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## **TRANSFORMING FOOD SYSTEMS IN CHINA: THE ROLES OF FOOD LITERACY EDUCATION IN ALTERNATIVE FOOD MOVEMENTS**

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### **ABSTRACT**

Food is part of daily life and central to public health, economy, social relationships and well-being, therefore the sustainable food systems are fundamental to the stability of society. However, there are growing concerns in current food systems toward food security, environmental degradation and other food related problems. In response, food literacy education paves the way for broad participation in alternative food movements addressing unsustainability. Focusing upon food literacy education, this paper attempts to discuss the roles of it in alternative food movements which potentially have the educative value that transform individuals' environmental concerns, pursue fair food and reshape market relationship, and motivate the reconnection in alternative food networks. Evidence for the research comes from participant observation and document analysis in China.

Key Words: food literacy; alternative food movements.

## 1. INTRODUCTION

The majority of people consume about three meals throughout the course of a day, and food may be one of the most ubiquitous cultural presence in the whole world. There is no doubt about that food is as important as everybody says it is. Among the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development, which are published by 193 Member States of the United Nations on 25 September 2015 (United Nations, 2015), nearly each goal could be connected with agriculture and food from stopping poverty and hunger to reacting to climate change and sustaining natural resources (FAO, 2018).

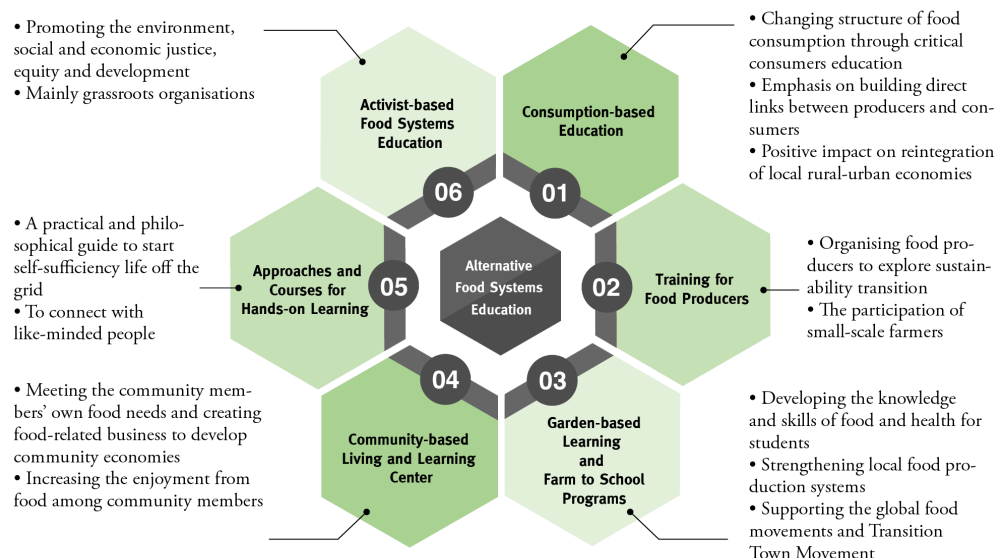
However, nowadays developing countries and developed countries are all facing with different food related problems. According to the data from Food and Agriculture Organization of the United Nations (FAO, 2017), yet 815 million people go hungry in 2017 and more than 600 million people in 2014 were suffered from a growing obesity epidemic, which is expressed in rising rates of certain non-communicable diseases such as diabetes and cardiovascular diseases. On the other hand, with the increase of population, the demands for food is boosting. The higher and higher food consumption would add pressure on natural resources, and it is critical for everyone to re-think the food systems and meet current and future challenges.

Meanwhile, a large amount of food initiatives, co-operatives, organisations and communities spark a new food-related revolution all over the world (Yu, 2014), and the similar changes are happening in China, including Community Supported Agriculture, farmers' market, Slow Food Movement, and school-based programs, etc.

This paper is organised as follows. Beginning with the framework for alternative food systems education in China, and then conceptualising food literacy, this paper concludes with a discussion of the potential role of food literacy education in alternative food movements to transform food systems in China by using the participant observation and document analysis methods, as well as limitations and considerations for future research.

## 2. THE FRAMEWORK FOR ALTERNATIVE FOOD SYSTEMS EDUCATION

How would we change ideas to the concept of ethical eating? What can be done to transform current food systems toward healthier and more sustainable food systems? These questions contributed us to focusing on alternative food systems addressing unsustainability. Based on ongoing participant observation on food issues in China, we outline the alternative food systems education into six components.



[Figure 1] The framework for alternative food systems education

### 2.1. Changing structure of food consumption through critical consumer education

With a myriad of food scandals leading to a general lack of trust among the consumers, the emergence of Little Donkey Farm in 2008 is a sign of the rise of Community Supported Agriculture in China, which is a model of food production and distribution that emphasis on sharing the risks of farming and partnership between consumers and producers (Henderson, 2007), trying to change the structure of food consumption and rebuild trust between consumers and producers. Not only as a marketing strategy, Community Supported Agriculture but also provides consumers an education opportunity for people who are removed from agriculture and food production to track the production progress back to see how, where and from what the food is made and who grows the food in alternative food systems.

### 2.2. Organising food producers to embrace sustainability transition

Jan Douwe van der Ploeg affirms that “a world with peasants is definitely a better place than one without them” and has characterized world agriculture in three component constellations what are peasant agriculture, entrepreneurial

agriculture and large-scale corporate farming (Ploeg, 2018). In contrast, there is distinctive difference of scale and many other differences between the three constellations, but the essence of the differences is “the different ways in which they mould their social and material resources and their interrelations with others” (Ploeg, 2018). In the era of empire and globalization, although more and more peasants in China have to leave their land to earn their bread and “peasant” is the name of “poverty”, there are still some peasants likely to have strong self-exploitation on sustainable livelihoods and they can get support from the organisations such as foundations and social enterprises. For instance, the Sustainable Agro-ecology Centre below division of Nurture Land, a social enterprise connects consumers and smallholder farmers through e-commerce platform, provides sustainable agricultural techniques training courses and communication opportunities for young peasants.

### **2.3. School-based programs contributing to food education for the future**

Currently, school lunches scandals are common in China due to the lack of honesty and responsibility in food industry, unguaranteed transparency and ineffective regulation. Daystar Academy is one of the few schools in China which would like to buy locally grown fresh food to offer meals for students (Daystar Academy, 2019). The food writer and the founder and president of the International Slow Food Movement, Carlo Petrini, considers that younger teens are viewed as tomorrow’s adult consumers and it is determined in the early years of life for them to build the relationship to food (Petrini, 2004). School-based programs like farm-to-school program in Daystar Academy contribute to increasing knowledge about how food reach the plate, forming a positive eating habits and making healthier food choices for students.

### **2.4. Community-based exploration to a highly participatory in food systems**

Beijing Farmers’ Market has established three community shops in different places, which are full of fresh products and other goods mostly from smallholder farmers, to support for consumers and producers besides the farmers market at weekend. In addition, Beijing Farmers’ Market often gathers producers and consumers to hold various food related events, sharing meetings and workshops. We could define them as a type of community food systems, which integrate food production, processing, distribution, consumption and disposal to enhance the environmental, economic, social and nutritional health of particular places, are considered as a small, local, open and connected alternative to the mainstream global food systems (Eames-Sheavly, etc., 2011; Garrett and Feenstra, 1999; Manzini, 2010).

### **2.5. Approaches to find visions of an ancient wisdom**

Permaculture, an ecological design system and a natural system design approach originally started in Australia, is popular in China now and rooted in mimicking natural ecosystems and combining with many other different knowledges such as ecology, architecture, anthropology, agronomy and botany (Holmgren and Mollison, 1978). Permaculture has spread via publications, online education, educational workshops and training courses, primarily through Permaculture Design Courses (PDC) which has been taught thousands of people globally. Permaculture provides practitioners not only down to earth skills such as the ability of growing food, but also a sustainable attitude towards life to improve self-sufficiency in an ecological way.

### **2.6. Activist-based food systems education arising in grassroots initiatives**

Meek and Tarlau believe that what a central goal of any food system education program or theoretical approach is the food justice which pays attention to class and race dynamics and the concept of food sovereignty which is progressively recognised as the powerful corrective strength for food systems education by some researchers (Meek and Tarlau, 2015). The food activists in Beijing Farmers’ Market uphold the right of smallholder farmers to define their own food systems and focus on class and gender inequalities issues in alternative food systems.

## **3. FOOD LITERACY: A CONCEPTUAL REVIEW**

Within the changes, food literacy in alternative food movements actually functions as a mechanism conducting to the transformation in food systems. While alternative food movements have gone from a trickle to a sweeping current in recent years, there is growing interest and concern about food literacy and related food education “go beyond ‘health promotion’ and ‘lifestyle education’ to encompass holistic and sustainable food knowledge, including ‘traditional’ food and cultural food pedagogies taught through theoretical, critical and applied methods” (Colatruglio and Slater, 2014).

Food Literacy, emerged as a new term having been used in the context of nutrition and health, agriculture and environment, culture and tradition, education, connectedness, life skills, social development and equity (Colatruglio and Slater, 2014; Bellotti, 2010; Vidgen and Gallegos, 2014), is a multi-faceted concept concentrated into four main domains:

### **3.1. Food and cooking skills education**

In a society where is full of ready-made food and lack of the knowledge of where food comes from and what is in it, why teach people how to cook? Tull explores this question in the book entitled “Food and Cook Skills Education” and assumes that the notion of food literacy in a universal set of competencies is appropriate for Food and Cooking Skills Education (Tull, 2018).

### 3.2. Health and nutrition knowledge

Some researchers define food literacy as the capacity to obtain nutrition information and the competence to use it to health enhancing (Kolasa, et al., 2001). Although nutrition knowledge and healthy eating have an impact on disease prevention and transformation in the way people take their nourishment, some critics argue that the focus on nutrients removed from other settings of understanding food while real foods are disappearing and replaced by processed nutritional food (Colatruglio and Slater, 2014)".

### 3.3. Local environmental context

Michael Pollan, with Alice Waters and Wendell Berry, are best-selling writers as locavores who improve general public ecological awareness about food and have a critical thinking about food production (McWilliams, 2009). Through food-related books about local and global food systems issues, it has captured popular attention to ecological and environmental knowledge and practices. Food is more than just food, and also associating with carbon footprints and food miles. They make people start to think the key question as Bellotti asked: "what is the impact of my food choices on the environment (Bellotti, 2010)?"

### 3.4. Social justice, equity and development

Quality food developed by Slow Food is based on three interconnected principles: good, clean and fair, corresponded with high quality food, sustainable environment and fair food systems, which refer to pursue social justice, equity and respect the right of consumers and producers (Petrini, 2004). Since every food choice and policy would affect the whole long food supply chains and have influence upon social development, researchers consider food justice and food sovereignty in food systems as part of food literacy. Food justice is a grassroots movement recognising food systems as racial and class projects (Meek and Tarlau, 2015), while La Via Campesina describes food sovereignty as the movement of reclaiming the rights of people who produce, distribute and consume food rather than multinational corporations and market institutions to control over the way food produce, distribute and consume (Meek and Tarlau, 2015; Patel, 2009).

## 4. RESEARCH METHODS

As we have been working in alternative agriculture and food areas since 2012, this paper is based on our long-term participant observation and document analysis in a range of alternative food initiatives, including farms, farmers' markets and food co-operatives in China, in which people there promote and practice food literacy education.

## 5. DISCUSSION AND CONCLUSIONS

This paper offers the framework for alternative food systems education in China and the review of food literacy education. To this end, this paper aims to analysis that how food literacy education in alternative food movements play a potential role in transforming food systems in China. For this purpose, Beijing Farmers' Market is used as a case for discussion as it provides different ways for food literacy education.

### 5.1. Educative value for environmental concerns

All the practices in alternative food movements advocate for improving public awareness of ecological and environmental issues. To be sustainable is the ultimate aim for alternative agriculture, not just for food safety, nutrient and flavour. Beijing Farmers' Market has announced a plastic ban in recent years, stipulating that the stallholders could not provide single use plastic bags for consumers. Besides plastic ban, Beijing Farmers' Market also calls on the consumers to donate bags in good condition for second use and rewards people who donate bags over a certain amount. The donated bags are used for people like some new consumers, who do not know the rules or forget to bring their bags. At first, some consumers thought it with inconvenient and incomprehension, and even some smallholder farmers appear not to understand why they should take more care in explaining the reasons, but Beijing Farmers' Market continued doing so and holding it to account for that the ban was essential in order to protect the environment and it will benefit later generations. Eventually more and more people join the movement and it enables people to rethink deeply on how their behaviour have impact on the environment. According to the statistics from Beijing Farmers' Market, it could reduce plastic bags use by a hundred thousand a year (Beijing Farmers' Market, 2016).

### 5.2. Consumer education for fair food and reshaping market relationship

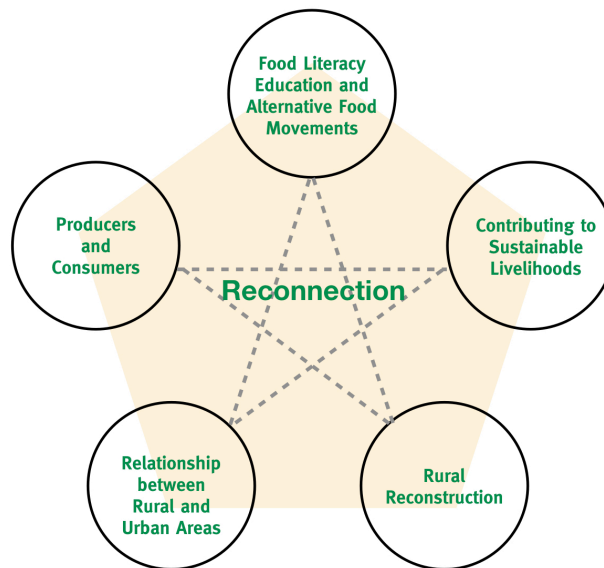
How to build trust mechanism among consumers and producers? Beijing Farmers' Market is establishing their own Participatory Guarantee Systems (PGS) to answer this question. Participatory Guarantee Systems (PGS) are quality assurance systems focused locally and through multi-participation to third-party certification proposed and promoted based on a large number of organic practices by the International Federation of Organic Agriculture Movements (IFOAM, 2019). To ensure better quality, build trust and encourage communication and collaboration, Beijing Farmers' Market recruit consumers to pay a visit to the farms. This is a process of creating a trust and sustainability nexus in food literacy education. Food is no longer the cold products in the supermarket but warm food which consumers know who grows it and they probably have participated in growing or harvest. Furthermore, this kind of consumer education has the potential to enforce consumers to support for fair trade and

reshape market relationship.

### 5.3. Reconnection in alternative food networks

Most of the organisations in alternative food systems design the internship program that create a pipeline for people who would like to learn sustainable agriculture in China. It has the potential to bring new blood into rural areas through training qualified individuals in sustainable agriculture and food field.

Yao Huifeng, one of the smallholder farmers shared his story at Beijing Farmers' Market, was an internship of Nurture Land and decided to start sustainable agriculture in his hometown. After Yao overcoming enormous difficulties and generating good sales, which is not about success for him but means a lot for a small village, some villagers were keen to join Yao to transform to organically grown rice from conventionally grown rice. Therefore, Yao set up an agricultural cooperative in the village and cooperated with 12 farmers in 2013. Yao also concentrates on changing local culture by reason that left-behind children has been a serious social problem and the prevailing of gambling and



frequent quarrels and fights are the huge challenges in rural areas. In response to this situation, Yao invited volunteers to teach for the left-behind children and established the rural children's library and women's dance crew.

[Figure 2] The reconnection in alternative food networks

In this case, we could see a nexus of urban-rural relationship, possibility of sustainable livelihoods and rural revival in present China starting with people having access to food literacy education. Ezio Manzini described the distributed and resilient systems have appeared and spread as four waves of innovation, and one of the gradually converging innovation waves are distributed food networks which concern food and agriculture (Manzini, 2015). Represented by Transition Town Movements and Slow Food Movements, both of the two innovations work on solutions to build a connection between agriculture production and food consumption (Manzini, 2015). It would form a new sustainable and resilient culture grounded on alternative food movements in distributed systems, create the new concept of globalisation as "a distributed globalisation where, for each process of production, distribution, and consumption, much of the decision making, know-how, and economic value remains in the hands, minds, and pockets of the local community" and redefine the notion of work, the meaning of relationship and time based on the small scale and interconnectedness of social organisations (Manzini, 2015).

Notwithstanding as with the majority of studies there are several limitations to this paper that we analysis inadequate sample information as individuals do not represent the total and we are unable to interview consumers who are associated closely with the food systems, we could perfect them in continuing research as part of contribution to a new possible sustainable world.

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