

Suppliers or demanders? Participants' identities in rural ECEC services from the perspective of the supply-side structural reform in China

Kuan-Ling Lin

Abstract

The purpose of this study is to utilize the concept of China's recent policy, Supply-side Structural Reform (SSSR) in education, in order to explore participants' identities in early childhood education and care (ECEC) in rural areas of China. The concept of the SSSR was integrated with Bronfenbrenner's Ecological Systems Theory (BEST) as a conceptual framework to analyze data collected from eight participants comprising of preschool teachers and caregivers (microsystems), and local communities (macrosystems). This case study reveals that participants' positive identities facilitate their empowerment. Additionally, the establishment of an educational foundation in rural ECEC adjusted the traditional SSSR way of thinking and successfully became an alternative educational supplier. As a result, this study suggests that to improve the quality of the rural ECEC service, the structural reform of rural ECEC should consider exchanging the roles of suppliers and demanders. Once the participants' diverse identities as both ECEC suppliers and demanders are considered flexible, policy makers and education legislators can clearly establish guidelines for the revitalization of rural ECEC in China.

Keywords

Supply-side structural reform; Bronfenbrenner; early childhood education and care; identity; China

Introduction

The Supply-side Structural Reform (SSSR) in early childhood education and care (ECEC) in China is an alternative and diverse concept adopted specifically to enhance the quality of the ECEC service (He & Liu, 2018). Recently, the supply-side of the SSSR has been deemed to be a local government or the Ministry of Education in China (Lin, Lin, Lu, & Hong, 2020). From the perspective of the government as a macrosystem, as identified by Bronfenbrenner in 1994, the elements that implicitly and/or explicitly effect the quality of ECEC should be investigated. This study employed two diverse theoretical points of view to explore how parents, teachers, residents of local communities, and village leaders of rural areas in China viewed themselves, and how their perceived identities create the influential elements to facilitate rural ECEC services.

Although the theoretical concept of the SSSR originally derives from British and French classical economics (Fang, 2018), the SSSR policy has not only been officially implemented in economics, finance and sociology, but also extensively interpreted in education in China since 2015 (Pang & Yang, 2016). Hundreds of descriptive papers explore and explain the possibilities of applying the SSSR in education. However, little empirical research has been performed on ECEC, leaving a gap in the literature.

First, the majority of educational SSSR papers are descriptive and discursive rather than empirical. This is because theoretically, the SSSR can be appropriately applied to educational policy to make up for the shortage of educational resources (Pang & Yang, 2016). However, the effectiveness of practically applying the SSSR in educational settings remains unknown. Second, the lack of studies focusing on ECEC in China indicates that it has been overlooked with regard to educational resources, quality of the teachers' education, and educational rural-urban disparity (Chang & Liu, 2016).

In 2015, when the second child policy was announced, attention was focused on ECEC. Several crucial issues were identified on the supply-side of education, such as a lack of qualified teachers, severe inequality of the distribution of educational resources, and the inferior quality of the ECEC service, especially in rural areas (Huang, 2018; National Office for Education Science Planning [NOESP], 2013; Xu & Zhang, 2016). Thus, the first

purpose of this study is to analyze and interpret the challenges of ECEC settings in rural areas in Fujin, China, from the perspective of the SSSR. After a review of relevant literature, this study also seeks to understand teachers, parents, residents of local communities, and village leaders' identities in preschool settings in rural areas of China, from the perspectives of the SSSR integrated with Bronfenbrenner's Ecological Systems theory (BEST).

Supply-side Structural Reform (SSSR) in ECEC

In Chinese economic policy, there are five core practical tasks of the SSSR: reducing the power of production, destocking, deleveraging, declining the cost, and making up for disadvantages. This section attempts to interpret the use of SSSR and its five core practical tasks in ECEC in rural areas of Fujin, China.

First, reducing the power of production works in, for example, the iron and steel industries or the cement industry, as they are industries with low profits and heavy pollution; however, it is not a reasonable goal in ECEC (Hu, Zhou, & Ren, 2016). The power of labor in ECEC is the most important production, which emphasizes the importance of qualified teachers and educators. However, in 2018 national statistics showed that one hundred and sixty-five thousand private preschools in China indicated a low number of qualified educators (Chang & Liu, 2016). Furthermore, approximately 10% of principals and 19% of full-time teachers in ECEC never graduated from vocational education (Chang & Liu, 2016). The worst-case scenario in national ECEC policy is that to have a teacher's license, the only requirement is completion of Grade 12, without any further ECEC vocational study. As a result, it is possible that the power of ECEC teachers' production in rural areas of China is worse.

Thus, the first task of the SSSR in ECEC in rural areas should be to increase the power of production by enhancing teacher education, increasing the number of qualified teachers, and facilitating teachers' professional development.

Second, destocking does not occur in the labor market of ECEC. As mentioned above, the inadequate number of qualified teachers and educators leads to lower quality ECEC in rural areas of China (NOESP, 2013). This deficiency of the ECEC service as an

educational supply-side has led to a severe decline in the number of preschoolers in rural preschools (Chang & Cheng, 2017). Another issue as a demand-side of ECEC is caregivers, who cannot afford to transfer children to an urban preschool, have unreasonable expectations such as excessive learning in mathematics and sciences, less play and more academic learning, and assigning homework (Chang & Liu, 2016; Xu & Zhang, 2016). To help mitigate these issues, the educational SSSR should consider how to utilize adults who are unemployed but educated. Hence, the second task of the SSSR is to improve the labor market of the ECEC in rural areas through reeducation and participation in professional development.

Third, SSSR deleveraging highlights the balance of the four elements in economics, namely the power of labor, territory, capital and creativity (Hu et al., 2016). From the educational SSSR perspective, these four elements represent qualified educators, adequate ECEC services, educational resources, and a high quality ECEC. As a result, the third task of the SSSR in ECEC in rural areas is to train more teachers, invest in basic preschool infrastructure, enlarge educational resources, and improve quality.

Fourth, lowering the cost of any business industry is the fundamental task of the SSSR. For example, the government should provide low-cost industrial infrastructure, such as rent, tax, electricity, etc. (Hu et al., 2016). From the perspective of the educational SSSR, the People's Republic of China Central Committee and the State Council (2018) have politically advocated that in 2020, the number of public and inclusive private preschools should reach 80% of all ECEC services. In other words, the goal of the ECEC policy in China is to build an accessible and inclusive service for the demand-side of ECEC as caregivers/parents.

Additionally, in order to reduce the cost of manpower in ECEC services in rural areas, cultivating local and well-educated residents to be ECEC teachers is necessary (Lin, et al., 2020). Employing local teachers can save local governments from having to pay remote duty allowance out of insufficient education budgets. Moreover, despite having a remote duty allowance and provision of good welfare, the turnover rate of non-resident teachers is still high in comparison to local teachers.

Therefore, the fourth task of the SSSR is to promote an inclusive ECEC service in rural areas, as well as offering opportunities to local residents via ECEC teacher training programs. The trained local residents will then be qualified teachers in the future. From the perspective of the teacher as an educational supply-side, this study also aims to explore their identities in two ECEC settings in rural areas in Fujin, China.

Lastly, making up for disadvantages that negatively influence any industry is a significant task for promoting national economics (Hu et al.,2016). For the rural ECEC service in China, the government as the supply-side should increase the ECEC budget as in comparison to the funds of the Organization for Economic Cooperation and Development (OECD) member countries, China's total financial investment is inadequate (Chang & Huang, 2016). In addition, the aforementioned disadvantages of the ECEC service in rural areas of China, such as a lack of qualified teachers and its inferior quality, should not be overlooked.

To sum up, from the perspective of the SSSR, this study aims to interpret the challenges of the ECEC service in rural areas in China. The power of production in rural ECEC settings is insufficient rather than excessive as there are inadequate qualified preschool teachers in the ECEC service in rural areas of China. As there is a lack of quality preschool settings and qualified educators, destocking cannot be applied to ECEC either.

Moreover, the core of deleveraging is the balance between caregivers' expectations of ECEC as a demand-side and the government investment as a supply-side. As a result, providing adequate qualified teachers and a quality ECEC service, as well as promoting ECEC resources in rural areas, is essential.

Lowering the cost of the private ECEC service in China requires effective and efficient investment of government funds, such as the policy to build accessible and inclusive preschools. Nevertheless, reducing the cost of recruiting qualified teachers to work in rural ECEC settings is possible and can be achieved by cultivating local residents through the provision of teacher training programs, obtainable opportunities and professional development. The improvement of the aforementioned disadvantages is the final task of the SSSR in the rural ECEC service.

The second purpose of this study is to explore how rural teachers in Fujin, China interact with their environments to shape their unique identities, from the perspective of the SSSR. To do this, the interpretation of the SSSR in rural ECEC settings in China is integrated with BEST.

Bronfenbrenner's Ecological Systems Theory (BEST)

BEST as a systematic framework not only explains influential environments on an individual's development, but also illustrates dynamic interactions between individuals and their environments (Bronfenbrenner, 1994; Bronfenbrenner & Evans, 2000; Bronfenbrenner & Morris, 2006). Bronfenbrenner indicates five environment systems, namely microsystems, mesosystems, exosystems, macrosystems, and chronosystems, where the individuals directly and indirectly interact with, are influenced by and influence on their own development (Bronfenbrenner, 1994, 1995; Bronfenbrenner & Morris, 2006).

The concept of the SSSR is primarily discussed in the macro level. For example, BEST can interpret the SSSR with the macrosystems, such as education policy and culture of the rural preschool, lifestyles of local residents, customs and parenting attitudes, and patriotism as a national ideology. For the SSSR of rural ECEC settings in China, the macrosystems also influence how rural teachers perceive themselves as suppliers of the ECEC service. Consequently, to understand the rural teachers' identities, as one of the purposes of this study, BEST is applied and integrated with the SSSR.

Case study

To obtain teachers, caregivers, non-resident villagers and local residents' voices and opinions regarding their identities from the perspective of the SSSR integrated with BEST as a conceptual framework, this qualitative research employs a case study as the methodology. The process and methods of data collection, the participants in the two rural ECEC settings, and the use of thematic analysis are all explained in this section.

Case study methodology

The philosophical underpinning of the case study methodology is grounded in a constructivist paradigm (Stake, 1995; Yin, 2003, 2009). The case study methodology based on this paradigm highlights the importance of human subjectivity and the phenomena of human behaviors in reality (Yin, 2003, 2009). As this study further aims to explore the problematic phenomena of the rural ECEC service, the case study methodology provides multiple methods of data collection and sources in order to understand the circumstances within their context and reality (Baxter & Jack, 2008; Stake, 1995; Yin, 2003, 2009). This methodology also allows the researcher to explore the understanding of how the teachers, caregivers, local residents and non-resident villagers identify their roles and the importance of the ECEC service in the two rural areas of Fujin, from the perspective of the conceptual framework.

Research participants

There were three unqualified preschool teachers, five caregivers of the preschoolers, two non-resident villagers, and one local resident in total in this study. The participants were chosen from two rural preschool settings in Fujin, mainland China. Table 1 illustrates the details of the settings.

Table 1

Summary of the two preschools

Name of preschool	Location	Number of local residents (Approximate)	Number of newborn babies* per year (Approximate)	Number of teachers
Lily	Rural area	2200	50	2
Camellia	Remote area	1300	30	1**

Note. * Number of newborn babies are counted by their household registration. **A practical teacher with no preschoolers currently enrolled in Camellia preschool.

In Lily village, the number of residents who held household registration was approximately 2200, which included both residents who live within the village and those who live out of it.

The total number of newborn babies since 2010 is approximately 50. Again, some of the newborns live out of Lily village with their parents but still hold the registration. The majority of the local residents are grandparents over 50 years old. As the number of young adults working in urban areas has increased annually, the number of preschoolers from September 2019 to January 2020 is only 18. The two teachers, Susan and Judy, are also mothers/caregivers of two 4-year-old boys and local residents; however, they are still unqualified teachers. They were recruited in July 2019, and at the same time started training in ECEC.

The Lily preschool is located in the mountain village shown in Figure 1. It is more than 800 kilometers away from the capital of Fujin and around 250 kilometers from the nearest city. Around 90% of its population come from the same ancestry and have similar surnames. The two non-resident villager participants in this study were originally from Lily village; however, they moved out and built successful businesses in different cities around 20 years ago. They organized an educational foundation in 2018 and now invite those with similar experiences as them to contribute to the village.



Figure 1. A whole view of Lily village

Camellia village is situated in a remote mountain. The distance between Lily and Camellia village is roughly 60 kilometers. The population of Camellia village is less than Lily, thus the number of newborn babies is also less at approximately 30 per year. Expectedly, the majority of Camellia village's young population relocate to urban areas. This leaves behind an aging population who have difficulty training teachers and have a government funded preschool due to the low number of preschool-age children that remain in the village. As a result, less research participants from Camellia village were included; one practical teacher, two caregivers and one local resident.

When collecting data from September 2019 to January 2020, Camellia preschool had no children enrolled. The teacher, Mary, is also a mother of a 5-year-old girl and joined an online teacher training program in ECEC in November 2019. As she was not teaching children at the time of the study, and was waiting for the new semester, her role was as a practical teacher. Table 2 introduces the research participants.

Table 2

Summary of eight participants

Name of participant	Role	Age	Gender	Current residence	Time living in village (years)
Susan	Teacher & caregiver	34	Female	Lily village	12+2*
Judy	Teacher & caregiver	31	Female	Lily village	4.5
Mary	Practical teacher & caregiver	30	Female	Camellia village	12+12*
Ella	Caregiver (grandmother)	48	Female	Lily village	48
Collin	Caregiver (grandfather)	50	Male	Camellia village	50

Alex	Village leader (grandfather)	55	Male	Camellia village	55
Alan	Secretary of foundation Business man	42	Male	Urban area	12**
Diona	Member of foundation Business woman	38	Female	Urban area	12**

Note. * Susan was in Lily village until she was 12 years old, then she moved away for further education. She then worked, married and had two children, before deciding to return to her hometown in 2018. Mary grew up in Camellia village until she was 12, then she went to complete her high school and vocational education in a city. After six years of study, she returned to the village. **Alan and Diona moved to cities after they graduated from the local primary school in Lily village.

Table 2 outlines the basic characteristics of the participants. Three of the participants had two identities--teachers and mothers, while the others only had one identity as local educational supporters or foundation members. This study also included multiple perspectives from two generations, such as parents and grandparents; from two current resident areas, such as rural and urban environments; and from two lived experiences, such as staying in the villages their entire life and living away from the villages for a period of time. The diverse participants provided multiple data, which is outlined in the next section.

Methods of data collection

Multiple types of data were gathered via interviews with the four types of participants, reflection diaries of the two teachers and one practical teacher, and the classroom observation of the teachers in Lily preschool. Data collection was mainly conducted by interviewing the trained preschool teachers, five caregivers, and three literates whose household registrations were in Lily and Camellia villages. Table 3 details the interview methods, the lengths of the interviews, and the other types of data used.

Table 3

Summary of data collection

Name of	Method of	Length of	Other data
----------------	------------------	------------------	-------------------

participant	interview	interview (hours)	
Susan	Face-to-face	6	1. Reflection diaries 2. Observation
	Telephone	20	
Judy	Face-to-face	4	
	Telephone	16	
Mary	Face-to-face	3	Reflection diary
	Telephone	10	
Ella	Face-to-face	2	N/A
Collin	Face-to-face	1.5	
Alex	Face-to-face	1.5	
	Telephone	2	
Alan	Face-to-face	2	
	Telephone	12	
Diona	Face-to-face	2	
Total		82	

All the interview data were collected between August 2019 and June 2020. The face-to-face interviews were undertaken over three visits or one visit in Lily and Camellia villages respectively, whereas the telephone interviews were conducted anytime as needed. As each participant had a different role (Table 2), the semi-structure interview method was applied. Susan, Judy and Mary shared more lived experiences in association with why they decided to move back to their hometown, and the ways in which they felt empowered by working in their local communities; however, some experiences were simple with the interview content replicated in the second interview. This replication caused data saturation and is the reason the participants' interview hours were unequal. The total number of interview hours was approximately 82, as shown in Table 3. The interview data were transcribed into text and then analyzed.

Thematic analysis

A thematic analysis as a method adopted in this case-study research not only enables the researcher to identify relevant themes, but also allows them to explore the meanings in relation to the concepts emerging from the participants' texts (Labra, Castro, Wright, & Chamblas, 2019). The conceptual framework of this study was incorporated with the thematic analysis of Labra et al. (2019) in order to systematically analyse and interpret the participants' data.

To explore the second purpose of this study, there were six analytical steps; familiarization of the data, assigning initial codes, looking for themes using the conceptual framework, reviewing and assessing the themes, defining and naming the themes, and recording the findings (Labra et al., 2019). With respect to the purposes of this study and from the perspective of the SSSR and BEST, the focus of the analysis was convergence of the codes related to participants' identities, the way they viewed the advantages and disadvantages of ECEC services in rural areas (such as preschool teacher training, the number of qualified teachers, opportunities for teachers' professional development, and quality of educational resources), and the elements of the educational SSSR as related to the five ecological systems. Although several themes were researched during this project, this article focuses on the two themes associated with cultural diversities in rural ECEC services in China.

Findings

Through the thematic analysis based on the SSSR integrated with BEST as the conceptual framework, there were two themes identified from the perspectives of the participants as a supply-side and demand-side of ECEC, their interactions between microsystems and macrosystems, and from the way they perceived themselves. As a result, this section identifies the first theme as participants are implicitly and explicitly empowered through their efforts in rural ECEC. The second theme is that an education foundation is preferred as an alternative educational supplier.

Facilitating teachers' empowerment via their positive identities

The data analysis of the eight participants found that the more positive the identities they believed they had, the less negative their thoughts were in regard to the rural ECEC service being perceived as hopeless, especially by the three teachers. The perception of hopelessness results from the difficulty in remedying the inferior quality of education in rural areas. The difficulties result from the lack of qualified teachers, high teacher turnover rate, inadequate educational resources, unstable school buildings, and residents' negative reputations due to the perception of the villages education falling behind. The five participants who have had lived experiences outside the villages mentioned similar thoughts that, in comparison to education development in urban areas, there were numerous difficulties in rural education. They also all indicated that in order to develop rural education, the economic environment must be improved first.

Extract 1: Family livelihood and children's education

I asked Alan, "Why did you never return to live in Lily village after you moved out at 12 years old?"

*Alan sighed, "There was **no job opportunity** in the village after I got my engineering diploma at that time. So, I worked in the city where I graduated. After a few years, the woman I married was born and grew in that city and did not want to live in this poor village. Then, I built my business and all my business interpersonal relationships are in the city. We cannot deny that **good educational opportunities are almost all in the city**. When you have children, you would not even think to move back, although Lily village is my hometown and my mother still lives there."*

From Alan's point of view, job opportunities, spousal preferences and children's education were the main challenges in rural areas and why he decided not to return to his hometown. However, despite these disadvantages in the Lily village, Susan had a different opinion and decided to move back.

Extract 2: Cannot afford the living costs in a city

I asked Susan, “Why did you make the decision to come back to Lily village in 2018, after you moved away almost 20 years ago? What reasons brought you back with two little children?”

*Susan recalled and answered, “... my mother is still alive here, which is one of the reasons. Additionally, I discussed with my husband that if we continued to live in an urban area where he worked, we would **not be able to afford the high cost of living** there. This is because I have to look after the two little ones, so I cannot work. If I send them to a daycare and go to work, my salary will not be enough. Whereas, although I knew the ECEC service was bad, well actually there is none, we could save some money for later. So, my husband also agreed with this idea and felt thankful because my mother helps me to care for the two children.”*

Interestingly, Susan illustrated that the high cost of living in a city was the main reason for them returning to Lily village. Lower living costs and Susan’s mother being available as an alternative caregiver were positive factors for returning to a rural area. However, while she always paid attention to her children’s education, Susan realized that the ECEC service in Lily village was inadequate.

Undoubtedly, whatever their decision-making process was for staying in the city or going back to the villages, all of the participants recognized that improvement of the rural ECEC service is necessary. After the majority of the local residents in Lily village decided to reconstruct their education service, the educational foundation was effectively set up and began looking for professional assistance.

Extract 3: I want to have a good education here

*In Judy’s interview, she told me that, “... Although my husband works outside of the village, my father and mother-in-law live here, which means I have to stay with them. However, my husband agrees that **when our son is at primary school age, we can move to the city** where he has a business. (...) it is a concern that **we don’t have preschools here**. So, when I heard Alan (the secretary of Lily village) mentioned that they (the education foundation) restarted a preschool and would hire good teachers in the village, I was so grateful. Meanwhile, I knew Alan looked for local preschool teachers and*

provided proper training. I didn't think about applying for this job as a teacher, but I want to have good education here. (...) Then, I was convinced to be trained as a preschool teacher."

When Judy was a mother, she cognized that a good ECEC service is important in the village because she was a demander of ECEC. Similarly, Susan and Mary had the same opinion in their interviews. After Susan and Judy became preschool teachers in Lily village and Mary a practical teacher in Camellia village, the way they viewed the ECEC service was different owing to the change in their roles. Now as suppliers of the ECEC service, they see themselves more diversely.

Extract 4: Two contrasting roles help me think diversely

*In Susan's telephone interviews, she mentioned a few times that, "... As a mother and a teacher at the same time, it sometimes makes me think differently because when I see a mother overly spoil her child, if I act as a teacher, I would try to communicate with the mother to modify the child's inappropriate behavior. Nevertheless, if I act as a mother, before being the teacher, I would think it is not my business and after being the teacher, I would reflect on whether I apply the same spoiled behavior to my children (...)." When I asked her, "How do you feel about being a teacher at Lily preschool? Susan replied, "Mostly, I am proud of myself (being a teacher). (laughing) Why? I have never thought I could be a teacher because my profession was in IT and I worked in an IT company before I married. (...) I was too naïve when I agreed to this job. Being a teacher, a good teacher, is hard. I feel more inadequate all the time. However, Alan is right. He told me, 'If we don't help our village, there is no one who will give us a hand.' Like this, **this is my hometown, I have to do something to make it better.** (...) A few times, when the caregivers of my preschoolers requested something unreasonable and made me upset or annoyed, I would tell myself, **I am doing good and the right thing for the village.**"*

The rising sense of personal responsibility as a local resident is a significant step to being empowered. As Susan noted, being a good teacher is the way she could make Lily village better. Mary as a practical teacher in Camellia village also said to me, "*Dr Lin, you are an*

outsider. *You can help us voluntarily build a preschool for our village. We are insiders. Here is **our home**, which is **our responsibility**. We should work harder to make it better for sure.”*

Whether their role is as a supplier or demander of the ECEC, when the three teachers see themselves as a contributor, they feel empowered and self-efficacy in their teaching identities.

Extract 5: I am a contributor

*In one of Judy's interviews, she said, “**I was quite confident** (as a non-experienced and qualified teacher) at the beginning of the first semester. After caregivers' unreasonable requirements and dissatisfaction, I felt maybe **I was not good enough**. You know I cried several times. (...) I always would like to quit (the job). (...) Then, every time I heard my son proudly tell our neighbor ‘**my mother is a teacher**’, I would tell myself, ‘I should not let him down.’ Furthermore, still **some parents and locals believed in me as a good teacher**. Your encouragement also made me understand **how important I should take this role as a preschool teacher in the ECEC service in Lily village**. It certainly rebuilt my confidence.”*

The teachers' identities have changed over time, bouncing between positive and negative and back again; however, they all ended positively. Without doubt, being an unqualified preschool teacher with no professional background or teaching experience is challenging. However, there were three core elements that reinforced the three teachers' confidence in being preschool teachers, namely, taking responsibility as contributors to the villages, being role models for their children, and recognizing the value in themselves. These are three influential elements on the teachers' identities. Consequently, the teachers' positive identities facilitate their empowerment.

Educational foundation as an alternative educational supplier

The educational foundation was set up in 2018 for the purpose of rural education in Lily village, and has more than 30 donators/foundation members. The founders were originally from Lily village but moved away for study, work and other purposes. Now, they have the

financial capacity to support the education in their hometown and as such, have become an alternative educational supplier for rural education.

Extract 6: It is my hometown, I want to do something good for it

*Diona is a successful businesswoman who owns three preschools in a city. She also supported the idea of rebuilding an ECEC setting in the Lily village. In her first interview, she stated, “**I always wanted to do something good for my hometown.** However, my strength is not strong enough to improve the whole situation of the village by myself. When Alan and the others contacted me saying they were looking for villagers to join the educational foundation, I knew it was time that **I should contribute what I can and what I have to the place that uniquely raised me.**”*

I asked Diona, “What are the reasons for you to think you should contribute something to your hometown?”

*Diona replied, “I am proud of being a villager. (Because) I always feel **I am more resilient and work harder than others who are from cities.** I was very poor in terms of material things in my childhood. I had to wake up early and help my mother to feed chickens in the early morning before I went to school. After school, I had to cook dinner, do housework and complete my assignments. (...) **these difficulties made me stronger than others I believe. I appreciate I had an economic hardship, so now I have the capacity to help my hometown.**”*

Not only Diona but also Alan and other foundation members believed that although they had poor childhoods in the village, it raised them with positive strengths, such as resilience and hard working attitudes. This gratitude to Lily village was universal to those who grew up there but currently lived outside the village. They remembered where they came from and who they were, and wanted to contribute financially, materially, and physically to their childhood home.

Extract 7: Feeling of nostalgia

Alex recalled, "... almost 25 years ago, Camellia village still had a primary school and **the number of students was more than 200**. At that time, we had forestry and local business was quite good. **Few locals would move outside** because transportation is not easy and **the village was quite self-sufficient**. (...) Then, technology and economic policy changed. The school closed. (...) I had never wanted to move to a town or city because **this is my home**. (...) The educational foundation of Lily village inspired us (locals). I really wished **we could get together and rebuild a glorious village just like before**. I wish I could see that day again in the rest of my life."

Alex and Collin grew up together and both mentioned that in their minds, the beauty of Camellia village was not forgotten. They expect to reconstruct it through the experience of the educational foundation in Lily village. As a result, feelings of nostalgia for the two rural villagers were the reason for the participants to improve their hometown. As Alan said, "**it is our responsibility to retrieve the honor of the village back**."

The participants who were members of the foundation, caregivers and teachers all believed that the establishment of the educational foundation was the first step to bringing hope of improvement to the villagers. The foundation as an alternative educational supplier is founded on showing gratitude to its hometown and returning glory to the village, which the villagers feel responsible for.

Discussion and Reflection

In this section, the two themes of this study's findings are discussed with the concept of the SSSR and macrosystems of BEST. Although the nature of education is not a market or business industry that can equally buy and sell, the SSSR employed in this study as a conceptual framework highlights how different perspectives represent different roles. In other words, the role of an ECEC supplier or demander changes overtime. This means that in China, the ECEC supply-side is unnecessarily defined as government obligations. Consequently, the SSSR should not be overlooked by different people's perspectives in rural ECEC services. Moreover, important influential elements identified in macrosystems can enhance the quality of rural ECEC services, which are discussed in this section.

For the SSSR of rural ECEC, suppliers and demanders should be interchangeable. The roles of the supplier or demander in rural education were defined by which perspective the participants referred to. As a result, the interchangeable roles of both can indicate the deficiencies of rural ECEC.

For the unqualified teachers in the two rural ECEC settings, they were demanders of professional development in ECEC, while they were also suppliers of the ECEC service to local residents. In this case, the government as an official supply-side of ECEC failed to solve the main issue of providing qualified teachers to rural areas (NOESP, 2013). From the perspective of the SSSR, the government has intended to create attractive conditions and teaching environments in rural areas of China by enhancing the remote duty allowance and offering welfare (NOESP, 2013; Xu & Zhang, 2016); however, the issue of inadequate and unqualified teachers remains unsolved (Lin et al., 2020). Hence, from the original concept of the economic SSSR, reducing the power of production in ECEC is problematic, especially in rural or remote areas of China. This finding is consistent with the studies of Chang and Liu (2016), and NOESP (2013).

This study identifies that the educational foundation in Lily village is an alternative educational supplier that replaces the role of the government when the government failed to successfully import qualified teachers to rural areas. The foundation adopted different strategies in order to look for qualified and experienced teachers and to reduce the high turnover rate of qualified and/or substitute teachers in Lily village. These strategies included providing professional development of ECEC to well-educated young residents who would like to be teachers, and inviting ECEC professionals from higher education to train the residents (Lin et al., 2020).

As a result, it is insufficient for the government's structural reform of rural ECEC to only take one supply-side perspective into consideration. This is because although the government controls and rearranges educational human and material resources, it might overlook the individual context of rural ECEC. If the government realizes that the demands of these young residents are not only for a good ECEC service, but also for opportunities for employment in their hometown, the SSSR of rural ECEC should consider multiple perspectives when looking for solutions. Therefore, this study suggests

implementation of an educational foundation as an alternative educational supply-side to support the shortcomings of the government in rural ECEC services in China.

Recognition of the values in macrosystems promoting participants' empowerment and improvement in rural ECEC services

There were two critical participants' values that contributed to the quality of the rural ECEC services in this study; belief in retrieving the villages' former glory, and gratitude toward their hometown and land. People's beliefs and values in a unique cultural context in China should be recognized as important influential macrosystems on the improvement of the rural ECEC service (Bronfenbrenner, 1995; Bronfenbrenner & Evans, 2000; Bronfenbrenner & Morris, 2006). The macrosystem shows that the power of their beliefs can empower people to enhance a rural ECEC environment in China.

For those who were unqualified but joined professional development in ECEC, their positive identities as contributors to the villages, being role models for their children, and responsible suppliers of rural ECEC made them resilient to the difficulties they encountered in their new occupation as ECEC teachers. In line with the research of Pearce and Morrison (2011), and Gu and Day (2007), teachers' identities and resilience have a dynamic and influential interaction. This is also demonstrated by the zero staff turnover rate of the teachers in this study. It has been over a year since this investigation took place and the turnover rate of the teachers who were residents in the villages is still significantly lower than ones who were hired from outside the village. This implicates that training locals and providing proper professional development in ECEC can effectively reduce the teacher turnover rate. Hence, this study recommends that the structural reform of the Chinese government as a supply-side should support the localization of teacher training programs in ECEC.

In conclusion, from the perspectives of the SSSR integrated with BEST as the conceptual framework, this study aimed to explore teachers and participants' identities in the ECEC services in two rural areas of China. Through the case study methodology, eight participants' data were included. The conceptual framework was incorporated with the thematic analysis to identify the two themes.

The first finding revealed that teachers' positive identities empowered them to face the reality of the ECEC service in their villages, even though they were unqualified. Additionally, the establishment of an educational foundation in rural ECEC adjusted the traditional SSSR way of thinking and successfully became an alternative educational supplier.

As a result, this study recommends that to improve the quality of the rural ECEC service, the structural reform of rural ECEC should consider exchanging the roles of suppliers and demanders. The diverse identities of participants as ECEC suppliers and demanders should be flexible as it is these diverse identities that facilitate the positive development of the rural ECEC service in China. Consequently, the Chinese government should consider both the supply-side and the demand-side of rural ECEC as it could have a new structural reform, such as supporting educational foundations, considering the localization of teacher training programs, and encouraging professional development. This study suggests that policy makers and education legislators refer to these suggested strategies and use them as a guideline for the rural revitalization of ECEC in China.

References

- Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report*, 13(4), 544-559.
<http://www.nova.edu/ssss/QR/QR13-4/baxter.pdf>
- Bronfenbrenner, U. (1994). Ecological models of human development. In T. Husen & T. N. Postlethwaite (Eds.), *The international encyclopedia of education (2nd ed.)*, Vol. 3 (pp. 1643-1647). Pergamon.
- Bronfenbrenner, U. (1995). Developmental ecology through space and time: A future perspective. In P. Moen, G. H. Elder, Jr. & K. Lüscher (Eds.), *Examining lives in context: Perspectives on the ecology of human development* (pp. 619-647). American Psychological Association.

- Bronfenbrenner, U., & Evans, G. W. (2000). Developmental science in the 21st century: Emerging questions, theoretical models, research designs and empirical findings. *Social Development, 9*, 115-125. <http://doi.org/10.1111/1467-9507.00114>
- Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In R. M. Lerner & W. Damon (Eds.), *Handbook of child psychology*(6th ed.). Vol. 1: *Theoretical models of human developmental*(pp. 793-828). John Wiley.
- Chang, J. & Liu, Y. (2016). *Xue qian jiao yu nei ban shi fa zhan yan jiu*. [Research on exploration of early childhood education]. *Modern Education Management, (8)*. 38-43. <http://doi.org/10.16697/j.cnki.xdjygl.2016.08.007>
- Chang, W. P. & Cheng, Y. L. (2017). *Tan xi jiao yu ling yu de gong gei ce jie gou xing gai ge*. [Exploring supply-side structural reform in education]. *Fudan Education Forum, 15*(5). 9-16. <http://doi.org/10.13397/j.cnki.fef.2017.05.003>
- Chang, Y. & Huang, H. (2016). *Xue qian jiao yu cai zheng tou ru de guo ji jing yan yan jiu —— Ji yu OECD zhu yao fa da guo jia de fen xi jian*. [Research on the international experience of national financial investment in early childhood education: An example of OECD countries]. *Modern Education Management, (11)*. 28-35. <http://doi.org/10.16697/j.cnki.xdjygl.2016.11.005>
- Communist Party of China Central Committee & State Council.(2018). Several opinions on deepening reform and regulating development of preschool education. <http://www.lawinfochina.com/display.aspx?id=29398&lib=law&SearchKeyword=&SearchCKeyword=>
- Fang, F. (2018). Seeking the theoretical origins of supply-side structural reform. *Social Sciences in China, 39*(4), 37-52. <http://doi.org/10.1080/02529203.2018.1519211>
- Gu, Q. & Day, C. (2007). Teachers resilience: A necessary condition for effectiveness. *Teaching and Teacher Education, 23*. 1302-1316. <http://doi.org/10.1016/j.tate.2006.06.006>
- He, H. F. & Liu, T. (2018). *Nong cun xue qian jiao yu gong gei ce gai ge de li lun nei ban he shi jian lu jing*. [Theoretical connotation and practice path of supply-side reform of rural preschool education]. *Education and Economy, 34*(5). 90-96. <https://kns.cnki.net/kcms/detail/detail.aspx?FileName=JYJI201805012&DbName=CJFQ2018>

- Hu, A.G., Zhou, S.J., & Ren, H. (2016). *Gong gei ce jie gou xing gai ge — Shi ying he yin ling zhong guo xin chang tai*. [Supply-side structural reform: Adaptation and guide new China]. *Journal of Tsinghua University (Philosophy and Social Sciences)*, 2(31). 17-22. <https://kns.cnki.net/kcms/detail/detail.aspx?FileName=SHGC201608004&DbName=CJFQ2016>
- Huang, X. P. (2018). “*Quan mian er hai ” zheng ce xia cheng xiang ji chu jiao yu xi yuan you hua pei zhi yu jun heng fa zhan yan jiu — yi he nan sheng wei li*. [Research on the arrangement and equal distribution of rural and urban educational resources from second child policy: An example of He-Nan province]. *Education Exploration*, (3). 18-23. <https://kns.cnki.net/kcms/detail/detail.aspx?FileName=SEEK201803006&DbName=CJFQ2018>
- Labra, O., Castro, C., Wright, R., & Chamblas, I. (2019). Thematic analysis in social work: A case study. In B. R. Nikku (ed.), *Global social work--cutting edge issues and critical reflections*. IntechOpen. <http://doi.org/10.5772/intechopen.89464>.
- Lin, L. C., Lin, K. L., Lu, Y., & Hong, X. (2020). *Xiang cun zhen xing fu wu shi jian yu ying yong xing gao xiao you shi pei yu shuang ying mo shi yan jiu — Yi bei qian cun xue qian ban wei li*. [Research on a model of rural revitalization in practice and teacher training program in higher education]. *Popular Science*, (2). 170-172. <http://lib.hebmu.edu.cn:8080/asset/detail.aspx?id=203898678530>
- National Office for Education Science Planning (NOESP). (2013). *Research on the challenges of rural education in China*. <http://onsgpe.moe.edu.cn/edoas2/website7/level3.jsp?inford=&id=1371521575488388&location=null>
- Pang, L. & Yang, X. (2016). Thoughts and suggestions on structural supply-side reform of education. *Journal of National Academy of Education Administration*, (10). 12-16. <http://doi.org/10.3969/j.issn.1672-4038.2016.10.003>
- Pearce, J. & Morrison, C. (2011). Teacher identity and early career resilience: Exploring the links. *Australian Journal of Teacher Education*, 36 (1), 48-59. <http://ro.ecu.edu.au/ajte/vol36/iss1/4>
- Stake, R. E. (1995). *The art of case study research*. Sage.
- Xu, Z. T. & Zhang, Y. F. (2016). *Jiao yu xi yuan jian she shi jiao xia de nong cun xue qian jiao yu “xia xue hua ” wen ti jie jue fang an*. [A program of solving “primary-school orientated”

early childhood education in rural areas from the perspective of construction of educational resources]. *Journal of Educational Institute of Jilin Province*, 32(8). 92-95.<http://doi.org/10.16083/j.cnki.1671-1580.2016.08.029>

Yin, R. K. (2003). *Case study research: Design and methods* (3rd ed.). Sage.

Yin, R. K. (2009). *Case study research: Design and methods*. Sage.

Authors

Kuan-Ling Lin is a senior researcher and preschool teacher in Taiwan and China. Her current research is to extend the topic of her PhD study focused on preschoolers' narratives of resilience in Taiwan to Mainland China. She is also keen on applying resilience and Bronfenbrenner's theory in Eastern cultures.

Correspondence: olivialin.taiwan@gmail.com