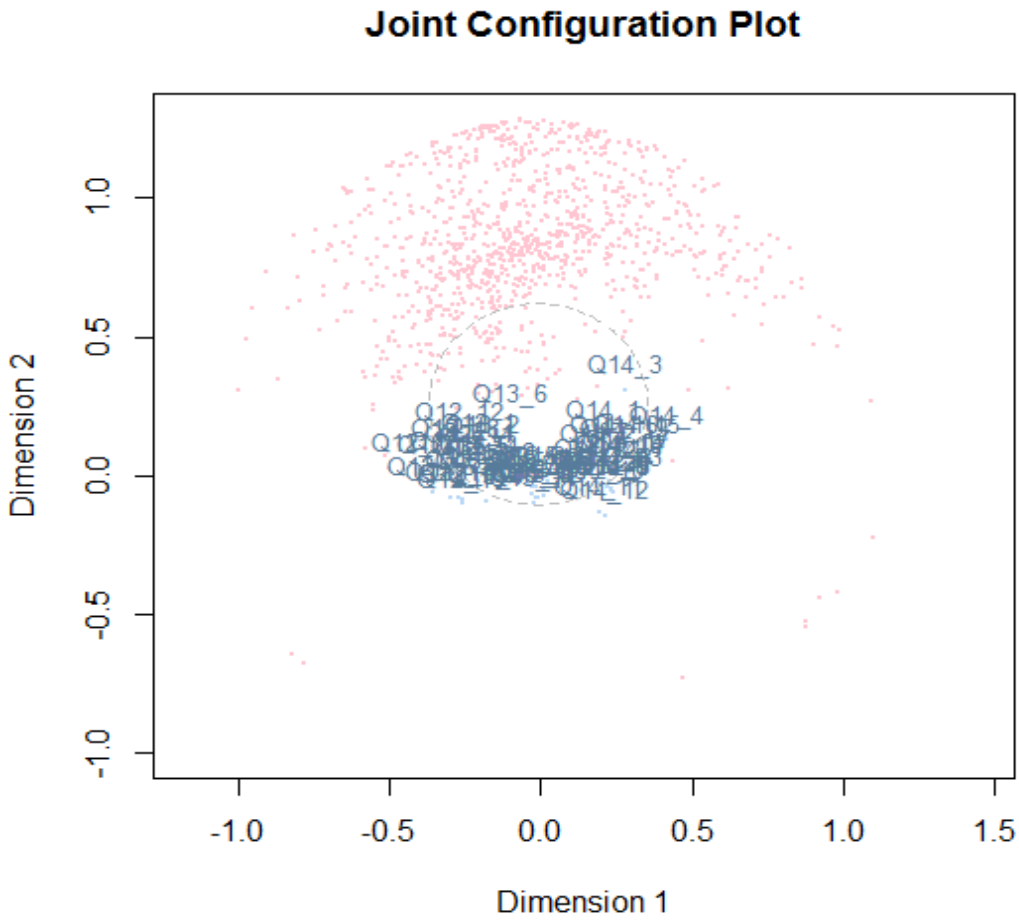

Figure 6.29. MDS unfolding for teacher wellbeing items

MDS unfolding plot (Figure 6.29) showed that Q14_3: “Little pressure from students' parents” and Q13_6: “I have accomplished a lot as a teacher” are spatially away from other teacher wellbeing survey items. Interestingly, Q12_12: “I want to be involved in my organization beyond my work duties” is spatially further to other wellbeing scale items. This indicates that these items are not conceptually sitting within the rural Chinese teachers’ wellbeing domain. Overall, MDS illustrated that the adopted existing scales for gauging

teachers' overall wellbeing inclusive of subjective, psychological and professional wellbeing, and self-composed survey items construing Confucian values, are conceptually close.

6.9 Summary

This chapter presented the findings of the quantitative phase which sequentially followed the qualitative phase of the mixed-methods study. The results were detailed according to the data analyses through both descriptive and inferential statistics pertaining to the research questions, to what extent, the multiple factors contributed to teachers' optimal functioning and wellbeing in rural China. This has been the first study of its kind simultaneously analysing multiple aspects combining rural teachers' subjective, psychological and professional wellbeing in China. These findings show how different aspects of teachers' wellbeing holistically are related to SDT psychological needs and Confucian culture.

The study used the theoretical lens of SDT. This was adapted in relation to the cultural context of Confucian doctrines with a reflection on rurality to explore their interactions and mechanisms on rural teachers' wellbeing in China. Confirmatory factor analysis supported a three first order latent variable. One second order latent variable model structure associated with 23 indicators was derived from the qualitative phase of the study was found. They were used to hypothesize the contribution to teachers' wellbeing in rural China. The hypothesis was confirmed by the results. A second-order latent variable labelled as cultural-rurality is constructed and validated. This comprised of three SDT psychological needs informed by the first-order latent variables. These included the three basic needs of competency, relatedness and autonomy, as well as unique features of rurality in China. The overarching higher order latent variable Culture-rurality integrated the three first-order latent constructs to capture teachers' perception of personal (including subjective and psychological wellbeing) and professional wellbeing.

Further regression modelling, canonical analysis, ANOVA and MANOVA enabled the understanding of the importance of the impact of first-order and second-order constructs along with demographic variables on teachers' wellbeing in rural China. MDS visualized the conceptual distances among the wellbeing indicators in the questionnaire. The results of the regression analysis revealed that the constructed latent variable of Culture-rurality manifesting Confucian cultural values and rurality in China has a stronger impact on teachers' wellbeing than the individual psychological needs fulfilment of SDT. Moreover, according to the results of MDS, regression and correlation analyses, high correlation and regression coefficients as well as the MDS map indicate conceptual congruence between teacher wellbeing, SDT basic needs fulfilment, Confucian values and rurality of China.

Furthermore, the present study aimed to conceptualize and operationalize context specific wellbeing for rural teachers based on appreciative inquiries using interviews and surveys. The theoretical framework of the present study proposed a multidimensional teacher wellbeing model for rural teachers in China via integration of the Confucian culture and SDT basic psychological needs. The results of the quantitative analyses supported the theoretical framework. Culture-rurality may be further conceptualized to understand teacher wellbeing in rural China. However, teacher wellbeing is multidimensional and complex in nature, and therefore the current model may not adequately cover all aspects of rural teacher wellbeing in China. In the next chapter, the key findings of both the qualitative and quantitative phases of the mixed-methods study will be synthesized to discuss teachers' wellbeing in rural China.

Chapter 7: Discussion

7.1 Introduction

This chapter draws on the data from phase 1 and phase 2 of the mixed-methods study and discusses the findings from both of these phases. It provides a synthesis of the topic of teacher wellbeing in rural Jilin Province of China. This discussion echoes the aim of the present study which is to investigate the relationship between teacher wellbeing, Self-Determination Theory (SDT) psychological needs fulfilment and Confucian culture within the context of rural China. The overarching aim of this research will thus be achieved by addressing the following objectives in this chapter:

- To identify the specific Confucian cultural factors that positively affect teachers' wellbeing in rural China.
- To examine the multiple factors that positively affect teachers' wellbeing in rural China and interrogate the effects of the factors on multi-dimensions of teacher wellbeing.
- To elucidate the meaning of wellbeing for rural Chinese teachers.

This chapter is divided into three parts. They are linked with SDT literature within Confucian cultural contexts based on the phase 1 qualitative and phase 2 quantitative studies, and also echo the research objectives of the present study: Part 1 of the discussion explores the context of rural teachers' wellbeing in China according to SDT; Part 2 focuses on the relationship between Confucian values and teacher wellbeing through investigating rural teachers' psychological needs fulfilment; Part 3 recontextualizes rural Chinese teachers' wellbeing under the core values of Confucianism.

The overarching research question of this thesis: 'What is the nature of rural teacher wellbeing within the Confucian cultural contexts of China?', and the following two sub-questions are thus discussed:

1) What multiple factors contribute to teachers' optimal functioning and wellbeing in rural China? ; and
2) To what extent does SDT prescribe psychological needs fulfilment and how does Confucian cultural factors contribute to teachers' wellbeing in rural China?

As established in Chapters 1 and 2 above, compared to urban areas, the environment of rural schools in China has been described as 'deficient' and 'backward'. This interpretation of rurality implies a deficit model of schooling in rural areas (Mingren & Shiquan, 2018; Reid et al., 2010). The present research moves beyond this deficit model and constructs an abundance model through Appreciative Inquiry (AI) focusing on positive indicators to teacher wellbeing (Cooperrider, 2008; Stavros, 2018; Whitney, 2010).

The remaining chapters above detailed the two phase mixed-methods approach: that is, the phase 1 qualitative study focusing on exploring rural teacher wellbeing under Chinese Confucian cultural settings; and the phase 2 quantitative survey investigating the influence of Confucian culture on rural teacher wellbeing in Jilin Province, China. This discussion thus advances the understanding of teacher wellbeing through the SDT theoretical lens within an eastern Confucian cultural setting. This chapter construes that rural teachers' wellbeing is nurtured by a sense of 'harmony' and 'responsibility' which are the basic core values of Confucianism. The findings of this present study reveal that Confucian cultural factors are not orthogonal to the SDT psychological needs that predicts optimal levels of teacher wellbeing in rural China.

7.2 Part 1: Context and content of rural teachers' wellbeing

This first part of the discussion identifies multiple factors that contribute to the context and content of rural Chinese teachers' wellbeing in the rural area of Jilin Province in China. Teacher wellbeing in rural China has two different aspects in the present study: First, the context in terms of a teachers' life domains, for example, their salary, years of experience, and

the social and cultural contexts; second, the content which is based on the three basic psychological needs evident in SDT, that is relatedness, autonomy and competency. The application of SDT (a western based theory) to wellbeing, an investigation of Confucian culture within rural China reflects the culture-sensitive nature of teachers' wellbeing. This advances the field's knowledge of teachers' wellbeing in the context of rural China.

7.2.1 Understanding rural teachers' wellbeing in China

Three key themes emerge from the phase 1 study of qualitative data: positive experiences of rural teachers (theme one); perceived pressures and stress for rural teachers (theme two); and, teacher perceptions of students' outcomes and motivations to teach in rural areas (theme three). Theme one and two support the findings of a strength-based mixed-methods study by Paterson and Grantham (2016) who claim that teaching is one of the most stressful occupations, but also the most rewarding. The present study extends this notion of teacher wellbeing. The third theme reveals that teachers' emotional involvement with students is a primary source of stress and job satisfaction, which is closely related to teacher wellbeing (Harding et al., 2019; Kitchenham & Chasteauneuf, 2010; Sullivan et al., 2018). These themes manifest both positive and negative perspectives, which conform to the spectral nature of wellbeing (Keyes, 2007; Peiró et al., 2014). This echoes the adopted AI approach of the present study. It enables a fresh angle to see what sustains 'thriving' by identifying the positive factors, and how negative factors can be turned around, and shape optimal teachers' experiences in rural schools in Jilin province, China.

Interviews conducted during phase 1 reveal that teachers' living standards and conditions have improved in rural China. This is significant because Lin et al. (2012) concluded that Chinese teachers stay in worse living conditions in rural regions because they probably do not prioritise the material side of life and that they remain teaching out of altruistic motivations to help poor rural children. Although rural areas are still constrained by inadequate resources in

comparison to urban areas (Kim, 2019), living standards have improved since the economic reform in China, therefore such altruistic motivations may no longer solely explain rural teachers' wellbeing.

Teacher job satisfaction is negatively associated with the intention to leave the teaching profession, however, it is positively associated with job performance and teacher student relationship (Virtanen et al., 2019). Higher levels of job satisfaction are positively related to teachers' supporting instructional behaviour for lower level classes (Virtanen et al., 2019). By logical extension, it can be argued that teachers' wellbeing promotes high quality education for students. This is particularly so in the case of students who are 'left-behind', as well as related to student's levels of engagement with learning. The narratives of the interviews reveal that rural students are not motivated to learn, and thus thriving teachers are not necessarily associated with motivated students. However, there is a lack of empirical data for this research to investigate this link. This area is recommended for future research through the collection of both teacher and student wellbeing data.

The themes and sub-themes of qualitative data construe that SDT psychological needs' satisfaction contributes to teacher wellbeing in eastern Confucian cultural contexts. SDT suggests that internalization is an "active and natural process in which individuals attempt to transform socially sanctioned mores or requests into personally endorsed values" (Ryan & Deci, 2000b, pp. 235-236). The fostering of the three basic psychological needs are conducive to individuals internalizing the social or cultural values and thus be self-determined (Ryan & Deci, 2000b). SDT proposes that basic psychological needs are universal to human beings, and thus are fundamental to cultural values. As such, SDT defines psychological needs independently of cultural values, which opens the possibilities to investigate the congruence of culture and psychological growth (Ryan, 1995b; Ryan & Deci, 2017).

The results of the phase 1 qualitative study are further translated according to Confucianism in relation to teacher wellbeing (see Figure 7.1 and Table 5.5). As Figure 7.1 illustrated that

the themes/subthemes extracted from phase 1's data elucidating the basic psychological needs of relatedness, competence and autonomy, which ultimately leads to rural Chinese teachers' wellbeing. This adds new insights to the understanding of teachers' needs satisfaction and wellbeing in rural Chinese contexts. This configuration (as seen in Figure 7.1) has been further tested through triangulation. For example, the results from the quantitative analyses show that three basic psychological needs form a second-order latent variable Culture-rurality which predicts rural teacher wellbeing. As such, the phase 2 quantitative study benefits from the inclusion of cultural influences as part of the contextual factors that construe teacher wellbeing (Delle Fave et al., 2011). The present study takes a step further, besides the study on the congruence between western theory and eastern culture, rural Chinese teachers' wellbeing was framed through the investigation of teachers' basic psychological needs based on Confucianism. This approach enables a conceptualization of rural teachers' wellbeing under the eastern Confucian perspectives.

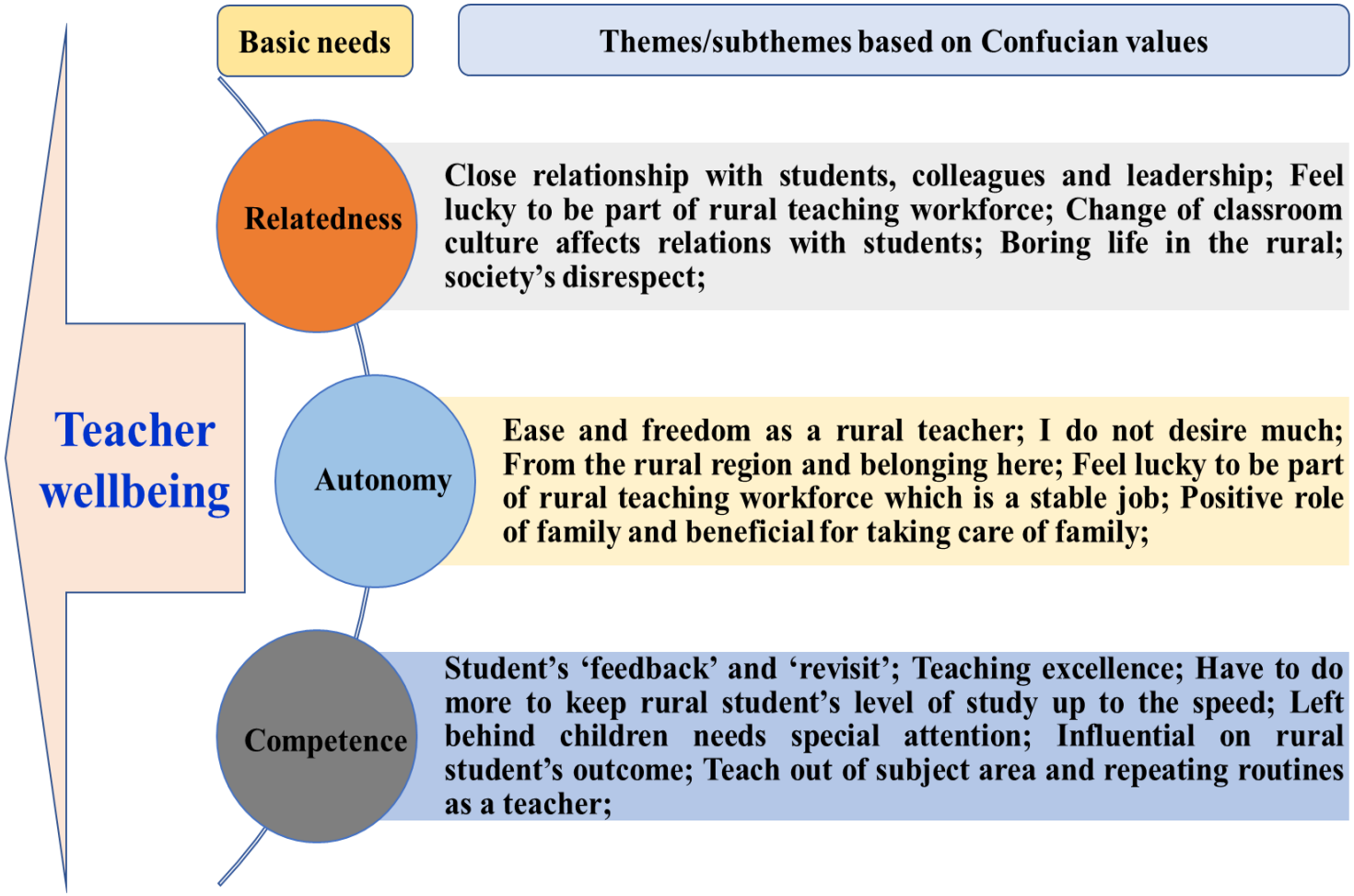

Figure 7.1. Relationships of themes: SDT psychological needs, Confucian values and teacher wellbeing

7.2.2 Context of socio-demographic indicators

The quantitative phase of the study investigated the socio-demographic variables. These include the teachers' age, teaching subjects, years of experience, salary, school level, years of living in the rural, whether the teacher is in-charge of the class and educational attainment. Complementing the qualitative findings, the survey data explicates the relationship between social-economic indicators and teacher wellbeing. Collie et al. (2016, p. 790) argue that in general teacher wellbeing is "wellbeing relating to life as a whole". This is distinct from a teachers' professional wellbeing; whereas, it is close to the meaning of subjective and psychological wellbeing. The present study constructed the latent variable as general wellbeing by combining subjective and psychological wellbeing of rural teachers. This was validated by Confirmative factor analysis (CFA) (CFI=0.998, RMSEA=0.053). However, the results from CFA show that both the Hedonic and Eudaimonic wellbeing of rural teachers were strongly correlated (r=0.91). This finding is in line with a large international study (N= 679) conducted by Disabato et al. (2016) whose results show a correlation of 0.96. This supports the feasibility of combining the constructs of subjective and psychological wellbeing as personal wellbeing for the present study.

Canonical analysis shows that more experienced rural teachers, and higher paid rural teachers are positively associated with higher personal wellbeing, but negatively associated with professional wellbeing. This finding is in line with previous studies which revealed that salary, rural school and community facilities are crucial factors that attract and retain quality rural teachers (Simon & Johnson, 2015; Song et al., 2020; Tang, 2018). This also echoes the results of the profile analysis of the present study. That is the profile of personal wellbeing driven rural teachers who scored high or positive on personal wellbeing constructs, however, had negative scores on dimension of rural teachers' professional wellbeing.

Tse (2017) argues that subjective wellbeing is correlated with income level. However, the results of this study indicates that salary is not a significant indicator of rural teachers'

wellbeing. This echoes the problem posed in the introduction chapter, that the policy initiatives of using salary as an incentive to attract quality teachers to rural schools does not work effectively in China. It is hypothesized this may be because rural teaching is regarded as a grass-roots career due to its unfavourable social reputation irrespective of the salary level (Mingren & Shiquan, 2018). Furthermore, this finding connotes the conceptual closeness between Confucianism and Eudaimonia, as SDT suggests that Eudaimonic wellbeing is not facilitated by materialism (Ryan et al., 2008; Thorsteinsen & Vittersø, 2019).

SDT assumes that basic psychological needs satisfaction fosters healthy wellbeing and intrinsic motivation (Ryan & Deci, 2000a). The canonical analysis result outlined in Section 6.8 shows that female and older teachers are more satisfied in teaching in rural settings, this finding supports Sargent and Hannum's (2005) study. The canonical analysis also shows that certain socio-demographic variables are indicative of a teachers' optimal functioning. For example, it shows that males and higher qualified teachers are less motivated, which conforms with previous studies by Cui and Richardson (2016), Sharif et al. (2016) and Tang (2018) conducted in Australia, The United Arab Emirates and China. It also echoes the Multidimensional scaling results of the present study.

Figure 6.25 (in Chapter 6) shows gender moderates age on rural teachers' status of flourishing. For example, under the influence of Confucian culture, "teachers' identities and life choices are still much gendered", male teachers have a strong sense of duty as being a 'breadwinner' of the family (Luk-Fong, 2013, p. 53). This may explain why gender moderates age on teacher flourishing. Male teachers have a strong sense of being the provider to support the family. For instance, when entering the teaching workforce, they may not be satisfied with the lower starting salary; but, after gaining more experiences, their wages are increased. This may contribute to male teachers' thriving when they are older. Another important reason is, although Chinese society changes, such as more females enter the workforce, the influence of Confucian values still holds. Female teachers

feel they belong to the domain of family, whereas male teachers feel they belong to the domain of work (Luk-Fong, 2013, p. 61). This cultural aspect may also foster the flourishing of male teachers, and encourage them to stay in the teaching workforce longer.

The ANOVA and MANOVA results in Section 6.6 (in Chapter 6) echoes the findings of Mingren and Shiquan's (2018) study, for rural Chinese teachers who are under 30 years old, although many of them were born in the countryside, they are in fact familiar strangers to rural areas and they have little connection with the rural culture (as they did post school qualifications in urban cities). As such, they lack enthusiasm for teaching in rural areas. Mingren and Shiquan's (2018) study suggests that many rural teachers who are over 50 years old, have a natural blood relation with rural people and they are highly respected by villagers and students. This supports the findings of the present study that teachers aged over 50 have a significant predictor for the status of flourishing.

Similarly, the present study shows teachers with 5-9 years of experience have the lowest levels of SDT psychological needs satisfaction. In contrast, teachers' needs are well satisfied if they are highly experienced (>=30 years) according to the present study. This finding is controversial when compared with the studies by Ingersoll and Smith (2003) and Goldring, Taie, and Riddles (2014) which indicate that a substantial number of teachers left the profession within the first five years of their teaching career due to teacher job dissatisfaction. However, this finding conforms with the study by Tang (2018) which found that teachers under the age of 30-40 years of age display the highest level of stress. The possible explanation may lie in cultural and societal differences, as in Chinese society changing stable employment (e.g. school teacher) is uncommon. Thus, even if teachers feel stress at the beginning of their teaching career, they tend to remain in the profession.

A counter intuitive finding of the present study is that teachers having 20-29 years of experience show relatively low levels of psychological needs fulfilment. This result does not follow the high needs satisfaction status of teachers with more than 30 years of experience (See Section 6.6 in Chapter Six). However, Mingren and Shiquan's (2018) study reveals teachers

with 20-29 years of experience, were more likely born in the rural and thus have deep connections and feelings for rural people. Also this group of teachers are admired by rural peers because they became school administrators or the backbone of rural schools. As such, the possible interpretations for the results presented here that the additional administration and management responsibilities of the rural teachers, lowers the levels of rural teachers' wellbeing, resonates with the multidimensional scaling results (see section 6.8 in Chapter Six), in particular, item Q12_12 which indicates that involvement in management is not highly valued by rural teachers, and this may exert an effect of lowering teachers' sense of wellbeing and needs fulfilment. However, underneath this unique phenomena are the cultural issues. This will be further explained in this chapter in section 7.3.

Tang's (2018) study argues that seniority of age is associated with lower levels of teachers' subjective wellbeing. Conversely, the findings of the latent profile analysis and logistic regression indicate that teachers' age at 50 and/or above is a significant predictor of the thriving teacher profile as well as needs unsatisfied teacher profile, whereas gender, qualifications and rewards are insignificant predictors for both profiles. To be specific, the logistic regression shows that teachers' aged at 50 and/or above is a significant predictor of the status of flourishing. Teachers in this age group are three times more likely to be thriving rather than languishing.

This finding conforms with Gloria, Faulk, and Steinhardt's (2012) study that shows that more experienced teachers report a higher level wellbeing. The MANOVA results (Figure 6.23) further shows that rural teachers with 30 years or more experiences have higher levels of personal and professional wellbeing compared to less experienced teachers. Therefore, the present study reveals that teachers close to retirement age are more likely to be flourishing in rural schools of China.

An unexpected finding from the MANOVA (Figure 6.24) is that for teachers' professional and personal wellbeing, being in charge of a class, rates marginally higher than other teachers ($p = .0594$). 'Teachers in charge of a class' plays an influential role in

student outcome in China (Wang & Lu, 2015). However, 'teachers in charge of a class' are labelled as 'tired' or almost "burnout", because they have responsibilities for almost every aspect of students' life at school and even outside the school (Zhong, 2017). These finding suggests that rural teachers' strong sense of responsibility and harmony is rooted in the elements of Confucian culture emphasizing self-reflection and self-realization. For instance, during the phase 1 interviews, Participant 7 stated that as a teacher in charge, he is like a father living with children together and looking after them as well as teaching classes. It is a lot of work, but when he saw students grow up and come back to visit him, he felt everything was worthwhile. So, it supports the proposition that Confucian culture plays a key role in rural Chinese teachers' wellbeing, which can offset or even turn around the negative effects of the heavy workload.

7.2.3 Contents of rural teachers' wellbeing in China

The present study confirms the reliability, validity, and factor structure of the construct of Culture-rurality through quantitative analyses. Culture-rurality embraces three basic psychological needs, Confucian values and rurality and predicts rural teachers' wellbeing. The quantitative analyses indicate a high correlation (=0.81) between the validated existing instruments measuring rural teachers' overall wellbeing including the constructs of teachers' psychological, subjective and professional wellbeing and Culture-rurality. The findings of the present study suggest that the construct of Culture-rurality conceptually construes teacher wellbeing in rural China. Also, the results of regression analysis suggest that SDT basic psychological needs are robust predictors of teacher wellbeing (Figure 6.13). The present study simultaneously analyses multiple aspects of rural teachers' wellbeing in China and builds a picture of how different aspects of teachers' wellbeing holistically are related to SDT psychological needs.

The three basic psychological needs of competency, relatedness and autonomy based on SDT emerged from the qualitative data (see Figure 7.1). For instance, teachers state that

students' feedback and maintaining visits to rural areas resonate with the needs of competency; closeness with both students and colleagues refers to the SDT psychological needs of relatedness; and, rural teaching is beneficial for rural teachers to take care of their families which reflects the needs of autonomy. These themes echo both SDT psychological needs and Confucian culture emphasizing harmonious relationships and a sense of responsibility. The CFA reveals that relatedness has the highest loading (=0.91) on Culture-rurality. This is in line with White (2010) who views that relatedness is central to wellbeing in collectivist cultures because of the importance of social connectedness.

The analysis of qualitative data reveals that rural teachers who choose to teach in rural areas are extrinsically motivated initially. Teachers stay and gradually enjoy rural teaching. Three teachers mentioned after years of rural teaching that they started to enjoy life and focus on their families because teaching in the rural areas is the only "appropriate" job they can do. For example, participant 2 mentioned, "when I just became a teacher, I had so much energy, I wish to improve my students through my teaching, but facilities here are not comparable to urban schools, such as even now we still do not have multimedia, so gradually my passions just become flat, I simply want to slow down, have a rest and enjoy my life as a teacher here." This could be because the rural teaching profession offers them a stable job and salary. This incentive enables them to take good care of their families, as such rural teachers stay and thrive, triangulating with the present study's latent profile analysis which shows there are 341 rural teachers who are at optimal level of wellbeing (Table 7.1), and almost one third of the sampled rural teachers are thriving.

This implies even if some rural teachers' psychological needs are not particularly met, as rural teachers may choose to teach out of extrinsic motivation, they still enjoy a life of teaching and thrive. This suggests a 'gap' between rural Chinese teachers' needs satisfaction and teachers' thriving, and the possible explanation for this 'gap' is cultural differences. This will be further explained in the following sections of this chapter.

According to Ryan and Deci (2017), psychological needs satisfaction plays a crucial role in motivation. This is even if the activity is not inherently interesting, and the fulfilment of basic psychological needs fuels internalized motivation and optimal functioning. By triangulating the interview data with CFA and Principal Component Analysis (PCA) the underlying structure of the three SDT psychological needs and rurality of teachers are revealed. For instance, the data shows that rural teachers feel they can take control of their work, and they do not desire material side of life, a simpler life is preferred, which reflects rural teachers' sense of autonomy; feeling rural students and colleagues are like a teachers' own family member, which reflects the SDT need of relatedness; teachers feel they are a role model to rural students which explicates rural teachers' sense of responsibility and competency. CFA shows rurality indicators all have high loadings (>=0.75) on second-order construct Culture-rurality, which implies that rurality and culture are interrelated as a unity (Cloke & Milbourne, 1992; Olatunji & Ajayi, 2016). Therefore, it is significant to investigate the effect of Culture-rurality rather than the effect of every single aspect because using a second order latent variable with a good fit of the data based on CFA is beneficial for the parsimony and practicality of the model (Nagabhushan, 2012).

Furthermore, SDT contends the three basic psychological needs function on wellbeing as a whole (Church et al., 2012). The interaction of individuals and culture constitutes the everyday lives of rural teachers, which is an essential component of rurality (Biddle & Azano, 2016; Humphreys, 1998). This is in line with the findings of the second-order Culture-rurality factor according to CFA which integrates autonomy, competency, relatedness and rurality as an overarching second-order variable.

By triangulating the quantitative analysis findings with the qualitative data, it elucidates how this overarching Culture-rurality factor positively affects rural teachers' wellbeing. Through the 4-D cycle of the AI process, the one-on-one appreciative interviews identified the best experiences of rural teachers and what gives life to the rural teacher community, teachers feel the teaching career is especially rewarding because not only can they see their

students growing up; but, they see the benefits that education has had on their own children. This construes rural teachers' sense of competency, relatedness, autonomy and rurality. This is because rural teaching is not especially stressful, as the interview data revealed and was mentioned in Chapter 5. This finding is different from previous literature emphasizing rural teaching in China is stressful (Kim, 2019; Mingren & Shiquan, 2018). However, rural teaching gives teachers autonomy to look after their families and to interact with students. It implies the strong family and community ties in the rural area, and teachers feel the genuine folk culture in the countryside and want to contribute to rural communities, which fosters rural teachers' wellbeing. This is in line with previous literature that rurality has a close link with wellbeing (Downes & Roberts, 2018; Murray et al., 2004).

The results of the present study reveal the contents of rural teacher wellbeing is a conceptual combination of rurality, competency, relatedness and autotomy, as they are intertwined, so Culture-rurality should be seen as a unity. This is confirmed by the CFA as well as general linear regression analysis. The standardized coefficients of the regression model (Figure 6.13) show that Culture-rurality is a more robust predictor (coefficient=0.81) of rural teacher wellbeing, than individual SDT psychological needs of relatedness (coefficient=0.23), autonomy (coefficient=0.27) and competency (coefficient=0.38).

The findings here confirm that SDT psychological needs satisfaction enhances wellbeing and increases commitment as well as more effective performance (Deci et al., 2017; Van den Broeck et al., 2008). According to the CFA results, relatedness shows the strongest correlation (0.91) with second-order factor Culture-rurality, followed by autonomy (0.9) and competency (0.88). This resonates with Paterson and Grantham's (2016) and Louis' (2007) research findings that suggest that a teachers' trust in their colleagues is the foundation of school effectiveness and associated with positive teacher wellbeing, otherwise teacher autonomy cannot be achieved.

This study argues that teacher wellbeing is multidimensional and complex in nature. As such, it incorporates eight constructs covering teachers' subjective, psychological and

professional wellbeing dimensions. These are Connect, Efficacy, Thriving at work, Perceived recognition, Desired involvement, Self-efficacy, Recognition and Job satisfaction. According to the correlation analysis, the multi-constructs are inextricably interwoven such that weakness in any one area may adversely affect the others. However, among the eight constructs of teacher wellbeing, cultural-rurality has the highest correlation with job satisfaction (0.86) and the lowest correlation with perceived recognition (=0.63). As teacher job satisfaction is a construct focusing on a sense of fulfilment and pride for teachers who enjoy teaching (Klassen, 2010), this conforms with Yin et al.'s (2016) study that teacher job satisfaction is strongly correlated with teacher psychological wellbeing. It also implies that Confucianism is more similar to Aristotle's Hedonic and Eudaimonic wellbeing because of the high correlation (=0.81) between cultural-rurality and overall teacher wellbeing which is a combination of eight constructs which belong to teachers' subjective, psychological and professional wellbeing according to the correlation analysis.

7.3 Part 2: Teacher wellbeing and Confucian culture

Part 2 explores teachers' wellbeing in rural China based on Confucian culture and explicates the compatibility between Confucian values and rural teacher wellbeing construed by SDT psychological needs. This part also investigates to what extent Confucian cultural factors contribute to teacher wellbeing. SDT suggests that "not all cultural norms can be easily integrated", and "cultural values and goals can be more or less well integrated by members of the cultures" (Ryan & Deci, 2017, pp. 587, 589). Thus, as previously addressed in Chapters 1, 2 and 3, it is crucial to gain an in-depth understanding of teacher wellbeing based on Chinese Confucian culture. This Part 2 thus provides the premise for conceptualizing teacher wellbeing according to SDT psychological needs fulfilment and elucidating the meaning of rural teacher wellbeing based on Confucian values.

7.3.1 Hedonic, Eudaimonic and Confucianism perspectives of wellbeing

The differences between the Hedonic/Eudaimonic and Confucianism perspectives on wellbeing are evident. For example, the construct of perceived recognition denoting teachers' perceptions of professionalism being recognized by their colleagues shows the lowest correlation with Culture-rurality among the eight constructs indicating rural teachers' subjective, psychological and professional wellbeing. This unexpected result implies that Confucian culture plays an important role on rural teachers' wellbeing. Confucian culture stresses that "I am not bothered by the fact that I am unknown. I am bothered when I do not know others" (不患人之不己知，患不知人也) (Confucius, 1979). Confucius emphasizes that the joy of a "gentleman" is to have friends who really understand our values. Whereas our virtues do not need to draw others' attention by simply holding the values and enforce them quietly (Confucius, 1979). This is the cornerstone of Confucian moral philosophy (Hahn & Waterhouse, 1972). Confucius' notion of wellbeing accentuates the realization of self-cultivation, harmony of community through fulfilling social duties and suppression of inappropriate desires (Shin & Lyubomirsky, 2017). This suggests that Confucian cultural values may be pivotally influential to teachers' wellbeing in rural China.

A further analysis through Multidimensional Scaling (MDS) (Figure 6.29) reveals that both Q14_3: "Little pressure from students' parents"; and Q13_6: "I have accomplished a lot as a teacher"; are conceptually distant to in the domain of teacher wellbeing. The interview narratives reveal that teachers are concerned about the lack of involvement and engagement of rural students' parents. So, less pressure from parents is not an indicator for flourishing because rural teachers have a strong sense of responsibility for students' outcomes. This resonates with the research findings from Kim (2019) that parents lack of involvement causes stress for rural teachers in China, and echo the core value of Confucianism emphasizing responsibility.

Q13_6 indicates that teachers are content with their achievements. However, this item is conceptually distant to other rural teacher wellbeing items. The possible explanation is eastern culture promotes a sense of self-abnegation which is an integral part of good life (Joshanloo, 2018). Confucianism highlights self-reflection and self-criticism, as such under the context of Confucian culture, people feel "socially unfavourable" in expressing self-acceptance emphasized by Eudaimonic wellbeing (Choi & Choi, 2016, p. 112). Thus, with the influence of Confucian values, rural teachers may feel they are not yet reaching their full potential.

This reveals a striking difference between Hedonic/Eudaimonic and Confucianism's conceptualizations of wellbeing. Aristotle proposed that flourishing and happiness sees wellbeing as the "end product", whereas Confucian value entail how to achieve happiness through Dao (道) which is "emergent from actions of persons whose self-realization is such that they are able to serve as peculiarity intense foci of meaning and value" (Hall & Ames, 1987, p. 248). It connotes attitudes, skills and reliability (Fraser, 2013). Rural teachers did not feel they "accomplished a lot", under the influence of Confucian culture, as teachers do not value wellbeing as an "end product", their perception of wellbeing is "on the way" of improving via self-realization.

The finding further suggests that although wellbeing through the lens of Confucianism is highly correlated to Aristotle's Hedonic and Eudaimonic wellbeing (correlation=0.81 between overall wellbeing and Culture-rurality), they are not exactly the same under the two different cultural values. To construe the meaning of teacher wellbeing in rural China, these subtle cultural differences should not be overlooked. As Ereaut and Whiting (2008, p. 8) suggested "wellbeing is essentially a cultural construct…wellbeing is no less than what a group or groups of people collectively agree makes a 'good life'" (Ereaut & Whiting, 2008, p. 8).

It sounds counterintuitive that Q12_12: "I want to be involved in my organization beyond my work duties" is not quite conceptually close to other teacher wellbeing scale

items based on MDS. This challenges the finding of Yildirim's (2015, p. 74) quantitative study focusing on teachers' professional wellbeing which suggests to "incorporate teachers into the process of decision making", as this is crucial for teachers' professional wellbeing. Also Downes and Roberts' (2018) literature review purports that appropriate leadership for rural teachers is an effective strategy to retain rural teachers in western cultures. Possible explanations may be that although school leadership is crucial to teacher wellbeing (Morris et al., 2019), the emphasized value of harmony in Confucian culture hinders teachers' intentions to be involved in leadership, to stand out as a leader may make rural teachers feel uncomfortable and isolated. This resonates with the interview data presented here, as Participant 3 highlighted "if I teach with excellence, which may hurt others even elicit jealousy". This discrepancy illustrates the importance of considering the Confucian cultural context in studying teacher wellbeing because differences exist between eastern and western rural teachers' perceptions of wellbeing.

Furthermore, both Chinese teachers and Turkish teachers, for instance, are from collectivistic cultural backgrounds (Tatli, Ozturk, & Woo, 2017b; Yildirim, 2015), and based on results presented here on multidimensional scaling analysis, Chinese teachers do not view the participation in decision making critical to their wellbeing. However, this is highly valued by Turkish teachers. It implies that to simply divide human cultures into general categories of collectivist and individualist are not informative in terms of studying a social phenomena such as teacher wellbeing.

Confucian culture plays a crucial role on teachers' sense of wellbeing. It is important to gain an in-depth understanding of teacher wellbeing based on Confucian culture. The findings of this present study supports the core idea of this thesis, which is to explore and conceptualize rural teachers' wellbeing based on the Confucian cultural context and values, and this resonates with Joshanloo (2014), Spencer-Rodgers and Peng (2018) and Matsumoto & Kupperbusch's (2001) stances. The following section will explore the link between Confucian values and rural teachers' wellbeing in China.

7.3.2 Teachers' SDT needs satisfaction and Confucian culture

SDT asserts that teachers' satisfaction with the basic psychological needs of relatedness, autonomy and competency fostering teachers' wellbeing (Deci et al., 2017). Teachers' need for respect can be classified under SDT basic psychological needs of relatedness (e.g.Deci et al., 2017; Ng et al., 2012). The qualitative data reveals that when the need of relatedness was not satisfied, as half of the participants (n=5) expressed the feeling of not being respected by the society during interviews. This resonates with Mingren and Shiquan's (2018) study results that rural community regarded the quality of rural teacher as not high despite the improved rural school facilities, rural teaching is not highly respected in the rural communities as before.

By referring to the MANOVA results (Figures 6.21 and 6.22 in Chapter 6), teachers with more than 30 years of experience have a significant higher sense of autonomy and competency, but non-significant for relatedness. This challenges a recent study by Mingren and Shiquan (2018) which claims that teachers who are over 50 years old are highly respected by villagers, and having an innate attachment to the rural community and deep feelings for their hometown. The results indicate that teachers with 5-9 years of experience show a significantly lower level of sense of relatedness, which supports Mingren and Shiquan's (2018) study. It claims that rural Chinese teachers under 30 years old feel little connection with rural culture although they were born there.

The possible explanation about relatedness showing a unique pattern among the three basic needs in terms of years of experiences is because rural teachers do not feel respected during their early career, but they persist. This is because people from collectivist cultural orientations who are motivated may persist longer due to internalized cultural values that emphasize responsibility to others (Ryan & Deci, 2006). As stated in the literature review, Confucianism accentuates that to be a "gentleman" (君子), the attitudes of respect, tolerance and deference are "preconditions for any kind of personal growth"(Hall & Ames, 1987, p. 167).

Combining with latent profile analysis based on needs satisfaction, 60 teachers' needs are not met but still flourish in rural school teaching (Table 7.1). This challenges previous research findings which suggest in the circumstances that needs are not met, it may leave teachers feeling angry and depressed (Roth, 1993; Tang, 2018). Confucian cultural values may explain the phenomenon that even though teachers' needs of relatedness are not satisfied and they feel they are not respected by the community, they still thrive. This is because in Confucianism, a flourishing life stresses self-discipline, self-cultivation and self-abnegation, which contributes to internal and social harmony (Joshanloo, 2014, p. 480). This implies the influential power of Confucian values that keeps rural teachers going even if their psychological needs are not well met.

The CFA results also shows that autonomy and relatedness are most strongly related to teachers' needs fulfilment and optimal wellbeing, which partially agrees to Reis, Sheldon, Gable, Roscoe, and Ryan's (2016) study that autonomy and competence were the most robust predictors of wellbeing. The CFA indicates that relatedness has highest correlation coefficient, which resonates the previous research findings that good relations and trust in colleagues is a determinant factor on teachers' needs' satisfaction of safety, belonging and self-esteem (Yin et al., 2016), which is essential to teacher wellbeing. For example, during the interviews, teachers mentioned that they belong to rural communities and they feel students and their colleagues are like family members. This echoes the core value of harmony under Confucianism (Jian, 2018; Qian, 1976; Spencer-Rodgers & Peng, 2018; Tatli, Ozturk, & Woo, 2017a). The subtle differences of research findings imply that relatedness is more meaningful in Confucian society, competence is cherished more in Western individualistic society. This resonates with the logistic regression analysis findings presented here indicating that within the teacher subjective wellbeing domain, 'connect' is a significant predictor of the profile of SDT needs fulfilled teachers, whereas Efficacy is not (see Table 6.31 in Chapter 6). The present study's results here show that Confucianism

values autonomy (Choi & Choi, 2016), however, the Confucian values de-emphasizes competency as Confucianism highlights self-reflection and self-criticism.

The concept of wellbeing in Confucian culture has similar components to the western Eudaimonic notion (Joshanloo, 2014). However, striking differences cannot be overlooked, such as, the role of autonomy which attracts disagreements about its importance between eastern and western cultures in terms of collectivism and individualism (Diener et al., 1995; Triandis, 2015). Although SDT claims the three basic human needs that are crucial for healthy wellbeing, which is universal to all cultures (Chirkov, Ryan, & Willness, 2005), the debate of universality of SDT around autonomy (e.g.Chirkov, Ryan, & Sheldon, 2011) has been central to SDT's "universality and ability to transcend cultural divides" (White & Jha, 2018a, p. 159). For instance, autonomy is thought to be less important for Asian cultures, and will only be valued and benefit people from individualistic western cultures (Diener, 2003; Joshanloo, 2018; Oishi, 2000). Joshanloo (2014) argues that autonomy is not appreciated and is even looked down upon in eastern cultures, because the achievement of harmony with others is important, whereas a sense of 'no-self' is considered pathological in western psychology.

However, according to the present study's CFA results, autonomy shows a significant high loading (=0.9) on second-order factor Culture-rurality. The high factor loadings of autonomy on the second order latent variable of Culture-rurality supports the universality claim of SDT, which indicates that individualism and collectivism are not orthogonal to the SDT psychological needs of autonomy. It contradicts the view of Choi and Choi (2016, p. 109) that "Confucian perspective does not explicitly highlight the value of self-determination", as autonomy is de-emphasized in Confucianism. However, this finding is in line with previous studies that claim autonomy fosters wellbeing of people from collectivism cultures (e.g.Chirkov & Ryan, 2001; Pawlik & d'Ydewalle, 2006; White & Jha, 2018b). This supports Ryan and Deci's (2017) argument that autonomy is a basic and

universal human need, because autonomy does not mean independence or individualism, but rather indicates the state of being volitational.

According to Fouad and Byars-Winston (2005), culture is one of the most significant and pervasive factors in our work life. The here interviews reveal that teachers in rural areas experience wellbeing because they have less pressure compared to urban teachers, and teachers are able to take care of family members. These findings challenge the results of previous studies by Sargent and Hannum (2005) and Tang (2018) that indicated that rural teaching in China is stressful. However, these findings are in line with Klassen, Foster, Rajani, and Bowman's (2009) study which demonstrated that rural school teachers reported less stress in comparison to their urban counter parts. The contradicting results may be a result of different contexts between these different studies and the focus on either a deficit or abundance model.

Thus we can conclude that rural teachers feel less pressured compared to urban teachers, which conforms to the western definition of autonomy. For example, Participant 8 talked about the striking difference between rural and urban teachers, that rural school teachers have much more freedom than urban teachers. In urban schools, she said "principals and parents put pressure on teachers…, urban school principals randomly inspect teachers' class without any prior notice" (#8). Wang's (2009) study described a situation of rural teachers playing cards and drinking alcohol during the teaching days in a rural school of China, and thus autonomy may lead to an adverse effect on teachers' wellbeing. According to Ryan and Deci (2017), values internalize and form the integrated self which thereby contributes to an optimal level of wellbeing, which is the central focus of SDT. SDT claims its validity and universality in substantially different cultural settings and posits that only if cultural values are fully integrated rather than simply introjected, then people will enact them with volition and have positive outcomes and wellbeing (Deci & Ryan, 2000).

By synthesizing the results of the latent profile analyses based on teacher wellbeing and needs fulfilment as illustrated in Table 7.1, some rural teachers are in a state of thriving as

well as being autonomously motivated. The data shows there are 280 teachers whose needs are satisfied and who reach the status of optimal wellbeing. Only one teacher whose needs are not met but thrive, implies being autonomously motivated is essential for healthy wellbeing, even though teachers were not intrinsically motivated initially as indicated in the qualitative data. Therefore, only internalized Confucian culture-oriented autonomy may foster teacher thriving. Thus, in order to obtain an in-depth understanding of rural teacher wellbeing, it needs to be based on particular social and cultural contexts, in this case, the Confucian culture in China.

Table 7.1

Latent profiles based on teachers' needs satisfaction and wellbeing

Needs satisfaction	Teacher wellbeing	# of teachers
D. Needs not well met (731)	A. Thriving teacher (341)	**A&D =60**
E. Unsatisfied needs (88)	B. surviving teacher (462)	**E&A=1** **F&C=0**
F. Fulfilled needs (379)	C. Languishing teacher (125)	**F&A=280** **F&B=27**

The assumption of this study is that the fulfilment of three SDT psychological needs in terms of relatedness, autonomy and competency determines both autonomous motivation and healthy wellbeing (Peters, Calvo, & Ryan, 2018). As established in Chapters 2 and 3, wellbeing is a concept that is rooted and embedded in particular cultural and social settings. Thus, wellbeing can be viewed as a culturally constructed meaning to human beings (Christopher, 1999; Spencer-Rodgers & Peng, 2018; White & Jha, 2018b), which has been overlooked in the literature (Adams, 2005; Shin & Lyubomirsky, 2017). SDT proposed to define basic needs separately from values (Ryan, 1995b), however, CFA shows Culture-rurality is not separate from basic needs, they are closely interrelated, which shows SDT psychological needs converge with Confucian values.

The CFA findings show a hierarchical order of determinants of rural teachers' wellbeing (figure 6.10). The regression modelling results indicate that the significance of the second-order construct of Culture-rurality predicts the optimal level of rural teachers' wellbeing (figure 6.13). This further reflects that Confucian culture is the driving force as the mechanisms of basic needs fulfilment, which is fundamental to teachers' optimal functioning and wellbeing.

This thesis highlights the factors that foster internalized cultural values that enable rural teachers' behaviours that benefit teacher optimal wellbeing based on SDT psychological needs satisfaction. As indicated by the quantitative survey in the methodology chapter (Chapter 4), wellbeing indicators emerge from the thematic analysis according to Confucian cultural values. CFA results imply that Culture-rurality are the underlying robust predictor of rural teachers' optimal functioning and wellbeing. A possible explanation is three basic psychological needs proposed by SDT delineates an underlying structure of human psyche and wellbeing emphasizing competency, relatedness and coherence (Deci et al., 2017), and it was integrated with Confucian culture in China.

Basic psychological needs of SDT reflect the "energizing force of organism and can provide a road map of how moral norms can be integrated" (Arvanitis, 2017, p. 59). SDT psychological needs foster the internalization of values which predicts healthy wellbeing. Interrogating the fulfilment of basic needs is conducive to reveal the overall picture of rural teachers' wellbeing under Confucian doctrines with ethics and responsibility at its core. Based on Confucian values, Culture-rurality implies that a sense of responsibility for rural teachers, is in line with the qualitative interviews, as all of the teachers (n=10) mentioned they were motivated to teach because they wanted rural students to have a better future and not to be peasants anymore, and teachers feel worried when they see some students are not motivated to learn. This also resonates with Qian (1976) who suggests that the core of Confucian value is ethics.

Confucian doctrines value the harmony of community, which potentially construes and supports a different perspective of viewing SDT basic psychological needs. For example, in western culture autonomy means an individual's own decision, whereas in eastern culture, it emphasizes the endorsement of the society (Ryan & Deci, 2000b). During interviews, participants mentioned they have no other choices than teaching at rural schools because it offers them a stable job and salary which enables them to take good care of their families. This supports the case that some rural teachers choose teaching not out of their volition, they teach out of extrinsic motivation; however, many of those teachers thrive (n=341) according to latent profile analysis. This implies psychological needs of rural teachers may be satisfied, as SDT elaborates that upon satisfaction of the three basic needs, Self-Determination function maybe achieved even if people enter the profession through internalization without initial interests and satisfaction (Deci & Ryan, 1985; Ryan & Deci, 2017).

Although harmony is not alien to Eudaimonia, the notions of harmony are different between Confucianism and Eudaimonia. For instance, Confucian harmony focuses on procesess rather than a state which denotes "balancing opposite elements into a whole", whereas Eudaimonic harmony means a freedom from worries. Harmony is core to Confucianism, but besides haromony Eudaimonia focuses on multiple dimensions, such as "engagement, fulfillment, meaning, awareness, autonomy, achievement and optimism" (Delle Fave et al., 2011, pp. 199-200).

As established in chapter 5, some rural teachers chose their profession out of extrinsic motivation, which is not unusual because "much of human behaviour is not intrinsically motivated" (Ryan, 1995b, p. 405). So, to establish what factors contribute to the internalization of teachers' extrinsic motivation to autonomous motivation as well as healthy wellbeing is crucial to rural teachers' retention. During their interviews, 8 out of 10 teachers mentioned they choose to teach in rural schools because they receive a stable income and for the sake of their families. This sounds like "enticing" rural teachers to stay

even if they are not autonomously motivated to do so, whereas according to SDT, if internalized with Confucian culture, it would contribute to rural teachers' thriving. Table 7.1 shows that there are 280 teachers whose needs are satisfied with an optimal level of wellbeing, which implies needs of competency, autonomy and relatedness are internalized through Confucian cultural values. As such, rural teachers' optimal wellbeing and motivation to teach in rural areas of China would eventually be supported in this sample.

SDT suggests that cultural values are more easily internalized when the needs of competency, autonomy and relatedness are satisfied (Deci et al., 2017), however, particular cultural values may contradict basic psychological needs, and can have deleterious consequences on wellbeing because people 'enslave themselves and lost autonomy' (Ryan, 1995b, p. 414). The results from CFA and regression analyses suggest that the overarching Culture-rurality factor explains rural teachers' state of internalization of Confucian values predicting optimal wellbeing with standardized coefficient of Culture-rurality indicated as 0.81, echoing the results of the latent profile analysis. 280 rural teachers appear in both of the thriving and needs fulfilled teacher profiles (Table 7.1). Thus, the research findings here suggest that Confucian culture is compatible with psychological needs fulfilment which further fosters healthy wellbeing of rural teachers in this sample.

SDT claims that people not only internalize but also transform culture (Ryan & Deci, 2017, p. 564), and this resonates with what teachers mentioned during interviews; that classroom culture is changing, so they need to adapt to this change and try to come up with new effective strategies to educate students and deal with their parents.

SDT proposes that psychological needs satisfaction has a direct influence on the internalization of cultural values, and "cultural contents that are more conducive to the satisfaction of basic psychological needs for competence, autonomy and relatedness are expected to be more readily and easily internalized and integrated" (Ryan & Deci, 2017, p. 565). The basic psychological needs as the central concept of SDT are etic and universal which connotes the human basic human needs vary their "salience and meaning" within

different cultures (Ryan & Deci, 2017, p. 566). This findings here support the theoretical stance of SDT, and assert that the fulfilment of the three psychological needs is critical to the internalization of cultural values and facilitates optimal levels of well-being (Ryan & Deci, 2001a), which has been shown in the general linear regression that the three basic psychological needs (relatedness, competence and autotomy) are all significant and positive predictors of teachers' wellbeing.

The findings of the present study support the argument of Deci et al. (2017), that the more teachers are satisfied with the three basic psychological needs, the better their wellbeing, because an optimal healthy state and wellbeing are achieved via needs satisfaction. However, these present results also show that Culture-rurality as a second-order latent variable mediates the effects of psychological needs and explains teachers' wellbeing. Furthermore, Culture-rurality is a more robust predictor of wellbeing of rural teachers in China. This implies cultural value is a fundamental mechanism to SDT psychological needs which affects rural teachers' wellbeing. Therefore SDT psychological needs are in disparity as well as congruent with Confucian values, which provides the accounts of necessity and premise to conceptualize teachers' wellbeing based on Confucian cultural values.

7.4 Part 3: Operationalizing rural Chinese teachers' wellbeing

This final part of the discussion answers the overarching research question of this thesis, 'What is the nature of rural teacher wellbeing within the Confucian cultural contexts of China?' This is achieved by elucidating the meaning of rural teacher wellbeing within the Confucian cultural contexts of China. Therefore, an in-depth understanding of teacher wellbeing in rural China will be arrived at by conceptualizing teacher wellbeing within the context of Confucian culture and through the theoretical lens of SDT.

Up to now, although wellbeing has been recognized as a multidimensional construct (Donaldson et al., 2015), wellbeing research has been based on Hedonic and Eudaimonic

perspectives to inform conceptualizations of wellbeing (e.g.Collie et al., 2015a; Renshaw et al., 2015; Thorsteinsen & Vittersø, 2019). The present study thus purports to reconsider the culturally relevant conceptualization of rural teacher wellbeing in Jilin Province, China based on Confucian values.

7.4.1 Controversial findings of the quantitative analyses

The regression analysis above shows that needs satisfaction predicts optimal wellbeing, and the latent profile analysis further elucidates that teachers whose psychological needs are satisfied will be excluded from the languishing teacher profile. In the same vein, if teachers' needs are unsatisfied, teachers are unlikely to be in the thriving teacher group. However, there were 60 teachers whose needs were not well met; but, appear in the flourishing teacher group (Table 7.1). Likewise, there were 27 teachers whose needs were satisfied but appear in the surviving teacher group (Table 7.1). This finding does not fully agree with the claims inherent to SDT which emphasize that needs fulfilment is beneficial for wellbeing across all cultural settings (Ryan & Deci, 2003, 2017). The satisfaction of needs "fosters a good life: a life capable of true flourishing-defined in terms of a person being fully functioning" (Ryan & Deci, 2017, p. 613), while unsatisfied needs "frustrates motivation and thus is unlikely to foster any durable sense of well-being" (Ryan & Deci, 2017, p. 91). SDT shows that the basic psychological needs are "essential not only for optimal motivation but also for well-being" (Ryan & Deci, 2017, p. 11).

This seemingly counter intuitive finding indicates that the wellbeing of this sample of group of rural teachers cannot be explained by SDT. This finding resonates with a study by Reza (2017) which included two quantitative studies with sample sizes of 606 and 212 comparing the different cultural impacts on wellbeing between Iran and Sweden. Reza's (2017) results suggest that negative affect is a stronger predictor of flourishing in collectivist cultures in comparison to individualistic cultures. So, satisfied psychological

needs may not necessarily lead to optimal levels of wellbeing in eastern societies, and unsatisfied needs may not frustrate wellbeing.

Referring back to MDS findings (Figure 6.26), Q13_6 "teachers feel they have achieved a lot" and Q14_3 "teachers feel little pressure from students' parents" belong to the psychological needs of competency and autonomy. However, they are conceptually distant to other wellbeing indicators. This suggests that rural teachers in China perceive wellbeing and psychological needs satisfaction differently on the basis of Confucian cultural contexts. Furthermore, higher order latent constructs of Culture-rurality explains the effects of three basic needs satisfaction. This further reveals the influential power of cultural values on first order constructs denoting three psychological needs. Chinese culture is highly influenced by Confucianism (Lin & Ho, 2009), which believes that a simple life is a good life, which is of upmost importance to contribute to societal harmony with ethics and responsibility at its core (Liu et al., 2018). Even though teachers' psychological needs were not met, under the influence of Confucian cultural values they feel a sense of wellbeing.

On the other hand, the findings verify the claims inherent in SDT, which internalized regulation facilitates autonomous motivation and contributes to wellbeing. As rural teachers internalized Confucian values, they are in a state of healthy wellbeing even if their psychological needs are not well met. This suggests that the internalized Confucian values contribute to healthy teacher wellbeing in rural China. Also, the results of CFA suggest that psychological needs are secondary to the internalization of cultural values. It challenges the claims inherent to SDT that cultural values are more easily internalized when the needs of competency, autonomy and relatedness are satisfied (Ryan & Deci, 2017). This suggests that needs satisfaction is the precedent to value internalization. This implies the conceptualization of wellbeing based on SDT theory of psychological needs fulfilment may not be exactly the same between Hedonia/Eudaimonia and Confucian cultural values. If the factor structure of a scale differs across cultures, it incurs the potential psychological

assessment bias (Walsh & Betz, 1995, p. 413). Thus, it is necessary to operationalize rural Chinese teachers' wellbeing based on Chinese Confucian culture.

The themes that emerge from the interviews and CFA results show Culture-rurality as an overarching second-order construct. This suggests that an operational definition can be derived from the findings of qualitative and quantitative analyses based on the second-order structure of the CFA and regression model, which underlies the hierarchical structure of SDT psychological needs and Confucian culture as well as their relations to teacher wellbeing.

7.4.2 Operational definition of rural teachers' wellbeing based on Confucianism

Theories and measures of wellbeing are founded on western cultural values of liberal individualism (Clandinin & Husu, 2017). Thus the potential cultural bias is embedded because of the conformation to the dominant ideology of western social settings (Christopher, 1999; Joshanloo, 2014). Shin and Lyubomirsky's (2017) pioneering notion of eastern wellbeing accentuates the realization of self-cultivation, harmony of family and the community through hard work, frugality and fulfilling social duties. White (2010) warns that solely adopting western defined wellbeing can misinterpret the responses of perceptions of wellbeing from non-western social settings. This echoes the research question of the present study which is to investigate the nature of teachers' wellbeing within the Confucian cultural context of China.

Referring to the data from this study, almost all interview participants, mentioned the most rewarding moment was to see their students grow up and the close relationship between rural teachers and students. This reveals that responsibility and harmony components of Confucian culture is the driving force of teachers' needs fulfilment and wellbeing. However, the qualitative data shows that family relations play an important role in rural teachers' wellbeing. The quantitative data does not support this finding, as logistic regression (Table 6.29) indicates insignificance ($p>0.05$) for item Q14_15: "rural teaching

is beneficial for me to take care of my children and parents". This suggests that although Confucianism values the harmony of family (Choi & Choi, 2016), the value of responsibility under the context of teachers' work life is prioritized. It implies that responsibility for rural students especially the 'left-behind children' is the underlying mechanism of rural teachers' optimal functioning instead of, for example the narrow interests of a teacher looking out for his/her own children. As Qian (1976, p. 114) states "Chinese history is formed from the spirit of ethics, and the same is the Chinese culture". The present study uses Confucian values to conceptualize teacher wellbeing because values are fundamental to human behaviours (Rokeach, 1973). SDT acknowledges that different cultural contexts affect psychological needs satisfaction and further influences motivation and wellbeing (Ryan & Deci, 2017, p. 561). Although SDT views culture as the "most pervasive influence on human behaviour" (Ryan & Deci, 2017, p. 564), SDT claims the universality of the three psychological needs to all cultures, and contends that only the avenue of needs fulfilment differs among cultures (Ryan & Deci, 2000b). This connotes the basis of which treats culture as secondary to basic psychological needs.

The findings from the present study suggest the Confucian cultural values of responsibility and harmony are fundamental to SDT psychological needs' satisfaction. This conforms to White and Jha's (2018b) research findings that psychological needs are actually expressed as relational cultural values based on Confucian cultural contexts. The possible explanation for this phenomenon is that SDT is based on the underlying ontology that assumes the individual as a psychological and biomedical subject, however, this may not hold for different societal contexts (White & Jha, 2018a).

These results suggests SDT psychological needs are in congruence with Confucian values, which partially challenges the findings of Pan, Gauvain, and Schwartz 's (2013) study which claimed that Confucian values can either support or frustrate basic needs under the mediation effect of parental psychological control. The disagreement may be because their study assumed that filial piety is the core of Confucian values, whereas the present

study views ethics and harmony are fundamental to Confucianism. The CFA results revealed harmony and ethics in terms of responsibility can be internalized, which construes basic psychological needs fulfilment. Table 7.2 shows that the Confucian value based survey items reflect the core values of Confucianism and highlights a sense of responsibility and harmony. It also reveals that Confucian culture and Chinese rurality are interwoven. For example, rural landscape and rural background are components of rurality, however, they reflect the core of Confucianism value harmony indicating the harmonious relationships with the rural area and society.

Table 7.2

Self-composed scale items reflecting core Confucian values

Harmony
Rural landscape;
I have rural background;
I get used to the life as a teacher in rural region; Rural facilities and infrastructure;
I belong to rural communities;
Keep on improving myself to be a better teacher for my students;
Teacher is a stable job which gives me sense of security;
Little pressure from students' parents;
I do not desire for material stuff such as professional ranks, I prefer simple life;
Genuine folk culture;
Responsibility
What I teach is matching our rural children's real needs;
Help rural children to learn;
Limited knowledge base for rural children;
Offer meaningful help for the left-behind children or other disadvantaged children;
I feel my career is so rewarding when I see my children growing up;
I can take control of my job;
I am a role model for my students; I accept my rural teacher identity;
As a teacher gives me benefits and convenience to take care of my children and parents;

The MDS diagram (Figure 6.26) illustrated that the derived second-order latent construct, Culture-rurality, is conceptually close to the existing validated scales for teachers' overall wellbeing inclusive of subjective, psychological and professional wellbeing. Church et al.'s

(2013) large scale quantitative study including the culture-level measures of needs satisfaction and wellbeing for the countries of United States, Japan, China, Australia, Mexico, Venezuela, Philippines and Malaysia, showed similar findings to the present study, which confirms that psychological needs fulfilment supports optimal functioning. This also conforms with the theoretical proposition of SDT. Furthermore, both studies show that SDT psychological needs predict aspects of both Eudaimonic and Hedonic wellbeing.

Church et al. (2012) claim that needs are the predictor of wellbeing as a whole which challenges SDT, because the latter supports individual psychological needs' effect on wellbeing. Yet, this is in line with the results here which show Culture-rurality as an overarching second-order factor that predicts rural teachers' wellbeing. However, the results here also show that if psychological needs are not well met, teachers may still be functioning optimally. Furthermore, if psychological needs are fulfilled, teachers may only survive not thrive. It potentially challenges the findings of Church et al. (2012) that suggests needs satisfaction shows positive effects on wellbeing across cultures. This reveals the essential role of Confucian cultural values on rural teachers' wellbeing.

By triangulating with qualitative findings, the body of evidence becomes clearer. Teachers claim they are happy to give up opportunities for an 'honourable teacher title' if their colleagues wish to obtain it, as they do not care about the material side of life, because a simple and harmonious life is more meaningful to them. Also, teachers expressed that their responsibility to rural students is to help them not to be peasants anymore. It revealed that "teachers' passion for changing students' life is the reason which keeps teachers in the profession despite the challenges they face", which further construes that the sense of responsibility may contribute to social rewards and benefit rural teachers' wellbeing (Lam, 2019, p. 248). The Confucian values of responsibility and harmony are internalized by rural teachers to reach a status of healthy wellbeing, even if the psychological needs are not well met for them.

The reasons behind the contradictions but interrelated results can be intricate, as multiple mechanisms support and maintain teacher wellbeing (Paterson & Grantham, 2016). A possible explanation is SDT's concept of wellbeing in regards to basic psychological needs which is conceptualized based on Aristotle's concept of Eudaimonia (Ryan & Deci, 2001a). The present study showed a strong link between psychological needs satisfaction and wellbeing as proposed by SDT. However, Table 7.1 above demonstrates that satisfied psychological needs does not guarantee flourishing. Furthermore, unmet psychological needs does not necessarily lead to languishing. It suggests this link may be confounded by Confucian culture of rural China. For example, according to Diener et al. (1995) and Choi and Choi (2016) eastern cultures tend to self-report lower levels of wellbeing. Their studies showed that east Asian survey participants have a lower subjective wellbeing score than American participants after controlling the effect of income as well as pre-assumed artifactual factors, such as the humble and self-abnegation nature of eastern culture. To probe this disparity, it is possible to argue that Hedonic/Eudaimonic based measures need cultural related adjustments to be unbiased towards eastern culture survey participants. Furthermore, it implies that the conceptualization and operationalization of rural Chinese teachers' wellbeing based on Confucian culture may write off this kind of contradiction.

SDT postulates psychological needs manifested differently in different cultures and suggests investigating needs fulfilment in different cultural contexts. The differences may "appear on the surface to be contradictory to a specific need" (Ryan & Deci, 2017, p. 576). However, the second order structure of CFA shows that needs satisfaction in role-specific and rural Chinese context is mediated by the latent variable Culture-rurality. Profile analysis further reveals that unique patterns (as seen Table 7.1) between needs satisfaction and teacher wellbeing, implies that cultural differences and its influence on wellbeing with respect to three universal psychological needs may not be 'on the surface' as claimed by SDT. On the contrary, it is crucial and fundamental.

According to Spencer-Rodgers and Peng (2018), Confucianism is rooted in Dialecticism (a cultural worldview purporting opposing elements, such that the positive and the negative coexist harmoniously) with a focus on harmony is influential to wellbeing. By triangulating CFA with the interview narratives, second order latent construct Culture-rurality echoes the statements of rural teachers emphasizing their close relationships with colleagues, students and students' parents and responsibility towards rural students. This reveals rural teachers' sense of belonging to rural communities elucidating the core values of Confucianism: harmony and responsibility.

Hedonic and Eudaimonic conceptualizations are used to examine the differences of the status of wellbeing between different cultures (Kitayama, Karasawa, Curhan, Ryff, & Markus, 2010). However, the differences between cultures are influential, if we continue to adopt well established Hedonic/Eudaimonic wellbeing measures for all cultures. Even though we do consider the generic differences of individualism and collectivism in terms of cultural significance, the picture of particular cultures' wellbeing, especially for non-western culture, would not be precise. This is because of the confirmation bias and generic cultural classifications which tend to be overly simplified which are unable to capture a precise picture of wellbeing (White & Jha, 2018a). One of the findings here suggests that elucidating the meaning of wellbeing based on collectivism/individualism classification is not informative for different cultures. However, solely focusing on particular cultural contexts to explore wellbeing, and "letting go of psychological subject may be a step too far" (White & Jha, 2018a, p. 160).

The research findings imply that rural Chinese teachers focus less on an individual's fulfilment of wellbeing but more on the achievement of wellbeing by relating to the communities. For instance, there are higher CFA loadings on SDT psychological needs of relatedness than competency. In order to produce a more precise view of teachers' wellbeing under a rural Chinese context, western wellbeing measures should incorporate Confucian culture to acknowledge individuals are the psychological and biomedical

subjects under particular social and cultural contexts. Confucianism is believed to be at the root of eastern conceptualization of mental or psychological wellbeing (Joshanloo, 2014). Based on the findings of the present study, teacher wellbeing is defined as responsibility and harmony stemming from Confucianism built on SDT psychological needs of relatedness, autonomy and competency fostering rural teachers' optimal functioning that complement Hedonia and Eudaimonia wellbeing. This operationalization is visualized in Figure 7.2, which echoes the present study's theoretical framework of this study which embraces SDT and Confucianism, and was presented in Chapter 3 (Figure 3.2). This illustrates the aspects of rural teachers' job meaningfulness with cultural context core to their wellbeing based on SDT. This answers the overarching research question of the present study: What is the nature of rural teacher wellbeing within the Confucian cultural contexts of China?

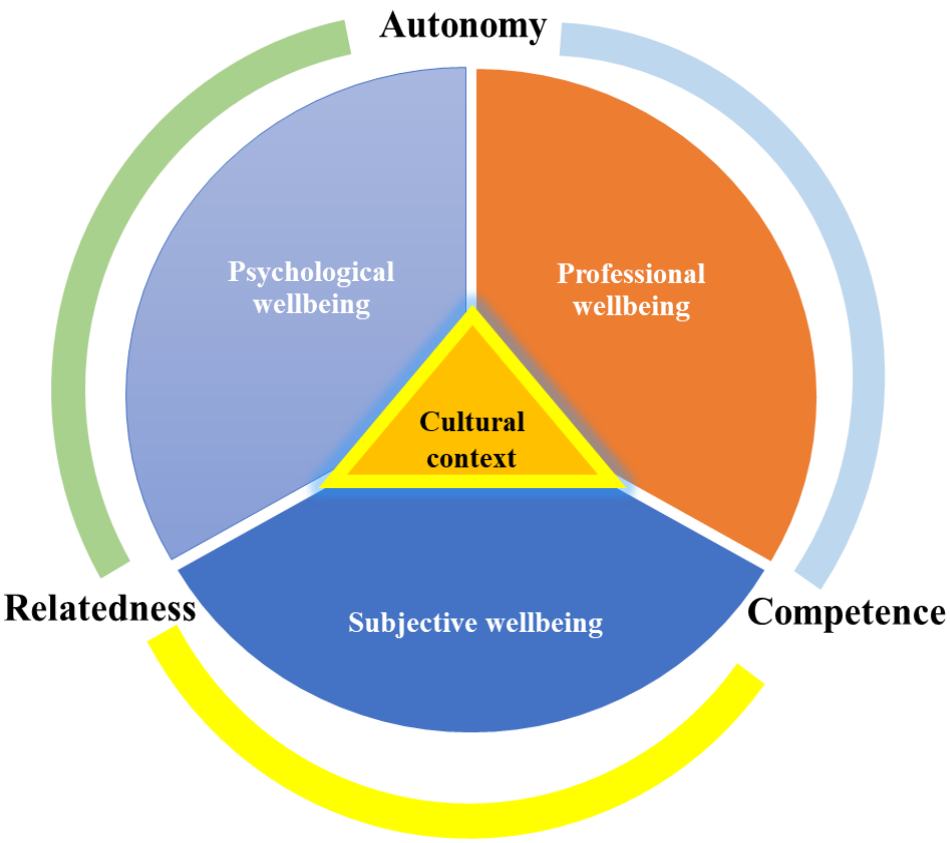

Figure 7.2. Conceptual model of rural teacher wellbeing in China

7.5 Summary

This chapter discussed the interrelationship of the concepts of Confucian culture and teachers' SDT psychological needs fulfilment, which is crucial to foster multivariate understandings of teacher wellbeing as it pertains to teachers' strengths and challenges in a rural Confucian cultural context. Part 1 identified the multiple factors that contributed to teacher wellbeing in rural China; part 2 established the case to what extent psychological needs fulfilment and Confucian cultural factors contributed to teacher wellbeing; part 3 answered the overarching question of the present study by elucidating the meaning of rural teacher wellbeing within the Confucian cultural contexts of China. Literature on teachers' needs (Collie et al., 2015a, 2016) and cultural identity (Ereaut & Whiting, 2008; Kim et al., 2018; Murray-Orr & Mitton-Kukner, 2017; Smart, Brock, & Tulasiewicz, 1986) in relation to teacher wellbeing have not integrated these concepts into a single theoretical framework, especially in reference to teachers' wellbeing under an eastern Confucian cultural context. Also, because SDT is a meta theory in psychology, previous studies have rarely considered incorporating Confucian culture to investigate teachers' wellbeing. This thesis has addressed this theoretical gap based on empirical qualitative and quantitative data through a mixed-methods approach.

The research revealed that Confucian cultural factors are not orthogonal to the SDT psychological needs. The operational definition of rural teachers' wellbeing emerged from the AI 4-D process concentrating on rural teachers' flourishing rather than stress, which indicates that 'healthy teacher wellbeing' is embedded within the hierarchical latent variable Culture-rurality under Confucian values consisting of items reflecting positive characteristics of rural Chinese teachers. The present study has shown that Culture-rurality can be operationalized as a sufficient response to teachers needs satisfaction based on SDT psychological needs theory. Culture-rurality is interpreted as a human needs fulfilment process elucidating Confucian values with respect to responsibility and harmony which contributes to healthy teacher wellbeing.

The results of the present study disagree with the view that the aspects of individualistic formulation of wellbeing would not be informative to wellbeing in eastern cultures (Joshanloo, 2014, p. 483), because these results confirm that SDT psychological needs predict teacher wellbeing in rural China, which manifests its compatibility with Confucian culture. Therefore, the present study advances the knowledge beyond the current understanding, emphasizing that wellbeing is promoted and nurtured by harmony in collectivist societies whereas this occurs via autonomy in individualistic societies (Joshanloo, 2014, p. 485).

The findings of the present study show that Confucian culture 'confounded' the theoretical path of needs fulfilment on rural teacher wellbeing. Previous studies have focused on either the verification of basic needs as a second order factor (Sparks, Dimmock, Lonsdale, & Jackson, 2016) or synthesizing sub-needs a basic needs' index (Moutão, Serra, Alves, Leitão, & Vlachopoulos, 2013). The present study takes this a step further and finds out that the overarching higher-order Culture-rurality factor explains rural teachers' wellbeing which can be further conceptualized based on Confucianism.

This is (at the time of writing) the first study that has simultaneously analysed multiple aspects combining teachers' subjective wellbeing, psychological wellbeing and professional wellbeing to elucidate the meaning of rural teacher wellbeing based on a Confucian cultural context. The conceptualization of rural teachers' wellbeing under Confucianism can offer meaningful implications for sustaining optimal teacher wellbeing and promoting quality teacher retention. The significance and implications of the present study will be detailed in the concluding chapter (Chapter 8).

Chapter 8: Conclusion

8.1 Introduction

This chapter reflects on the research objectives, summarises the main findings, discusses the strengths and contributions of the present study, and considers the limitations and recommendations for future research.

The overarching research question for this study was: **what is the nature of teacher wellbeing within the Confucian cultural context of China?** By answering this research question, the cultural nature of teacher wellbeing was conceptualized based on Confucian values. The results of the present study suggest a Confucian culture-based perspective on Chinese rural teachers' wellbeing needs to be included in the broader teacher wellbeing research literature. Furthermore, the research methodologies can be adapted and applied to explore the meanings of culturally based teacher wellbeing in other settings.

8.2 Summary of the research

This research investigated the relationship between teacher wellbeing, Self-Determination Theory (SDT) psychological needs and Confucian culture within the context of rural Jilin Province, China. This aim was achieved by addressing the research questions of the present study.

This study generated the following key findings which addressed the sub-research question: To what extent does SDT prescribed psychological needs fulfilment and how does Confucian cultural factors contribute to teachers' wellbeing in rural China? This further answered the overarching research question of the present study: What is the nature of rural teacher wellbeing within the Confucian cultural contexts of China? Thus, the present study achieved the following:

1) Defined teacher wellbeing in rural China as responsibility and harmony stemming from Confucianism built on SDT psychological needs of relatedness, autonomy and competency fostering rural teachers' optimal functioning that complement Hedonia and Eudaimonia wellbeing.
2) Confirmed the reliability and validity of the factor structure of the higher-order latent construct of Culture-rurality. Also, culture-rurality scale was developed in the study and that its relation to SDT was examined. Based on the qualitative and quantitative stages of the mixed-methods study, Culture-rurality under Confucian values embraces items reflecting positive characteristics of rural Chinese teachers. The derived second-order latent construct culture-rurality is conceptually close to the existing validated scales for teachers' overall wellbeing inclusive of subjective, psychological and professional wellbeing. Higher order latent construct of Culture-rurality explains the effects of three basic needs satisfaction. This further reveals the influential power of cultural values on first order constructs denoting three SDT psychological needs.
3) Demonstrated that Confucian cultural values are influential to teachers' wellbeing in rural China, and indicated that teachers' wellbeing through the lens of Confucianism is highly correlated to Aristotle's Hedonic and Eudaimonic wellbeing (correlation=0.81 between teachers' overall wellbeing and Culture-rurality). However, differences existed between Hedonia/Eudaimonia and Confucian perspectives of wellbeing. To interpret the meaning of teacher wellbeing in rural China, these subtle cultural differences should not be overlooked. This provides the accounts of necessity and premise to conceptualize teacher wellbeing based on Confucian cultural values.
4) Confirmative Factor Analysis (CFA) illustrated rurality indicators of teacher wellbeing in rural China, such as, "Rural landscape" and "Genuine and simple folk culture" all have high loadings (>=0.75) on the second-order construct Culture-rurality, which implies that rurality and culture are interrelated and interwoven as a unity.

5) Highlighted that although Confucianism values the harmony of family, and the value of responsibility under the context of teachers' work life is prioritized. It also implied that responsibility for rural students is the underlying mechanism of rural teachers' optimal functioning instead of the narrow interests of teachers' own family.
6) Found that simply dividing human cultures into general categories of collectivist and individualist are not informative in terms of studying a social phenomenon such as teacher wellbeing. The present study further revealed that the overarching higher-order culture-rurality factor explains rural teachers' wellbeing which can be further conceptualized based on Confucianism, and the Confucian cultural values of responsibility and harmony are fundamental to SDT psychological needs' satisfaction, higher-order construct Culture-rurality and teacher wellbeing.
7) Found that the standardized coefficients of the regression model show that culture-rurality is a more robust predictor (coefficient=0.81) of rural teacher wellbeing, than individual SDT psychological needs of relatedness (coefficient=0.23), autonomy (coefficient=0.27) and competency (coefficient=0.38). This suggested that the overarching second-order culture-rurality factor explains rural teachers' state of internalization of Confucian values predicting optimal wellbeing.
8) By triangulating the quantitative analysis findings with the qualitative data, this research elucidated how the overarching culture-rurality factor positively affects rural teachers' wellbeing. Culture-rurality can be operationalized as a sufficient response to teachers needs satisfaction based on SDT psychological needs theory, so culture-rurality is interpreted as a human needs' fulfilment process elucidating Confucian values with respect to responsibility and harmony which contribute to healthy teacher wellbeing.
9) The CFA analysis revealed that relatedness has the highest loading on culture-rurality. According to the CFA results, relatedness showed the strongest correlation (0.91) with second-order factor culture-rurality, followed by autonomy (0.9) and competency

(0.88). The CFA results showed that autonomy and relatedness are more strongly related to teachers' needs fulfilment and optimal wellbeing, competency shows the weakest link to teacher wellbeing because Confucianism highlights self-reflection and self-criticism, as such competency is de-emphasized. This implied that Confucian perspectives of wellbeing value relatedness and autonomy, however, it de-emphasized competency.

10) The results of multidimensional scaling analysis revealed that rural Chinese teachers do not view their participation in decision making critical to their wellbeing. This implied the emphasized value of harmony in Confucian culture hinders teachers' intentions to be involved in leadership, as this may make rural teachers feel uncomfortable and isolated.

Furthermore, the following findings also addressed the sub-research question of: **What multiple factors contribute to teachers' optimal functioning and wellbeing in rural China?** These findings were that:

1) More experienced rural teachers are positively associated with higher personal wellbeing (including subjective and psychological wellbeing), but negatively associated with professional wellbeing.
2) Salary is not a significant indicator of rural teachers' wellbeing. This reflected the problem posed in the introduction chapter, that the policy initiatives of using salary as an incentive to attract quality teachers to rural schools does not work effectively in China. Furthermore, this finding showed the conceptual closeness between Confucianism and Eudaimonia, as SDT suggests that Eudaimonic wellbeing is not facilitated by materialism
3) Gender moderates age and educational attainment on rural teachers' status of flourishing. Males and higher qualified teachers are associated with lower levels of wellbeing. However, male teachers are inclined to thrive when they are older.

4) Rural teachers with 5-9 years of experience have the lowest level of SDT psychological needs satisfaction, Culture-rurality and overall wellbeing.
5) Rural teachers with 20-29 years of experience have the second lowest levels of SDT psychological needs satisfaction, Culture-rurality and overall wellbeing.
6) Teachers' aged over 50, is a significant predictor of the status of flourishing. Rural teachers in this age group are three times more likely to be thriving rather than languishing. Accordingly, rural teachers with 30 years or more experiences have higher levels of wellbeing compared to less experienced teachers. The present study revealed that teachers close to retirement age are more likely flourishing in rural schools of China.
7) Rural teachers are at risk of leaving their teaching careers. 10% of rural teachers were languishing with 39% surviving. These statistics implied a situation that may leave rural children in an even more disadvantaged situation because of a lack of quality rural teachers.
8) Rural teachers' wellbeing for 'teacher in charge of a class' is marginally higher than other teachers ($p = .0594$). This implies rural teachers' strong sense of responsibility rooted in Confucian culture. 'Teachers in charge of a class' normally have heavier workloads, but it did not lead to teacher burnout, on the contrary it resulted in higher levels of wellbeing. This demonstrated that Confucian culture plays a key role in rural Chinese teachers' optimal level of wellbeing, which can offset or even turn around negative effects such as heavy workload.

8.3 Significance and Strengths of the study

The present study contributed to the theoretical foundations of cultural effects on teacher wellbeing and the meaning of wellbeing for rural teachers under a Confucian cultural context in China, which lends theoretical and methodological support for teacher wellbeing research across cultures. As established in Chapter 1, Chapter 2 and Chapter 3, previous

teacher wellbeing studies have focused on western theories, and eastern culture has not figured prominently in the field of wellbeing. This thesis has addressed this theoretical gap based on empirical qualitative and quantitative data through a mixed-methods approach. It contributed to the literature on teacher wellbeing by investigating teachers' SDT psychological needs satisfaction in relation to Confucian culture.

The present study elucidated the importance of reconsidering the culturally relevant conceptualization of rural teachers' wellbeing based on Confucian values, and reflected the unique characteristic of teacher wellbeing in rural China. The original contribution of the present study was the successful adoption of Appreciative Inquiry (AI) informed mixed-methods approach, which revealed the nature of rural teacher wellbeing based on Confucian cultural values through an SDT theoretical lens.

The present study operationalized rural teacher wellbeing through Confucian cultural values which exposed an enhanced understanding of teacher wellbeing in an eastern culture. Wellbeing of rural teachers in Jilin Province, China was conceptualized based on Confucian cultural values. Teacher wellbeing was defined as 'responsibility' and 'harmony' stemming from Confucianism built on SDT psychological needs of 'relatedness', 'autonomy' and 'competency' fostering rural teachers' optimal functioning that complement Hedonia and Eudaimonia wellbeing. The Conceptualization of wellbeing was primarily drawn from western theories (Choi & Choi, 2016; Joshanloo, 2014; White & Jha, 2018b), and the definition of rural teacher wellbeing was based on Confucian values. This has thus made a meaningful contribution to the literature by addressing culturally relevant conceptualizations of teachers' wellbeing in the east.

In previous mixed-methods studies, wellbeing was normally measured by global measures, such as subjective, psychological and professional wellbeing which were developed in the west (Choi & Choi, 2016; Joshanloo, 2014; White & Jha, 2018b). As such, it was difficult to extract and understand the meaning of a cultural effect on wellbeing (Joshanloo, 2014; Scollon et al., 2016; White & Jha, 2018b). The AI informed mixed-

methods approach used in this study addressed this gap. To be specific, the research design included both qualitative and quantitative methods. Based on exploratory sequential mixed-methods research design, this approach facilitated the derivation of second-order construct of Culture-rurality embracing SDT three basic psychological needs (relatedness, competency and autonomy), Confucian values and rurality.

Upon the confirmation of Culture-rurality's reliability and validity, this approach proved to be an effective way to gauge teachers' wellbeing in rural China. The research design offered a fresh methodological angle to the teacher wellbeing literature. It treated teacher wellbeing as an integral part of Chinese Confucian culture. This approach found variations in teacher wellbeing within Confucian cultural context to gain in-depth understanding of rural teachers' wellbeing.

The research methodologies could be adapted and applied to explore the meanings of other culturally based teachers' wellbeing. Moreover, this approach shows advantages over using existing SDT psychological needs measures which are 'from researchers' rather than participants' points of view, which may "limit teachers' responses to fit within the perimeters of predetermined constructs" (Perry, Brenner, Collie, & Hofer, 2015, p. 10). Through engaging the voices of rural teachers, the study was able to explore what factors within the social and cultural contexts of rural China were positively related to teachers' wellbeing, and the answer to the key question on what wellbeing means to rural Chinese teachers. This approach offered a conducive way to empower rural teachers by doing research with them instead of for them, and was also in line with the core of AI which is about being positive and empowering. Through the AI approach, teachers' wellbeing in rural China was understood as teachers' sense of responsibility and harmony stemming from the beliefs and values of Confucianism and rural societal context in China, and was underpinned by SDT psychological needs of relatedness, autonomy, competency, yet is unique to Hedonia and Eudaimonia wellbeing, and fostering rural teachers' optimal functioning.

8.4 Implications

Retaining quality rural teachers is a complex task faced by educational policy makers worldwide, and the various economic, cultural and even geographic the factors and reasons are different among countries. While much attention has been paid to the material incentives to lift teacher rewards, teacher wellbeing has been neglected. The present study found rural teacher SDT psychological needs fulfilment is highly correlated with multidimensional teacher wellbeing including the aspects of subjective, psychological and professional wellbeing. This offers an avenue and premise to conceptualize teacher wellbeing based on psychological needs and to further operationalize rural teacher wellbeing. This study further promoted a better understanding of the multifactorial nature of teacher wellbeing based on a Confucian cultural context specifically. This may potentially help researchers and policy makers grapple with teacher shortage issues. It is also amenable to future interventions that can retain quality teachers in rural China.

Based on the narratives of the interviews, it was found that many rural teachers in China are thriving in their teaching careers, however, little is understood about what has driven their success. This study identified the drivers of thriving for rural Chinese teachers through an AI informed mixed-methods design. The definition of rural Chinese teacher wellbeing deepens the knowledge of teacher wellbeing, and exerts empirical implications. It possesses implications by elucidating the fundamental drivers of optimal teacher wellbeing to inform quality teacher retention strategies and policies with a focus on promoting rural teachers' sense of responsibility and harmony.

The present study confirmed that SDT basic psychological needs foster optimal levels of wellbeing which emerged from the satisfied conditions of perceived autonomy, competency and relatedness. However, simply prescribing basic psychological needs satisfaction on its face value by using generic measures would not be informative (White & Jha, 2018a), as well as practical for every distinct human society and culture. This study

fostered the understanding of rural teacher wellbeing by integrating SDT basic psychological needs with Confucian cultural values, which better informs future teachers' wellbeing interventions enabling teachers to thrive in a rural teaching career.

This study provided a novel methodological framework, to be specific, the construct of Culture-rurality was derived from the interview data which were analysed according to Confucian cultural framework, which was based on an AI informed mixed-methods design. In this way, the research findings may have more practical values to guide the strategies that endeavour to enhance teacher wellbeing under different social and cultural contexts. Therefore, this study is informative for future wellbeing studies undertaken in a non-Western cultural context to integrate distinctive cultural values with well-established theories developed from the West. This would be helpful to promote teacher wellbeing worldwide.

In summary, the findings presented here revealed that rural Chinese teacher wellbeing can be conceptualized as Confucian cultural values in terms of responsibility and harmony, which can guide strategies to enhance teacher wellbeing and further attract and retain quality teachers in rural China. The operational definition of rural Chinese teachers' wellbeing resonated with the definition of wellbeing adopted in the above literature review, which focused on positiveness and Confucian culture, which is "respecting individual, family and community beliefs, values, experiences, culture" and "underpinned by positive notions" (McCallum & Price, 2016, p.17). This echoes the 4-D process of AI, which demonstrated the most positive underlying strengths of rural teachers is their sense of responsibility and harmony. According to Downes and Roberts (2018, p. 36), to keep quality rural teachers, one of the key focuses should be on teachers' values "about rural teaching". Thus, policy makers can design tailored approaches and strategies to retain quality teachers by ameliorating SDT needs satisfaction to maintain optimal levels of rural teacher wellbeing based on Confucian values which have been embedded in Chinese culture for more than two millennia.

8.5 Limitations

It is inevitable that there were limitations to the present study.

1) As teachers participate on a voluntary basis, the sample was non-random.

2) The teacher wellbeing constructs were considered at an individual level only in this study, as the rigorous ethical requirements of anonymity, it was not possible to collect teachers' school information and to conduct multilevel analysis.

3) The sample of rural teachers does not include teachers who are teaching in high poverty rural schools, although there are no poverty rural regions in Jilin province, China, there are still villages below the poverty line in rural China. High poverty rural school teachers possess idiosyncrasies, such as they need to perform farming duties, and an important part of their working load is managing drop-out rural students (Wu, 2018). As such, the research findings of the present study cannot apply to rural schools in poverty areas of China.

   However, this study reflects its own strength from another angle, as much of the research on wellbeing of rural school teachers in poverty regions in China, in fact, the 'not so poor' rural teachers who are the majority of rural teachers upon Chinese government's poverty elimination initiatives which aim to wipe out poverty by 2020, research on their wellbeing has been overlooked. Notably, the present study shows 10% of rural teachers are languishing and 39% are only surviving. The rural teachers in Jilin Province, China are at risk of leaving the teacher career, which may leave rural children in an even more disadvantaged situation.

4) The subjectivity has to be disclosed as to the Confucian culture framed factors in relation to teachers' wellbeing. Although the categorization of survey items into the three universal psychological needs and rurality is through rigorous quantitative analyses, the labelling of the components is subjective.

5) The present study can be seen as the first step for culturally relevant conceptualization of rural teachers' wellbeing in China, whereas the study was undertaken in Jilin Province, China, it does not elaborate the concept of rural teacher wellbeing for the whole of China. However, the notions of subjective, psychological and professional wellbeing are primarily drawn on western theories (Choi & Choi, 2016; Joshanloo, 2014; White & Jha, 2018b). The present study highlights the importance of reconsidering the culturally relevant conceptualization of rural teacher wellbeing based on Confucian cultural values to reflect the unique characteristic of teacher wellbeing in rural China.

Although there are limitations for the research, this study has contributed to the literature on cultural construal of teachers' wellbeing research under a non-western context.

8.6 Recommendations for future research

There is a lack of empirical research on rural teachers' wellbeing under non-western cultural contexts, future research may consider the following directions:

1) Interventions could be designed to improve rural Chinese teachers' wellbeing by focusing on the Confucian cultural nature of teacher wellbeing developed in the present study.
2) Interview and self-reported survey data were used in this study. Future research may utilize broader data sources e.g. observations, in order to improve the objectivity of the research.
3) Teachers' school information due to privacy concerns was not collected. Future research may consider feasible solutions to collect teachers' school identity to undertake hierarchical multi-level modelling to enhance the power of generalizability.
4) The results of CFA show that the parameter i.e. RMSEA is close to the goodness of fit threshold, which implies there is a potential risk that CFA may fail to reject

mis-specified models (Heene, Hilbert, Draxler, Ziegler, & Bühner, 2011). This may be because the present study only provided the insights about rural teachers' working lives, there are other aspects of social factors that contribute to teacher wellbeing. As such, the conceptualization of wellbeing may not adequately cover all potential dimensions of teachers' wellbeing. Thus, further study may contribute to this line of research by including teachers' personal lives, such as teachers' families.

5) Rural teachers are in a close relationship with their students, which benefits teacher wellbeing. Future research could further explore empirical evidence to support the posited link between teacher wellbeing and student wellbeing.
6) As the present study suggests Hedonic/Eudaimonic based measures need cultural related adjustments to be unbiased towards eastern culture survey participants. This introduces the opportunities for research on teachers' wellbeing to design more suitable and efficient questionnaires for teachers from non-western cultures in the future.
7) There are other factors and forces to formulate the generative mechanisms with respect to rural Chinese teachers' wellbeing. Thus, there is a need for a seminal effort from teacher wellbeing research communities to design studies and to synthesize findings together to illuminate the deepest level of the phenomena in relation to optimal levels of teacher wellbeing, for example, a longitudinal study on rural teacher wellbeing may be recommended.

8.7 Concluding remarks

Teacher wellbeing has gained increasing attention worldwide, whereas the conceptualization and operationalization of teacher wellbeing are yet to be established in rural China. This is because little is known about the nature of teacher wellbeing for rural Chinese teachers. As such, we have very limited knowledge on how to enhance teachers'

wellbeing for rural teachers in China. At the time of writing this was the first study to systematically and empirically apply SDT basic psychological needs theory to a rural Chinese cultural context to examine teacher wellbeing, and simultaneously analyse multiple aspects combining teachers' subjective wellbeing, psychological wellbeing and professional wellbeing to elucidate the meaning of rural teacher wellbeing based on Confucian cultural values.

This study has both theoretical and practical benefits to the field of teacher wellbeing. The present study elucidates the importance of reconsidering the culturally relevant conceptualization of rural teachers' wellbeing based on Confucian values. This research examined the factors that fostered intrinsic and internalized extrinsic motivations that enabled rural teachers' certain behaviours to benefit optimal teacher wellbeing. The findings of the present study not only sustained the theoretical consistency of SDT but also found incongruence between the scientific theory and the specific cultural and societal beliefs of rural teachers. This advances the understanding of teacher wellbeing under eastern Confucian cultural settings.

The study first explored the factors that affected rural teacher wellbeing under rural Chinese cultural and societal settings based on a theoretical framework. The focus was on a Confucian conceptualization of teacher wellbeing under the dimensions of subjective, psychological and professional wellbeing of rural teachers. Subsequently, the study interrogated the factors based on Confucian values and their relationships with SDT psychological needs, and conceptualized rural Chinese teachers' wellbeing based on Confucian cultural values.

The study conceptualized teacher wellbeing as a multidimensional construct which contained eight constructs in three wellbeing domains of subjective, psychological and professional wellbeing and this was further collapsed to two domains by combining subjective and psychological wellbeing as one domain of general wellbeing. Confirmatory factor analysis supported three first order latent variables of relatedness, autonomy and

competency based on SDT. One second order latent variable of Culture-rurality embracing 23 positive indicators based on the phase 1 qualitative data analysis contributed to teachers' flourishing in rural China.

Resonating with eastern culture's relationship (缘分) and qualities or skills (风韵) focusing on psycho-spiritual development （德，道，无为) tapping the moral dimension of wellbeing, the findings revealed that Confucian cultural norms can be well integrated with western theory SDT. This is because the derived latent construct Culture-rurality is consistent with SDT psychological needs, and the regression results show Culture-rurality is the most robust positive predictor of teacher wellbeing in comparison to the individual needs of relatedness, autonomy and competency.

The study adopted a mixed-methods approach to explore rural teacher wellbeing in China and revealed that rural teacher wellbeing can be operationalized according to Confucian cultural values in terms of responsibility and harmony. The study confirmed the hypothesis which was derived from SDT, that rural teachers' optimal level of wellbeing is a function of fulfilment of basic psychological needs, that is the three basic psychological needs of relatedness, autonomy and competency are essential to teacher wellbeing in rural China. However, this is mediated by the overarching factor of Culture-rurality. The study further elucidated the utility of SDT in a Confucian cultural context, and construed the conceptualization of teacher wellbeing based on Confucian cultural values. This reflects the social and cultural distinctive nature of wellbeing and offered a cross-cultural understanding of teacher wellbeing under the context of rural China.

The operational definition of rural teacher wellbeing was derived from Culture-rurality construct based on Confucian values. Culture-rurality can thus be conceptualized as a sufficient response to teachers' psychological needs satisfaction process based on SDT needs theory elucidating core Confucian values in terms of responsibility and harmony. The study also validated that AI informed mixed-methods is an effective approach, and an engaging process to explore teachers' optimal wellbeing due to the focus on positive experiences and successes of rural teachers.

Finally, the study demonstrated that Confucianism provides a platform for the internalization of rural Chinese cultural values through SDT psychological needs fulfilment which fosters rural Chinese teachers' flourishing. It supports a theoretical foundation which underpins the importance and meaningfulness of the integration of eastern Confucian culture with SDT, and Confucianism based teacher wellbeing operationalization and conceptualization. As responsibility and harmony are core to Confucianism, the findings revealed that Confucian values are essential in shaping rural teachers' wellbeing, which are the institutional pre-requisites for realizing basic psychological needs. Therefore, rural Chinese teachers' wellbeing is defined as responsibility and harmony stemming from Confucianism, built on SDT psychological needs of relatedness, autonomy and competency, and thus foster rural teachers' optimal functioning that complements Hedonia and Eudaimonia wellbeing.

Appendices

Appendix A: Ethics approval (Phase 1)

RESEARCH SERVICES
OFFICE OF RESEARCH ETHICS, COMPLIANCE AND INTEGRITY
THE UNIVERSITY OF ADELAIDE

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CRICOS Provider Number 00123M

Our reference 33052

26 July 2018

Professor Faye McCallum
School of Education

Dear Professor McCallum

ETHICS APPROVAL No: H-2018-155
PROJECT TITLE: Teacher's wellbeing in rural Jilin Province China: An appreciative study

The ethics application for the above project has been reviewed by the Low Risk Human Research Ethics Review Group (Faculty of Arts and Faculty of the Professions) and is deemed to meet the requirements of the *National Statement on Ethical Conduct in Human Research (2007)* involving no more than low risk for research participants.

You are authorised to commence your research on: 26/07/2018
The ethics expiry date for this project is: 31/07/2021

NAMED INVESTIGATORS:

Chief Investigator:	Professor Faye McCallum
Student - Postgraduate Doctorate by Research (PhD):	Mr Bo Cui
Associate Investigator:	Associate Professor Mathew White

CONDITIONS OF APPROVAL: Thank you for your responses dated 10.07.2018 and 24.07.2018 to the matters raised. The revised application provided 24.07.2018 has been approved.
Approval has been given for Stage 1. It is a condition of approval that details of stage 2 are provided prior to commencement of that stage.

Ethics approval is granted for three years and is subject to satisfactory annual reporting. The form titled Annual Report on Project Status is to be used when reporting annual progress and project completion and can be downloaded at http://www.adelaide.edu.au/research-services/oreci/human/reporting/. Prior to expiry, ethics approval may be extended for a further period.

Participants in the study are to be given a copy of the information sheet and the signed consent form to retain. It is also a condition of approval that you immediately report anything which might warrant review of ethical approval including:

- serious or unexpected adverse effects on participants,
- previously unforeseen events which might affect continued ethical acceptability of the project,
- proposed changes to the protocol or project investigators; and
- the project is discontinued before the expected date of completion.

Yours sincerely,

Dr Anna Olijnyk
Convenor

Dr Jungho Suh
Convenor

The University of Adelaide

Appendix B: Participant information sheet (Phase 1)

PARTICIPANT INFORMATION SHEET

PROJECT TITLE: Teachers' Wellbeing in Rural Jilin Province China: An Appreciative Study

HUMAN RESEARCH ETHICS COMMITTEE APPROVAL NUMBER: H-2018-155

PRINCIPAL INVESTIGATOR: Professor Faye McCallum

STUDENT RESEARCHER: Bo Cui

STUDENT'S DEGREE: PhD in Education

Dear Participant,

You are invited to participate in the research project described below to explore teachers' wellbeing in Jilin Province, China.

What is the project about?

This research project is aiming to identify the factors that positively affect teacher wellbeing in rural China. Teachers require optimal functioning and wellbeing to teach well. Maintaining quality teachers in rural areas is a growing concern worldwide, however, in rural China this is exemplified because it is a disadvantaged area in comparison to their urban counterparts in terms of working conditions, rewards and professional development opportunities. The findings of this PhD study will enable policy makers and schools to undertake strategies and actions to address teachers' wellbeing that enable positive educational outcomes for students.

Who is undertaking the project?

This project is being conducted by Bo Cui, a PhD candidate from the University of Adelaide, who is supervised by internationally renowned scholars in Education, Professor Faye McCallum and Associate Professor Mathew White.

Why am I being invited to participate?

You are being invited to participate in an interview with regards to teacher wellbeing. The research is to be undertaken with teachers who have been teaching in rural school for

more than 5 years and who are passionate about teaching and who are effective in rural school teaching.

What am I being invited to do?

You are being invited to do a 30-45 minutes' interview, your participation is entirely voluntary, and you can choose to withdraw anytime you wish to. In order to gain accurate information, interview will be audio recorded using a digital audio recorder/smart phone. You will be asked about what makes you thrive in your school as a teacher.

How much time will my involvement in the project take?

The interview will take around 30-45 minutes.

Are there any risks associated with participating in this project?

This study focuses on the positive aspects of being a teacher in Jilin Province of rural China. During the interview process it is unlikely that you could experience discomfort. However, if you do you can withdraw from the interview at any time. In the unlikely event of an adverse response, the interview will be discontinued. You will be encouraged to speak to the school's counsellor, if your school does not have a counsellor, you will be provided with contact information of a local doctor who is trained in mental health medicine, or a mental health help line.

What are the potential benefits of the research project?

This research project aims to identify positive factors to teacher wellbeing that will be beneficial for policy makers and schools, so they can undertake strategies and actions to address teachers' wellbeing that lead to positive educational outcomes for students. Also, this research will allow the participants to discuss their own positive teaching experiences, which will give you a sense of achievement and a reflection on your strengths.

Can I withdraw from the project?

Participation in this project is completely voluntary. If you agree to participate, you can withdraw from the study at any time. Participation in this project is completely voluntary. Findings of the research will be circulated through thesis or potential publications, and if material you have contributed has already been published, it will not be possible to withdraw it from that thesis/publication. However, you may withdraw your contribution from the research data, and, in that case, it will not be used in any further publications.

What will happen to my information?

During the research process all transcripts, audio recordings and participants' personal details and information will be stored in the University of Adelaide's online secured

storage Box. The transcripts will be provided to you for review through email. Your personal data will only be used as described in this participant information sheet and it will only be disclosed according to the consent provided, unless required by law. According to the University of Adelaide's data management policy, the data will be securely stored for five years, after which the data will be destroyed. Only the PhD student and his supervisors will be able to access the data.

Who do I contact if I have questions about the project?

Any questions regarding this project should be addressed to: Principal Supervisor Professor Faye McCallum email: Phone:, or Student Mr Bo Cui Email:

What if I have a complaint or any concerns?

This research project will be conducted according to the NHMRC National Statement on Ethical Conduct in Human Research (2007). If you have questions or problems associated with the practical aspects of your participation in the project, or wish to raise a concern or complaint about the project, then you should consult the Principal Investigator. If you wish to speak with an independent person regarding concerns or a complaint, the University's policy on research involving human participants, or your rights as a participant, please contact the Human Research Ethics Committee's Secretariat on:

Phone: +61 8 8313 6028

Email: hrec@adelaide.edu.au

Post: Level 4, Rundle Mall Plaza, 50 Rundle Mall, ADELAIDE SA 5000

Any complaint or concern will be treated in confidence and fully investigated. You will be informed of the outcome.

If I want to participate, what do I do?

If you wish to participate, please sign both copies of the enclosed consent form, retain on for your own records, and return the other (scanned copy as an email attachment) to:

Yours sincerely,

Professor Faye McCallum and Mr Bo Cui

Appendix C: Participant consent form (Phase 1)

Human Research Ethics Committee (HREC)

CONSENT FORM

1. I have read the attached Information Sheet and agree to take part in the following research project:

Title:	Teacher's Wellbeing in Rural Jilin Province China: An Appreciative Study
Ethics Approval Number:	**H-2018-155**

2. I have had the project, and the potential risks and burdens fully explained to my satisfaction by the researcher. I have had the opportunity to ask questions about the project and my participation. My consent is given freely.

3. I understand the purpose of the research project, and it has also been explained that my involvement may not be of any benefit to me.

4. I agree to participate in the activities outlined in the participant information sheet.

5. I agree to be:
   ☐ Audio/video recorded

6. I understand that as my participation is anonymous, and I can withdraw at any time.

7. I have been informed that the information gained in the project may be published in a journal article, thesis and/or conference presentations.

8. I have been informed that in the published materials will not identify me and my personal results will not be divulged. While all efforts will be made to remove any information that might identify you, as the sample size is small, complete anonymity cannot be guaranteed in the report. However, the upmost care will be taken to ensure that no personally identifying details are revealed.

9. I agree to my information being used for future research purposes limited to this PhD study and related publications: Yes ☐ No ☐

10. My information will only be used for the purpose of this research project and it will only be disclosed according to the consent provided, except where disclosure is required by law.

11. I am aware that I should keep a copy of this Consent Form, when completed, and the attached Information Sheet.

Participant to complete:

Name: _____ Signature: _____ Date: _____

Researcher/Witness to complete:

I have described the nature of the research to _____

(print name of participant)

and in my opinion, she/he understood the explanation.

Signature: _____ Position: _____ Date: _____

Appendix D: Interview protocol (English and Chinese)

1. How do you feel about your current wellbeing (comparing to 5/10… years ago)?

   和 10 年前相比，你如何评价现在的幸福感？具体：开心吗？工作/人生的意义？

   Probe: Can you tell me why you scored your wellbeing that way? 为什么。。评价？

   Probe: You mentioned that your wellbeing is on a downward/upward trend, why is that?

2. Do you feel happy teaching at the rural school and why? 在乡村教书开心吗？

   Probe: May I have more details about what makes you feel this way? For example, such as living conditions 生活条件, facilities 设施, salaries, work load 工作量, social respect/status/belongs, stable job, students' success? 社会地位/安于本职/稳定家庭/安居/自豪/体面工作/照顾父母子女/归属于乡村/热爱教育事业/做学生榜样/工资重要吗？-平和无求；留守儿童/比例/难度？家长配合？

   You mentioned X, why X factor is most important to you – why was that?

   Do you feel a sense of sacrificing teaching in rural school but rewarding when you see students' success? 在相对艰苦的乡村教书，是否会感觉为了教育自我牺牲/奉献自我，但是看到学生的成绩就充满了满足感？reunion

3. Probe: What is the main sacrifice you feel? 主要感觉哪方面有自我牺牲呢/奉献自我？ What has been the most rewarding time? 什么时候最感觉有成就感？学生/家长/家人/校长的认可？ Are there any feelings that describe the sense of sacrifice against the sense of reward? 成就感和牺牲感的冲突； Probe: can you think of anything from a professional point of view that you have sacrificed? 职业发展有哪些牺牲？

Probe: can you think of anything from a personal point of view that you have sacrificed?

Probe: when you see your students learning, how do you feel? Do these feelings outweigh the sacrifices you have identified previously? 当你看到学生认真学习并且有成绩的时候，成就感是否超越了牺牲/不值得感受?

4. How do you compare your conditions with urban city school teachers? 如何比较/看待你的工作生活环境和城市教师 How do you compare your living/working conditions with urban city school teachers and/or your peers? 和乡村的做其他工作的乡亲比较呢？

   Probe: When you mentioned X, how do you feel …?

5. Could you describe your students' (academic/social/emotional) outcomes? 请描述一下学生的表现？ X会如何影响你的幸福感呢？学生做农活/留守儿童/学生的求知欲/学习热情/课业压力/班级大小/多少人;

Probe: You indicated that your students are X (academically poor) (socially well adjusted) (emotionally stable), how does this affect/support your wellbeing?

6. What unique features at school/home/community positively affect your wellbeing? 学校/家庭/乡村的哪些特点/情况/因素方面影响你的幸福感;

Probe: You mentioned X, how do you think X supports your wellbeing?

7. What makes you go to work at this school every single day? 什么是促使你每天来学校教书育人的动力？

8. What is your coping strategy for the challenges and turns out to be a great outcome? 你有什么方式来应对在乡村教书的压力和挑战/怎么应对/如何解决/调节，如何将压力变为了动力？

Probe: You mentioned X, why X?

9. What did you gain from your rural teaching experience? 你认为在乡村做教师的收获是什么？你做为乡村教师对学生/社区最大的价值体现是/价值/意义/作用？/发挥什么作用？

Probe:

Could you list 1-3 items that you are content about your professional life? 教师职业生涯最满意/开心的 3 件事情;

Could you tell me a story about your best experience? 最难忘的经历？

If you/your students/school were at its/their best, what would it look like? 对学校/学生最大的期望是/有什么期望？

Appendix E: Ethics approval (Phase 2)

RESEARCH SERVICES
OFFICE OF RESEARCH ETHICS, COMPLIANCE AND INTEGRITY
THE UNIVERSITY OF ADELAIDE

LEVEL 4, RUNDLE MALL PLAZA
50 RUNDLE MALL
ADELAIDE SA 5000 AUSTRALIA

TELEPHONE +61 8 8313 5137
FACSIMILE +61 8 8313 3700
EMAIL hrec@adelaide.edu.au

CRICOS Provider Number 00123M

Our reference 33203

13 September 2018

Professor Faye McCallum
School of Education

Dear Professor McCallum

ETHICS APPROVAL No: H-2018-201
PROJECT TITLE: Teacher's Wellbeing in Rural Jilin Province China: an Appreciative Study

The ethics application for the above project has been reviewed by the Secretariat, Human Research Ethics Committee and is deemed to meet the requirements of the *National Statement on Ethical Conduct in Human Research (2007)* involving no more than low risk for research participants.

You are authorised to commence your research on: 13/09/2018
The ethics expiry date for this project is: 30/09/2021

NAMED INVESTIGATORS:

Chief Investigator:	Professor Faye McCallum
Student - Postgraduate Doctorate by Research (PhD):	Mr Bo Cui
Associate Investigator:	Associate Professor Mathew White

CONDITIONS OF APPROVAL: Thank you for your considered responses to the matters raised. The revised application provided by Bo Cui on 12.09.18 has been approved.

Ethics approval is granted for three years and is subject to satisfactory annual reporting. The form titled Annual Report on Project Status is to be used when reporting annual progress and project completion and can be downloaded at http://www.adelaide.edu.au/research-services/oreci/human/reporting/. Prior to expiry, ethics approval may be extended for a further period.

Participants in the study are to be given a copy of the information sheet and the signed consent form to retain. It is also a condition of approval that you immediately report anything which might warrant review of ethical approval including:

- serious or unexpected adverse effects on participants,
- previously unforeseen events which might affect continued ethical acceptability of the project,
- proposed changes to the protocol or project investigators; and
- the project is discontinued before the expected date of completion.

Yours sincerely,

Ms Michelle White
Secretary

The University of Adelaide

Appendix F: Participant information sheet (Phase 2)

PARTICIPANT INFORMATION SHEET

PROJECT TITLE: Teachers' Wellbeing in Rural Jilin Province China: An Appreciative Study

HUMAN RESEARCH ETHICS COMMITTEE APPROVAL NUMBER: H-2018-201

PRINCIPAL INVESTIGATOR: Professor Faye McCallum

STUDENT RESEARCHER: Bo Cui

STUDENT'S DEGREE: PhD in Education

Dear Participant,

You are invited to participate in the research project described below to explore teachers' wellbeing in Jilin Province, China.

What is the project about?

This research project is aiming to identify the factors that positively affect teacher wellbeing in rural China. Teachers require optimal functioning and wellbeing to teach well. Maintaining quality teachers in rural areas is a growing concern worldwide, there is no exception for rural China in terms of working conditions, rewards and professional development opportunities. The findings of this PhD study will enable policy makers and schools to undertake strategies and actions to address teachers' wellbeing that enable positive educational outcomes for students.

Who is undertaking the project?

This project is being conducted by Bo Cui, a PhD candidate from the University of Adelaide, South Australia, Australia, who is supervised by internationally renowned scholars in Education, Professor Faye McCallum and Associate Professor Mathew White.

Why am I being invited to participate?

You are being invited to participate in an interview with regards to teacher wellbeing. The research is to be undertaken with teachers who are currently teaching in rural school. You may choose to withdraw any time prior to the submission of survey.

What am I being invited to do?

You are being invited to do a 10-15 minutes' survey, your participation is entirely voluntary, and you can choose to withdraw anytime you wish to. This survey instrument has a combination of multiple choice and Likert scale questions. It has been developed through the adaption of a previous survey instrument developed by Yildirim (2015), Renshaw, Long, & Cook (2015) and Dagenais-Desmarais and Savoie (2012).

How much time will my involvement in the project take?

The interview will take around 10-15 minutes. By clicking on the --> button below your consent to participate in this survey is implied. If you do not wish to participate you could simply close the window and you will be automatically led out of the survey.

Are there any risks associated with participating in this project?

Your participation involves no foreseeable risk and should take up to 15 minutes. However, if you do feel uncomfortable please feel free to stop filling the questionnaire. If necessary please contact me via the email provided below, you will be encouraged to speak to the school's counsellor, if your school does not have a counsellor, you will be provided with contact information of mental health help line.

What are the potential benefits of the research project?

This research will allow the participants to be mindful of various factors that contribute to their optimal wellbeing. Also, the survey embraces a multi-dimensional view of wellbeing by including subjective wellbeing, psychological wellbeing and professional wellbeing scales in the questionnaire. This may encourage teachers to take better care of themselves and to pay attention to their overall wellbeing.

Can I withdraw from the project?

Participation in this project is completely voluntary. You can withdraw from the survey at any time prior to the submission of your final response by simply closing the window.

What will happen to my information?

Each survey response will be deidentified by the software (Qualtrics) so your identity will remain anonymous. The survey data will be stored in the University of Adelaide's online secured storage Box for up to 5 years and will only be accessible by Bo and his supervisors. If you choose to provide your email address for a follow up research results briefing, your anonymity will also be guaranteed. In the publication or dissemination of any findings from the study the confidentiality and anonymity of individual participants will be ensured through the use of either pseudonyms and/or research codes.

Who do I contact if I have questions about the project?

Any questions regarding this project should be addressed to: Principal Supervisor Professor Faye McCallum email: Phone: or Student Mr Bo Cui Email:

What if I have a complaint or any concerns?

This research project will be conducted according to the NHMRC National Statement on Ethical Conduct in Human Research (2007). If you have questions or problems associated with the practical aspects of your participation in the project, or wish to raise a concern or complaint about the project, then you should consult the Principal Investigator. If you wish to speak with an independent person regarding concerns or a complaint, the University's policy on research involving human participants, or your rights as a participant, please contact the Human Research Ethics Committee's Secretariat on:

Phone: +61 8 8313 6028

Email: hrec@adelaide.edu.au

Post: Level 4, Rundle Mall Plaza, 50 Rundle Mall, ADELAIDE SA 5000

Any complaint or concern will be treated in confidence and fully investigated. You will be informed of the outcome.

If I want to participate, what do I do?

By clicking on the --> button below your consent to participate in this survey is implied. If you do not wish to participate you could simply close the window and you will be automatically led out of the survey.

Yours sincerely,

Professor Faye McCallum and Mr Bo Cui

Appendix G: Questionnaire items

Demographic items	
Q1	age
Q2	gender
Q3	qualification
Q4	major at university
Q5	subject currently teaching
Q6	How long have you worked in this rural area
Q7	Prior to working in this area, did you live/work in other places
Q8	Are you a teacher in charge of a class
Q9	teaching primary or secondary
Q10	Years of teaching experience
Q11	Income per month
Teacher psychological wellbeing items	
Q12_1	I feel teaching is exciting
Q12_4	I feel proud to be a rural teacher
Q12_6	I find meaning in my work
Q12_9	I feel that my work efforts are appreciated
Q12_10	I feel that the people I work with recognize my abilities
Q12_11	I can take control of my work
Q12_12	I want to be involved in my organization beyond my work duties
Q12_13	I like my job
Q12_14	As a rural teacher, I have strong sense of satisfaction
Q12_15	My colleagues trust me
Q12_16	I feel I am important to my school
Q12_17	I care about my school's teaching management
Q12_18	I like taking challenging teaching tasks
Q12_19	I endeavour to achieve the goal of my school
Teacher subjective wellbeing items	
Q13_1	I feel like I belong at this school
Q13_2	I am a successful teacher
Q13_3	I can really be myself at this school
Q13_4	I am good at helping students learn new thing
Q13_5	I feel like people at this school care about me
Q13_6	I have accomplished a lot as a teacher
Q13_7	I am treated with respect at this school
Q13_8	I feel like my teaching is effective and helpful
Self-composed items (Culture-rurality)	
Q14_1	Rural landscape
Q14_2	Genuine folk culture
Q14_3	Little pressure from students' parents
Q14_4	I have rural background
Q14_5	Help rural children to learn

Q14_6	Deal with rural children, their parents and my colleagues feel like family members
Q14_7	Rural facilities and infrastructure
Q14_8	Limited knowledge base for rural children
Q14_9	Offer meaningful help for the left-behind children or other disadvantaged children
Q14_10	I am a role model for my students
Q14_11	I am able to keep on improving myself to be a better teacher for my students
Q14_12	I feel my career is so rewarding when I see my children growing up
Q14_13	What I teach is matching our rural children's real needs
Q14_14	Teacher is a stable job which gives me sense of security
Q14_15	As a teacher gives me benefits and convenience to take care of my children and parents
Q14_16	I do not desire for material stuff such as professional ranks; I prefer simple life
Q14_17	I get used to the life as a teacher in rural region
Q14_18	I accept my rural teacher identity
Q14_19	I belong to rural communities
Q14_20	Close relationship with my students and they keep in touch with me
Q14_21	I can take control of my job
Q14_22	My students are passionate for knowledge and eager to learn
Q14_23	The improving teaching facilities of our school
Teacher professional wellbeing items	
Q15_1	I follow recent developments about my profession
Q15_2	Students' parents always support me
Q15_3	When I have a problem related with my profession, school management and I solve it together
Q15_4	When I enter the class, all students are ready to study
Q15_5	In this school students' demands of help are met immediately
Q15_6	Students in this class take care to create a pleasant learning
Q15_9	School staff is ready to help me if I demand about something related with teaching
Q15_10	I receive appreciations because of my professional success
Q15_11	School management always supports me in developing my capabilities of teaching
Q15_12	I have knowledge and skills to carry out my profession adequately
Q15_13	I effectively and productively utilize technological devices in my professional area
Q15_14	I usually now how to get through to students, parents and school staff

Appendix H: Questionnaire

Dear teachers,

Thanks very much for your kind help on the survey data collection.

The research is being undertaken to form the basis of Bo Cui's PhD at the University of Adelaide, under the supervision of Professor McCallum and Associate Professor White.

To ensure the confidentiality and anonymity of survey your information and contact details have not been shared with the research team.

The participation is completely voluntary, and you may withdraw at any time prior to the submission of survey responses. Submission of responses will be indicative of consent to participate. More information can be found in the Participant Information Sheet, which is imbedded as the preamble to the survey.

By clicking on the --> button below your consent to participate in this survey is implied. If you do not wish to participate simply close the window and you will be automatically led out of the survey.

Thanks.

Yours sincerely,

Teacher Gao on behalf of Professor Faye McCallum Associate Professor White Mr Bo Cui

Q1 Your age: changed

- ○ 18 to 25
- ○ 26 to 40
- ○ 41 to 55
- ○ 56 and above

Q2 Your gender

- ○ Female
- ○ Male

Q3 Your qualification

- ○ lower than bachelor’s degree
- ○ Bachelor’s degree
- ○ Master’s degree and above

Q4 What is your major

- ○ Math
- ○ Chinese
- ○ English
- ○ Music/Arts/PE
- ○ Science
- ○ Others

Q5 What subject you are currently teaching (you can choose more than 1 answer)

- ☐ Math
- ☐ Chinese
- ☐ English
- ☐ Music/Arts/PE
- ☐ Science
- ☐ Others

Q6

How long have you worked in this rural area:

- ○ Less than 1 year
- ○ 1-4 years
- ○ 5-10 years
- ○ More than 10 years
- ○ from birth

Q 7. Prior to working in this area, did you live/work:

- ○ In another rural area
- ○ In an urban area
- ○ all the time here

Q8 Are you a teacher in charge of a class? Yes/No

Q9 You are teaching

- ○ Primary school
- ○ Secondary school

Q10 Years of teaching experience

- ○ 0-4 years
- ○ 5-9 years
- ○ 10-19 years
- ○ 20-29 years
- ○ 30 years and above

Q11 Income per month (RMB)

- ○ Below 2500
- ○ 2500 to 5000
- ○ Over 5000
- ○ Prefer not to disclose

Q12 Please choose one answer most suitable for your current feeling or situation

	almost never	sometimes	often	almost always
I feel teaching is exciting	○	○	○	○
I feel proud to be a rural teacher	○	○	○	○
I find meaning in my work	○	○	○	○
I find meaning in my work	○	○	○	○
I feel that my work efforts are appreciated	○	○	○	○
I feel that the people I work with recognize my abilities	○	○	○	○
I can take control of my work	○	○	○	○
I want to be involved in my organization beyond my work duties	○	○	○	○
I like my job	○	○	○	○
As a rural teacher, I have strong sense of satisfaction	○	○	○	○
My colleagues trust me	○	○	○	○

I feel I am important to my school	○	○	○	○
I care about my school's teaching management	○	○	○	○
I like taking challenging teaching tasks	○	○	○	○
I endeavor to achieve the goal of my school	○	○	○	○

Q13 Please choose one answer most suitable for your current feeling or situation (continue to next page)

	almost never	sometimes	often	almost always
I feel like I belong at this school	○	○	○	○
I am a successful teacher	○	○	○	○
I can really be myself at this school	○	○	○	○
I am good at helping students learn new thing	○	○	○	○
I feel like people at this school care about me	○	○	○	○
I have accomplished a lot as a teacher	○	○	○	○
I am treated with respect at this school	○	○	○	○
I feel like my teaching is effective and helpful	○	○	○	○

Q14 **The following factors encourage me to continue passionately teaching in my rural school : (continue to next page)**

	strongly disagree	Disagree	agree	strongly agree
Rural landscape	○	○	○	○
Genuine folk culture	○	○	○	○
Little pressure from students' parents	○	○	○	○
I have rural background	○	○	○	○
Help rural children to learn	○	○	○	○
Deal with rural children, their parents and my colleagues feel like family members	○	○	○	○
Rural facilities and infrastructure	○	○	○	○
Limited knowledge base for rural children	○	○	○	○
Offer meaningful help for the left-behind children or other disadvantaged children	○	○	○	○
I am a role model for my students.	○	○	○	○
I am able to keep on improving myself to be a better teacher for my students.	○	○	○	○
I feel my career is so rewarding when I see my children growing up	○	○	○	○
What I teach is matching our rural children’s real needs	○	○	○	○

Teacher is a stable job which gives me sense of security	○	○	○	○
As a teacher gives me benefits and convenience to take care of my children and parents	○	○	○	○
I do not desire for material stuff such as professional ranks, I prefer simple life	○	○	○	○
I get used to the life as a teacher in rural region	○	○	○	○
I accept my rural teacher identity	○	○	○	○
I belong to rural communities	○	○	○	○
Close relationship with my students and they keep in touch with me	○	○	○	○
I can take control of my job	○	○	○	○
My students are passionate for knowledge and eager to learn	○	○	○	○
The improving teaching facilities of our school	○	○	○	○

Q15 Please choose one answer most suitable for your current feeling or situation

	almost never	sometimes	often	almost always
I follow recent developments about my profession	○	○	○	○
Students' parents always support me	○	○	○	○
When I have a problem related with my profession, school management and I solve it together	○	○	○	○
When I enter the class all students are ready to study	○	○	○	○
In this school students' demands of help are met immediately	○	○	○	○
Students in this class take care to create a pleasant learning	○	○	○	○
I receive appreciations because of my professional success	○	○	○	○
School staff is ready to help me if I demand about something related with teaching	○	○	○	○
School management always supports me in developing my capabilities of teaching	○	○	○	○
I have knowledge and skills to carry out my profession adequately	○	○	○	○
I have knowledge and skills to carry out my profession adequately	○	○	○	○

I effectively and productively utilize technological devices in my professional area	○	○	○	○
I usually now how to get through to students, parents and school staff	○	○	○	○

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