

Original Article

Backgrounds and challenges of food education policy in Taiwan: risk or chance in the reflexive food modernity?

Haruka Ueda PhD

Japan Society for the Promotion of Science, Nagoya University, Aichi Prefecture, Japan

In 2022, Taiwan enacted the Food and Agricultural Education Act, thus officially launching its food education policy. The objective of this article is to elucidate the social background to this Act and current challenges to promoting food education. The data were obtained from the relevant literature and interviews with 11 key actors, who represented academia, the government, public education and civil society. Although having much in common with the Japanese equivalent policy, Taiwan's food education contains some notable features. Food education began as a reaction to recent food safety scandals, growing food anxiety, the prevalence of eating out, the globalisation of food systems and increasing instability, all of which characterise reflexive food modernity. The Taiwanese policy aims to avoid the nutrition-centered, gendered and nationalistic tendencies of food education in countries such as Japan by stressing the interconnection of food system actors, social responsibility for family meals and an openness to diverse food cultures. However, achieving such objectives requires consciousness of the reflexive food modernity facing Taiwan and addressing operational issues, notably the strengthening of inter-ministerial collaboration and the integration of dialogue with diverse food education actors in defining educational content and professional qualifications.

Key Words: food education, Food and Agricultural Education Act, Taiwan, reflexive modernity

INTRODUCTION

There is a global movement for food education policy, some notable examples of which include the Sustainability Development Goals of the United Nations and the strong advocacy of the International Union of Nutritional Sciences to achieve sustainable food systems.^{1–3} In Japan, a nationwide food education policy was initiated in 2005 under the Basic Law on Shokuiku (hereafter rephrased in English shortly as 'Food Education'). Although no other country had similar policies at the time,⁴ some countries soon followed this political direction, including France,⁵ the UK,^{6,7} South Korea⁸ and, very recently, Taiwan. In 2022, the Taiwanese government finally passed the Food and Agricultural Education Act.⁹ Since little is known about this emerging policy, both inside and outside Taiwan, the aim of this article is to fill this knowledge gap and promote international dialogues on food education.

Consumers in Taiwan have recently experienced a dynamic societal change. During the past couple of decades, many food safety scandals have occurred and damaged consumers' trust in the national food system.¹⁰ According to the Taiwan Social Change Survey, more than 80% of Taiwanese were anxious about food safety issues such as pesticide residues and contamination.¹¹

Population nutrition and health have also become serious issues. The Nutrition and Health Surveys in Taiwan (NAHSIT) have revealed that, for men, obesity rose from 33.4% to 51.0%, diabetes from 3.2% to 12.0% and hyperlipemia from 13.4% to 20.8% from the mid-1990s to the mid-2000s.¹² An underlying reason for this health problem is the evolution of eating models, notably the in-

crease in the practice of eating out. The most recent NAHSIT (2017–2020), confirmed a high prevalence of eating out. It was reported that the working population (aged 19–44 years old) who 'eat out five times or more per week' amounted to 56% for breakfast, 60% for lunch and 31% for dinner.¹³

Furthermore, health inequalities are growing. The official poverty rate in Taiwan is 2.6%,¹⁴ but this might be an underestimation of the true prevalence of poverty, given its very low income-based poverty line (e.g., in Taipei City 18,682 TWD, which is equivalent to 607 USD, per month). In fact, food aid activities have been growing throughout Taiwan and recent studies have also reported socioeconomic inequalities in health and nutritional status.^{15–17}

Food systems in Taiwan are also not without challenges. Rice production (per capita per year) dropped from 120 kg in the latter half of the 1970s to 50 kg in the 1990s,¹⁸ requiring a drastic restructuring of national agriculture. Since its integration into the World Trade Organisation framework in 2002, national agriculture has been under increasing threat from cheap foreign products. Recent global instability due to the COVID-19 pandemic and Russia's invasion of Ukraine has also threatened na-

Corresponding Author: Dr Haruka Ueda, Nagoya University, Furo Cho, Chikusa District, Aichi Prefecture, Japan 464-0814
Tel: +81-90-5056-1108
Email: ueda.haruka@b.mbox.nagoya-u.ac.jp
Manuscript received 29 May 2023. Initial review completed 13 July 2023. Revision accepted 27 August 2023.
doi: 10.6133/apjcn.202309_32(3).0005

tional food security in Taiwan.

All the food-related phenomena facing Taiwan – food safety scandals, food anxiety, nutritional problems, eating out, poverty and the globalisation of food systems – are characteristic of reflexive modernity^{19,20} and food modernity,^{21,22} together called ‘reflexive food modernity’. Since this concept might not be so familiar in nutritional sciences, some specifications deserve mentions (for further details, see above-mentioned original texts^{19–22}).

First, the term reflexive is different from that of reflection, which was the paradigm of the first modernisation, to express the unexpected, non-reflected and by-product nature of the second modernisation. Nevertheless, the reflection is still needed as the only way to understand the reflexive consequences of modernisation, insofar as the distinction between reflexive and reflective is kept in mind. It is in this context where the reflexive also becomes the ‘power’ type concept that allows us for ‘chances’ to avoid or better prepare for such social conditions. Second, on the contrary to so-called post-modern theories, reflexive food modernity does not deny the modern trends, such as the rise of nutritional sciences and politics to govern the people’s eating habits on behalf of customary family/community dietary norms. Rather, the reflexive food modernity is premised on the radicalisation of these modernity trends and the complexity to confront simultaneously these side-effects. Third, scholars generally assume that the reflexive (food) modernity has made a clear appearance since around the 1970–1980s, while leaving its period specification flexible. In this article, we would not delve into this issue and leave it open for future studies on Taiwan’s food history. Despite its conceptual novelty to nutritional sciences, the introduction of this perspective is meaningful not only to open opportunities for dialogues between nutritional and social sciences but also to situate the importance of Taiwan’s experience in the global literature on food modernity.

What makes East and South East Asian countries particular is that modernisation has taken place in a ‘compressed’ manner,²³ which makes it complex to deal with reflexive food modernity.^{12, 24–26} This situation does not exclude Taiwan. It is interesting to see how an emerging food education policy in Taiwan will react to this reflexive food modernity.

So far there was a document, published from the Japanese Journal of Nutrition and Dietetics, which translated relevant online materials into Japanese to introduce Taiwan’s food education policy,²⁷ but it does not elucidate in what social context this policy has become necessary or what obstacles food education actors are facing. In the following paragraphs, an attempt is therefore made to elucidate the background and challenges of food education policy in Taiwan.

METHODS

In this study, a mixed approach involving literature analysis and interviews with key actors was employed. The literature included government documents and relevant research articles published in Taiwan. Most of the information was obtained from the Food and Agricultural Education Information Platform (FAEIP), which was developed as a part of food education policy and is being oper-

ated by the Council of Agriculture under the Executive Yuan.²⁸ However, little information was available on the FAEIP about the policy contexts and actual challenges, so interviews were conducted to obtain in-depth insights.

Semi-structured interviews (two hours each) were conducted by a single researcher, who has been deeply engaged in food education research and policy development in Japan, in partnership with a host researcher at a national university in Taiwan, during December 2022 and January 2023. A total of 11 actors (No.1–11), representing academia, the government, public education, civil society and, partly, the agri-food industry, were interviewed.

These actors were identified and contacted by means of the following process: three key academics (No.1: rural sociologist, No.2: cultural anthropologist, No.3: health sociologist) were identified on the basis of their academic contributions and engagement in the development of food education policy in Taiwan. Interview request letters were simultaneously sent to the relevant divisions in the Council of Agriculture, the Ministry of Education and the Ministry of Health and Welfare, which resulted in the acceptance of only the Council of Agriculture. An interview was conducted with the administrative officer in charge, who was introduced by the Council of Agriculture (No.4). To obtain insights about public education (including school lunch programme), an interview was conducted with the responsible person from a non-profit organisation that has one of the largest networks of school dietitians in Taiwan (No.5). Through this organisation, four dietitians from differing institutional settings who have actively practised food education at schools were introduced and then interviewed (No.6: urban elementary school, No.7: sub-urban junior high school, No.8: rural elementary school, No.9: catering enterprise). The responsible person from a wholesale market that provides vegetables for school lunches to dietitian No.6’s elementary school was also interviewed (No.10). To gain insights about social inequalities, an interview was conducted with the person responsible for a food bank association that has one of the largest networks in Taiwan and a long history of providing food education for disadvantaged populations (No.11). Due to time constraints and arrangement difficulties, other major actors, such as local authorities and the agri-food industry, could not be accessed for this study.

The semi-structured interviews included the following three questions: ‘What are your thoughts on the social background of the emerging food education policy in Taiwan?’; ‘How have you (or your organisation) engaged in promoting food education?’; and ‘What are the obstacles to further promoting food education under this policy?’ The interview results were summarised in Table 1.

Each interview (Mandarin Chinese, English or Japanese) was audio-recorded, transcribed verbatim and analysed by this researcher. The interpretation was then validated by the interviewee. Prior to the interview, each participant was informed of the objective and content of the study and, if they agreed to participate, they filled out a letter of informed consent. This study protocol was in line with the Declaration of Helsinki and approved by the Eth-

Table 1. A summary of interview results[†]

Interviewee	(1) Social backgrounds	(2) Engagement	(3) Challenges in promotion
No.1 Rural sociologist	Food safety scandals Weakening of the national agriculture Family structural change	Research on Japan's food education in the 2010s Policy development at the second stage (2021–2022)	Partnership with education actors Participation of women without moralising their loss of home cooking
No.2 Cultural anthropologist	Activism triggered by Japan's food education since 2005 US pork import	Policy development at the first stage (2016–2019)	Professional qualification, a risk of its commercialisation Nationalistic tendency in defining the educational content
No.3 Health sociologist	Food safety scandals Decreased food literacy Weakening of the national agriculture	Food risk communication	Encouragement of economic actors Definition of food literacy
No.4 Council of Agriculture	Food safety scandals Political motivation for other pending bills	Policy development at the second stage (2021–2022)	Professional qualification Partnership with education actors Linkage building between different economic actors Definition of the 'national' cuisine
No.5 School meal association	Food safety scandals Imports of Fukushima products and US pork	Networking of school meal actors	Promotion of local products in school meals
No.6 Dietitian (elementary)	Pupils' little interest and knowledge of food	Food education practices	Partnership with teachers
No.7 Dietitian (junior high)	Pupils' little interest and knowledge of food	Food education practices	Partnership with teachers Little attention to non-curricular subjects in junior high schools Poor quality of health education
No.8 Dietitian (elementary)	Pupils' little interest and knowledge of food	Food education practices	Partnership with teachers
No.9 Dietitian (enterprise)	Pupils' little interest and knowledge of food	Food education practices	Distancing between catering enterprises and schools
No.10 Wholesale market	Weakening of the national agriculture	Food education practices Provision for school meals	Under-valorisation of 'middle' economic actors in food system
No.11 Food bank	Food poverty	Food aid (inc. nutrition education practices) for disadvantaged population	Integration of inequality perspective (esp. rural and indigenous population)

[†]Due to the space limit, the table simply presents a list of answered content. See the main texts for further interpretation.

ical Committee of the Graduate School of Environmental Studies of Nagoya University (2022-03).

RESULTS

Background

The first draft of the Food and Agricultural Education Act was submitted in March 2016. This was soon followed by two other drafts developed by other legislative members. Perhaps due to their irreconcilable nature, none of these drafts passed the review in the Legislative Yuan. The second stage of review started in February 2021, again with three drafts. The Council of Agriculture's final draft was more or less based on these drafts and eventually passed all the reviews in the Legislative Yuan in April 2022 and led to the enactment of the Act in May 2022. This administrative process can be observed in the FAEIP data,²⁶ but it is unknown why there was such a diversity of drafts and what the difference was between the first and second stages of policy development. These details were elucidated by the interviewees.

(1) First stage (2016–2019): Interviewee No.2, who was deeply engaged in the first policy development stage, described the major features of the first three drafts. The first draft (submitted in March 2, 2016) was prepared based on the proposition of the Homemakers United Foundation (HUF), which had long years of experience of nutrition education practices. The HUF started working with a researcher who was familiar with food education policy in Japan and came to realise the necessity for food and agricultural education that went beyond nutrition education.^{26,27} They then began preparing policies to promote such community practices. The second draft (March 16, 2016) was prepared as a direct reaction to a series of food safety incidences (e.g., oil scandal in 2011 and the controversy over US beef imports in 2012), and also in reference to Japan's food education policy since 2005. The third draft (October 25, 2016) derived from a peasant movement called the 'Taiwan Rural Front', which put agricultural development at the centre of policy over food safety.

The diversity of rationales for food education was one of the reasons for the complicated review process in the Legislative Yuan. Furthermore, as two interviewees noted (No. 2, No.4), the Council of Agriculture did not fully recognise the urgent need for food education. The failure to re-elect the concerned legislative members ultimately brought an end to the review of the first stage.

(2) Second stage (2021–2022): A series of incidents from 2021 gradually increased the urgent need to address food education. The import of US pork started in January 2022. It was controversial because consumers were anxious about the safety of the ractopamine used in US pork production, but Taiwan's government decided to lift the relevant safety restriction to strengthen economic ties with the US. Interviewee No.2 spoke about consumers' concern that 'food and agricultural education might be a trade-off for the US pork imports to appease citizens' anger and anxiety'.

However, it was more of an inevitable choice than a trade-off, according to two interviewees (No.1, No.4) who were deeply engaged in the second stage of policy development. From the consumption side, social interven-

tions to improve consumers' food choices became necessary due to a series of food safety issues. On the other hand, from the production side, new approaches to revitalising national agriculture and rural communities also became necessary under the threat of Taiwan's increasing integration into the global liberal trade system. The importation of pork from the US was certainly one factor that led to increasing the need for food education, but other incidents had also occurred since 2021, notably the import of products from Fukushima, and the instability of the global food market due to the COVID-19 pandemic and Russia's invasion of Ukraine.

All these developments pushed the Council of Agriculture to develop a new food education policy. This was the big difference between the first stage (2016–2019) and the second stage (2021–2022). In 2022, there were three pending drafts relevant to addressing the above-mentioned concerns, namely the School Lunch Act (Ministry of Education), the National Nutrition Act (Ministry of Health and Welfare) and the Food and Agricultural Education Act. The last one was under the auspices of the Council of Agriculture and, according to interviewee No.4, the choice was made to pass the last bill first due to its relative feasibility and its potential for advancing social and political debate on the other two bills.

Policy objectives

The analysis has so far confirmed the linkage between Japan's Basic Law on Food Education and Taiwan's Food and Agricultural Education Act.^{6,28} To better highlight its unique nature, the policy objectives of food education in Taiwan are described and compared with those in Japan.

The primary role of the Food and Agricultural Education Act is to announce the fundamental principles and underlying philosophy of food education, the legal nature of which is similar to 'basic laws' in Japan.³² Concrete policy shall be stipulated by subsequent individual acts and regulations, for which four types of acts and regulations are currently proposed, namely on professional qualification and training, the task force for promotion, the financial supports and the award for distinguished practices. Since little information is available at this early stage, we shall discuss only the act on professional qualification and training, which some interviewees considered problematic.

The basic content of the Food and Agricultural Education Act is summarised in Table 2. It consists of the establishment of the central task force, the development of basic plans at both the central and regional levels, professional training and the promotion of a national movement through inter-sectorial partnerships, all of which are essentially the same as the content of Japan's Basic Law on Food Education. However, some notable differences were observed between the policy objectives of Japan's Basic Law and Taiwan's Act.

The first feature relates to the place of nutrition. Despite its allegedly comprehensive and interdisciplinary approach, about 70% of food education research in Japan has been conducted in nutritional disciplines³³ and thus has not succeeded in overcoming the nutrition-centered paradigm.³⁴ In contrast, food education in Taiwan puts

Table 2. Taiwan's Food and Agricultural Education Act and Japan's Basic Law on Food Education[†]

Taiwan's Food and Agricultural Education Act	Japan's Basic Law on Food Education
Art. 1 Objectives	Preamble
Art. 2 Definition of authorities	Chapter 1 General provisions
Art. 3 Definition of terms	Art. 1–8 Objectives
Art. 4 Principles for promotion	Art. 9 Responsibility of the state
Art. 5 Roles of central authorities	Art. 10 Responsibility of local authorities
Art. 6 Roles of municipal, city and county authorities	Art. 11–12 Responsibility of education and agri-food actors
Art. 7 Roles of other central authorities	Art. 13 Responsibility of citizens
Art. 8 Food and agricultural education task force	Art. 14 Legislative actions and budgets
Art. 9 Principle of food security	Art. 15 Annual report
Art. 10 Promotion based on national dietary standards	Chapter 2 Basic plans for promotion
Art. 11 Prioritised use of local agricultural products	Art. 16 Development of basic plans
Art. 12 Guidance for relevant agencies	Art. 17 Prefectural, Art. 18 Municipal
Art. 13 Collaboration with relevant agencies	Chapter 3 Basis promotion policies
Art. 14 Assistance for communities	Art. 19 Promotion in households
Art. 15 Assistance for schools	Art. 20 Promotion in schools
Art. 16. Information platform	Art. 21 Promotion in communities
Art. 17. Research development	Art. 22 National movement
Art. 18. Budgets	Art. 23 Revitalisation of rural communities
Art. 19. Rewards	Art. 24 Passing down of traditional food cultures
Art. 20. Promulgation and enforcement	Art. 25 Information and research development
	Chapter 4 Food education promotion council
	Art. 26–31 Central, Art. 32–33 Prefectural, municipal

[†]Each article headline was added or modified by the authors to describe its content. For actual content, see original texts.^{9,31}

agriculture, the environment and rural lives at the centre of its policy (Articles 1, 4, 11–14). Although, admittedly, the improvement of populational nutrition is one of the objectives, the Act states that it can be achieved only with the 'strengthening of linkages' of consumers with agriculture, the environment and rural lives (Articles 1, 3, 4). To put it more concretely, the Act stipulates the prioritisation of the use of local products (Article 11) and institutional support for various activities to promote local products, such as labelling and the establishment of sales points (Article 12–14), all of which cannot be seen in Japan's Basic Law.

The second feature concerns gender consciousness. Food education in Japan has been criticised for reinforcing the gendered norm of women being the meal providers³⁵ and excluding men from the realm of food education practice.³⁶ With the lack of gender consciousness, Japan's Basic Law even emphasises the responsibilities, or duties, of family members in food education practice (Article 5, 13, 19), despite the fact that the demographic conditions for such family practices have been lost since the 1980s.³⁷ In contrast, no article in Taiwan's Act stipulates the duties of family members. Family is mentioned only in general terms in the phrase '[...] food and agricultural education of individuals, families and societies' (Article 3).

The third is the relationship with nationalism. The loss of traditional food cultures is a common background for food education, both in Japan and Taiwan. Japan's approach is to emphasise the 'passing down of traditional food cultures' (Article 7, 24) and it has been criticised for neglecting the religious, class, ethnic and regional diversity of Japanese food cultures, as well as their hybridity and openness to other food cultures.³⁸ In contrast, Taiwan's Act clearly states the diversity of food cultures, depending on each region and ethnic group (Article 3), and stresses their 'passing along [down] and innovation' ra-

ther than having a closed approach to food culture (Article 4).

Promotion systems in public education

Food education policy is to be developed at the central level by the Food and Agricultural Education task force, which consists of 23 representatives from the government, academia, industry and civil society. Only the first committee meeting had been held at the time of our research. Since little information is available about concrete promotion systems, we focus on public education (especially, elementary and junior high levels) by using available documents.

Educational content in Taiwan is defined in the Curriculum Guidelines for 12-Year Basic Education (promulgated in 2014, amended in 2021). The content is divided into the Ministry of Education's mandated curriculums and school-developed flexible ones. For example, the recommended ratio of course numbers in the 5–6th grade for elementary schools is 26 classes for the mandated curriculums and four to seven classes for the flexible subjects per week. Furthermore, 19 'issues' that are to be incorporated into various curricula are also defined, some of which include food-related educational content.

Currently, there is no specific curriculum (or issues) for food education. It is thus expected to be implemented in relevant curriculums, such as those for 'health and physical education', 'social studies', 'natural sciences', 'integrative activities' and 'environmental education (as an issue)'. In this sense, Taiwan's food education can be viewed as an integrative approach to existing food-related pedagogies such as nutrition and health, home economics and environmental education.^{39,40}

Challenges in promotion systems

In terms of promotion systems, some interviewees (No.2, No.4) noted a difficulty regarding the act with respect to

professional qualification and training. This act was requested, on the one hand, due to the government's ambition to ensure the quality of food education practice and, on the other hand, due to the actual actors' desire to obtain some legitimacy. However, the act has two types of difficulties: the first is how such professionalism can be defined and the second relates to who is in charge of such training. The government tentatively recognises multiple forms of professionalism (education, experience and recommendation from relevant institutions) and stipulates the Council of Agriculture and its accredited institutions to operate training programmes (No.4). However, these two fundamental questions remain unresolved.

The most frequently-mentioned difficulty was how to develop partnerships with education actors. The Food and Agricultural Education Act stipulates the Council of Agriculture's duty to collaborate with other central authorities, including the Ministry of Education, but these authorities have neither any duty nor special funds to conduct food education (No.4).

Various related obstacles were solicited from the field actors. Currently, school dietitians play a pivotal role in promoting food education. However, these actors are already carrying the heavy burden of daily school lunch operations; thus, conducting food education might result in additional (unbearable) burdens. The active participation of other school actors is necessary to ease the burden on school dietitians, but it has so far proved difficult to cultivate the teachers' interest and encourage their cooperation (No. 6–8). This issue becomes particularly problematic for junior high schools, which prioritise the mandated curriculum more than elementary schools (No.7), and for schools in which lunch operations are outsourced to catering companies and no school dietitian is present (No.9).

One dietitian (No.7) also indicated the limited quality of current educational curriculums, saying that 'our health textbook has only two pages related to food, and only content about nutrition [...] the government has made efforts to introduce local and organic foods into school lunches, but, without curriculum improvement, it cannot be an effective education about food systems.'

Challenges in educational content

Being aware of the above-mentioned situation, Interviewee No.1 proposed that a possible solution would be to inscribe food education in the formal curriculum, most feasibly as one of the 'issues', in the next curricular amendment to be made in 2027. However, doing so requires a thorough consideration of critical issues about educational content.

The first issue is how the learning of food systems should be situated within the curriculum by going beyond ordinary agricultural education. Interviewee No.4 noted the key term 'linkage', which is being weakened under food modernisation across all food system actors, from production to consumption. Interviewee No.10 stressed the role of wholesale markets, from which almost half of fresh foods come in Taiwan, which has often been forgotten in the discourse of 'knowing the origin of our food'.

The second issue relates to a complex attitude to family dietary norms. Being aware of the demographic change

and women's social promotion, Interviewee No.1 highlighted the increasing difficulties related to home cooking in Taiwanese households and the risk of normalising it, which might result in demoralising mothers and discouraging potential actors in food education promotion. On the other hand, the same interviewee still recognised the intrinsic value of home cooking, the taste of ama (grandmother), conviviality and festive meals with family members. From a sociological perspective, Interviewee No.3 diagnosed the decreasing practice of home cooking as a prerequisite condition for growing food anxiety and the need for social interventions to improve the population's 'food literacy' rather than leaving this duty to the family. These lines of argument might well reflect the reason for which the family's duty regarding food education was not stipulated in the Act.

The third issue is how to maintain a healthy nationalism. As pointed out by Interviewee No.4, Taiwan is a multi-ethnic society and it is difficult to normalise 'one food culture', compared to other countries, notably Japan's washoku.⁴¹ On the other hand, Interviewee No.2 was alarmed that decision-makers were not adequately self-conscious of the nationalistic tendency in current food education, the primary objective of which remains merely the promotion of national produce.

The last challenge, as noted by Interviewee No.11, is the current absence of an inequality perspective. In particular, indigenous Taiwanese living in remote areas tend to face malnutrition (e.g., 60% of indigenous children do not have enough food in the remote area, for which this food bank association takes charge). The same interviewee stressed the need for nutritional guidance, along with food aid, for this disadvantaged population.

DISCUSSION

In this section, we summarise and further discuss empirical insights in relation to the relevant literature and the previous experience of food education policy in other countries.

Policy implication

The central government's strong intervention in professional training and qualifications is a particular feature of Taiwan's food education policy. Although a part of Japan's food education policy was to deploy 'nutrition teachers', which has been effective in developing food education practice in schools,⁴² the government has been reluctant to intervene regarding qualifications for professionalism and pedagogy in general. This policy has resulted in a multitude of professional qualifications and training courses being developed by private associations, with no assurance of quality. On this aspect, Japan's food education has a more privatised approach³⁵ than the public one in Taiwan. As noted by some interviewees, both approaches have strengths and weaknesses.

Perhaps it would be beneficial to think of the third approach taken in France, that is, an effective collaboration between the private and the public sectors: to retain the diversity of actors and pedagogies, private associations have taken responsibility for the professional training and qualification of educators. On the other hand, the government has also made an active commitment to iden-

tifying effective pedagogies, developing a reference for food education actors, establishing national networks for these associations and evaluating educational effects, all of which processes have been effected jointly with the private associations.⁴³ Nevertheless, it should be noted that the existence of an established pedagogy called 'taste education' has been a prerequisite condition for such an effective partnership.^{44,45}

An important implication for Taiwan is not to stop discussion about what should be taught in food education and who should be responsible for the educational content. A recent discussion about 'food literacy' in Taiwan is quite relevant with this issue.⁴⁶⁻⁴⁸ Although there are many other operational challenges, the concerned individual act is valuable in itself, so that the government can announce its determined attitude to shift the responsibility of food education practice from the family to society.

This point is closely related to the need for inter-ministerial collaboration. In Japan, food education has been inscribed in the formal educational curriculums since 2007 and this has contributed to enhancing the status of food education practice in schools. Given this experience in Japan, a collaboration between the Council of Agriculture and the Ministry of Education is also needed in Taiwan to inscribe food and agricultural education in the next curriculum, starting in 2027, as well as continuing discussion about what educational content should be inscribed. Doing so also necessitates a partnership with the Ministry of Health and Welfare and related actors, particularly nutritional scientists, whose discipline has a long history of impact evaluation and programme development in nutrition education.

In this sense, the implication of the Food and Agricultural Education Act goes beyond food education policy; it points to a need to accumulate the necessary experience of inter-ministerial and inter-sectorial collaboration to ultimately realise two pending food policies, namely the School Lunch Act and the National Nutrition Act.

Taiwan in the reflexive food modernity

The implication of food education policy in Taiwan also extends to enriching our understanding of food modernity. The findings reveal that food education policy in Taiwan was established as a counterreaction to certain characteristic reflexive food modernity phenomena, such as the globalisation of food systems, growing food anxiety, the prevalence of eating out and the distancing of food production and consumption (Figure 1).

However, food education can also lead to negative consequences, such as the dissemination of a nutrition-centered, gendered and nationalistic ideology, which further radicalises eater's 'gastro-anomic' conditions; that is, being overwhelmed by a multitude of conflicting dietary norms and being at a loss as to what they should eat.^{49,50} To live in our reflexive modernity is, as Giddens rightly pointed out, 'to live in an environment of chance and risk' (p.109).²⁰ Similarly, food education policy can be a chance to improve people's dietary standards, but it can also become a risk if reflexive food modernity is not properly dealt with. Our findings indicate some issues in which this dual modality of food education is being questioned in Taiwan.

The first issue is how to deal with family, particularly familial norms, in the kitchen. As one interviewee rightly pointed out, home cooking should not be unconditionally normalised, because this might carry the risk of moralising mothers. On the other hand, the prevalence of eating out (distancing from the kitchen) is an important factor in recent nutritional problems and growing food anxiety. Furthermore, it seems that decision-makers in Taiwan still adhere to some familial elements, such as conviviality at the family table, festive meals and the taste of the grandmother. There is no single answer to this dilemma. What is important is to recognise that demographic conditions for achieving such familial norms are being lost at a particularly fast rate in East Asia³⁴ and that food education constitutes an opportunity for reflecting on previous and future family meals.

Second, the modernisation of food systems is not simply the distancing of production from consumption, but a complex networking of multiple economic actors, including wholesale markets and even food aid actors. Food education in reflexive food modernity period has to enhance such a structural understanding of food systems rather than simplifying it merely into the direct connection between producers and consumers, which is often assumed in terms such as 'linkage' and 'origin'.

The third point relates to national identity and Taiwanese food cultures. Although one interviewee assumed 'one Japanese food culture (washoku)' to contrast the complexity in Taiwan, Japanese food culture is also a hybrid culture that interacts strongly with different cultures.^{48,49} The nationalistic masking of this hybridity has been problematic in Japan's food education.³⁵ A necessary perspective is thus to understand the patterns by which different cultures are integrated into such a hybrid culture.^{53,54}

A similar argument can also be applied to Taiwanese food cultures. Being a multi-ethnic culture does not mean that one can escape inquiries into how the food cultures of differing ethnic and regional origins have been integrated into its national cuisine, how this process has included certain cultures and excluded others, and how Taiwan should face its colonial and post-colonial histories.⁵⁵

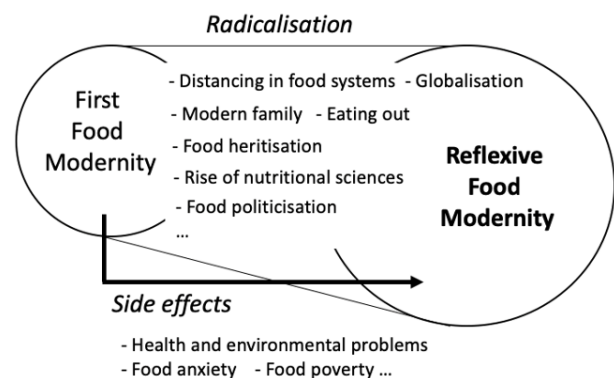


Figure 1. A simplified concept of reflexive food modernity. Reflexive food modernity is the period in which food modernity trends get radicalised and we must confront with these side effects. This figure simply illustrates this dynamism not to present an exhaustive list of food modernity trends. For further discussion, see theoretical papers.^{21,22,24}

Lastly, the perspective of inequality should be included. Although addressing inequalities has become one of the food education policy targets since 2013 in Japan, discussion is still ongoing about what dietary interventions are needed and to what extent the eating lives of the vulnerable should be socially secured. We were unable to extensively explore this aspect in this article, but the inequality perspective has to be integrated into Taiwan's food education policy at the earliest possible point (e.g., the first basic promotion plan).

ACKNOWLEDGEMENTS

The author would like to thank the Department of Bio-Industry Communication and Development at National Taiwan University for hosting me as a visiting scholar and Prof. Yu-Chan Chiu for her generous assistance.

AUTHOR DISCLOSURES

The author declares no conflict of interest.

This work was supported by JSPS KAKENHI, Grant Number 21J01732 and 22K14956, and the Lotte Foundation, Grant Number LF000805.

REFERENCES

- United Nations Department of Economic and Social Affairs. Sustainability Development Goals. 2015/9 [cited 2023/8/9]; Available from: <https://sdgs.un.org/goals>
- Beauman C, Cannon G, Elmadfa I, Glasauer P, Hoffmann I, Keller M, Krawinkel M, et al. The principles, definition and dimensions of the new nutrition science. *Public Health Nutrition*. 2005;8: 695–8. doi: 10.1079/PHN2005820.
- Wahlqvist ML. International nutrition and health. In Wahlqvist ML, Gallegos D, editors. *Food and Nutrition: Sustainable Food and Health Systems*. London: Routledge; 2020. pp. 556–72.
- Cabinet Office of Japan. Research Report on Food Education Policies in Other Countries. 2007/3 [cited 2023/5/31]; Available from: <https://warp.da.ndl.go.jp/info:ndljp/pid/1238758/www8.cao.go.jp/syokuiku/more/research/foreign/h19-1/index.html>. (in Japanese)
- Conseil National de l'Alimentation. Propositions du Conseil National de l'Alimentation pour la mise en œuvre du Programme National pour l'Alimentation. 2010/6 [cited: 2023/5/31]; Available from: https://cna-alimentation.fr/wp-content/uploads/2017/03/CNA_Avis69.pdf. (in French)
- Dimbleby H, Vincent J. The School Food Plan. 2013. Available from: http://www.schoolfoodplan.com/wp-content/uploads/2013/07/School_Food_Plan_2013.pdf
- Page A, Hart C. A Report on the Food Education Learning Landscape. Jamie Oliver Foundation. 2017 [cited: 2023/5/31]; Available from: <https://www.sheffield.ac.uk/education/research-old/early-childhood/fell>
- Yoon J, Kwon S, Shim JE. Present status and issues of school nutrition programs in Korea. *Asia Pac J Clin Nutr*. 2012;21:128–33. doi: 10.6133/apjcn.2012.21.1.17.
- Food and Agricultural Education Act. Laws & Regulations Database of the Republic of China (Taiwan). 2022/5/4 [cited 2023/5/30]; Available from: <https://law.moj.gov.tw/ENG/LawClass/LawAll.aspx?pcode=M0090039>
- Chiu YC, Yu SH. Everyday strategies for handling food safety concerns: a qualitative study of distrust, contradictions, and helplessness among Taiwanese women. *Health Risk Soc*. 2019;21:319–34. doi: 10.1080/13698575.2019.1685658.
- Fu YC. Taiwan Social Change Survey (Year 6 of Round 4): Risk Social. Academia Sinica. 2013. doi: 10.6141/TW-SRDA-C00224_1-1. (in Chinese)
- Pan WH, Wu HJ, Yeh CJ, Chuang SY, Chang HY, Yeh NH, Chuang SY, Chang HY, Yeh NH, Hsieh YT. Diet and health trends in Taiwan: comparison of two nutrition and health surveys from 1993-1996 and 2005-2008. *Asia Pac J Clin Nutr*. 2011;20:238–50. doi: 10.6133/apjcn.2011.20.2.14.
- Pan WH. Nutrition and Health Surveys in Taiwan Report (2017-2020). Ministry of Health and Welfare. 2022/5 [cited 2023/5/31]; Available from: <https://www.hpa.gov.tw/EngPages/Detail.aspx?nodeid=3999&pid=15562>. (in Chinese)
- Ministry of Health and Welfare. Survey on Life Conditions of Low-Income Households. 2021/7/14 [cited 2023/5/30]; Available from: <https://dep.mohw.gov.tw/DOS/lp-5094-113-xCat-y107.html>. (in Chinese)
- Lee MC, Jones AM. Understanding differences in income-related health inequality between geographic regions in Taiwan using the SF-36. *Health Policy*. 2007;83:186–95. doi: 10.1016/j.healthpol.2007.01.007.
- Lo YT, Chang YH, Lee MS, Wahlqvist ML. Dietary diversity and food expenditure as indicators of food security in older Taiwanese. *Appetite*. 2012;58:180–7. doi: 10.1016/j.appet.2011.09.023.
- Hsu CC, Lee CH, Wahlqvist ML, Huang HL, Chang HY, Chen L et al. Poverty increases type 2 diabetes incidence and inequality of care despite universal health coverage. *Diabetes Care*. 2012;35:2286–92. doi: 10.2337/dc11-2052.
- Food and Agriculture Organization. Rice production. 2023 [cited 2023/5/30]; Available from: <https://www.fao.org/faostat/en/#data>
- Beck U. *Risk Society: Towards a New Modernity*. London: SAGE Publications; 1992.
- Giddens A. *The Consequences of Modernity*. California: Stanford University Press; 1990.
- Poulain JP. The affirmation of personal dietary requirements and changes in eating models. In: Fischler C, editor. *Selective Eating The Rise, Meaning and Sense of Personal Dietary Requirements*. Paris: Odile Jacob; 2012. pp. 253–64.
- Poulain JP. Anxiety as Invariant of Human Relation to Food. In: Ehlert J, Faltmann NK, editors. *Food Anxiety in Globalising Vietnam*. Singapore: Springer Nature Singapore; 2019. pp. 301–20.
- Chang KS. Compressed Modernity in South Korea: Constitutive Dimensions, Manifesting Units, and Historical Conditions. In: *The Routledge Handbook of Korean Culture and Society*. London & New York: Routledge; 2017. pp. 31–47.
- Poulain JP. Beyond weak signals listening theory. From risk analysis to the management of alimentary concerns. In: Louis AJ, Poulain JP, editors. *Risk and Food Safety in China and Japan*. London & New York: Routledge; 2018. pp. 19–44.
- Poulain JP, Laporte C, Tibère L, Mognard E, Ragavan NA, Zadeh AA, Zadeh AA, Noor IM. Malaysian Food Barometer (MFB): a study of the impact of compressed modernisation on food habits. *Malays J Nutr*. 2020;26. doi: 10.31246/mjn-2019-0042.
- Figuié M, Moustier P, Bricas N, Loc NTT. Trust and Food Modernity in Vietnam. In: Ehlert J, Faltmann NK, editors. *Food Anxiety in Globalising Vietnam*. Singapore: Springer Nature Singapore; 2019. pp. 139–65.
- Ueda H. Food education policy in Taiwan. *Japanese J Nutr Diet*. 2023;81:129–137. doi: 10.5264/eiyogakuzashi.81.129. (in Japanese)

28. Council of Agriculture. Food and Agricultural Education Information Platform. 2022 [cited 2023/5/30]. Available from: <https://fae.coa.gov.tw/index.php>. (in Chinese)
29. Chang WC, Yen CS. A study on the construction of sustainable food development index for rural society. *J Rural Tour Res.* 2012;5:51–70. doi: 10.30169/JRTR.20112.0005. (in Chinese)
30. Yen CS, Tseng Y, Chang WC, Chen M, Xie A. A study on promotion systems for food and agricultural education in Taiwan. *Agric Educ Anthology.* 2015;60:69–86. (in Chinese)
31. Japan's Basic Law on Shokuiku. Japanese Law Translation. 2005/6/17 [cited 2023/5/30]; Available from: <https://www.japaneselawtranslation.go.jp/en/laws/view/3419/en>
32. Shiono H. On Basic Acts; *Trans Japan Acad.* 2008;63:1–33. doi: 10.2183/tja.63.1_1. (in Japanese)
33. Ueda H. Research structure and epistemological obstacles. In: *Food Education and Gastronomic Tradition in Japan and France.* London & New York: Routledge; 2022. pp. 23–34.
34. Scrinis G. On the ideology of nutritionism. *Gastronomica.* 2008;8:39–48. doi: 10.1525/gfc.2008.8.1.39
35. Kimura AH. Food education as food literacy: privatized and gendered food knowledge in contemporary Japan. *Agric Human Values.* 2011;28:465–82. doi: 10.1007/s10460-010-9286-6
36. Takeda W, Kelby M, Ishikawa Y. Food education for whom?: Perceptions of food education and literacy among dietitians and laypeople in urban Japan. *Food Stud An Interdiscip J.* 2017;7:49–66. doi: 10.18848/2160-1933/CGP/v07i04/49-66.
37. Ochiai E. Leaving the West, rejoining the East? Gender and family in Japan's semi-compressed modernity. *Int Sociol.* 2014;29:209–28. doi: 10.1177/0268580914530415
38. Takeda H. Delicious food in a beautiful country: Nationhood and nationalism in discourses on food in contemporary Japan. *Stud Ethn Natl.* 2008;8:5–30. doi: 10.1111/j.1754-9469.2008.00001.x
39. John Tung Foundation Food and Nutrition Centre. Guideline for Healthy Eating Education in Schools. 2018 [cited 2023/5/30]. Available from: <https://www.nutri.jtf.org.tw/Home>. (in Chinese)
40. Hamajima K. New home economics education in the national curriculum guidelines grades 1-9 in Taiwan (2003). *J Japan Assoc Home Econ Educ.* 2011;54:143–54. doi: 10.11549/jjahee.54.3_143. (in Japanese)
41. United Nations Educational, Scientific and Cultural Organisation. Washoku, traditional dietary cultures of the Japanese, notably for the celebration of New Year (nomination file No. 00869). 2013 [cited 2023/5/30]; Available from: <https://ich.unesco.org/en/RL/washoku-traditional-dietary-cultures-of-the-japanese-notably-for-the-celebration-of-new-year-00869>
42. Ministry of Internal Affairs and Communications. Evaluation of Food Education Policy. 2015/10/23 [cited 2023/5/30]; Available from: https://www.soumu.go.jp/main_content/000382445.pdf. (in Japanese)
43. Ueda H. Institutionalisation in Japan, France and Italy. In: *Food Education and Gastronomic Tradition in Japan and France.* 2022. pp. 67–89.
44. Puisais J. *Le goût chez l'enfant : L'apprentissage en famille.* Paris: Flammarion; 1999. (in French)
45. Ueda H. The philosophy of taste education: reading Jacques Puisais as a contemporary humanist-gastronome. *Int J Gastron Food Sci.* 2021; 25:100385. doi: 10.1016/j.ijgfs.2021.100385.
46. Vidgen HA, Gallegos D. Defining food literacy and its components. *Appetite.* 2014; 76:50–59. doi: 10.1016/j.appet.2014.01.010.
47. Lin RP. Handbook for Food and Agricultural Education. Council of Agriculture. 2022. [cited 2023/5/30]; Available from: https://fae.coa.gov.tw/files/TeachingPlan/710/A01_1.pdf (in Chinese)
48. Teng CC, Chih C. Sustainable food literacy: A measure to promote sustainable diet practices. *Sustainable Production and Consumption.* 2022;30:776–86. doi: 10.1016/j.spc.2022.01.008.
49. Fischler C. *L'omnivore.* Paris: Odile Jacob; 1990. (in French)
50. Poulain J-P. The contemporary diet in France: de-structuration or from commensalism to vagabond feeding. *Appetite.* 2002;39:43–55. doi: 10.1006/appe.2001.0461.
51. Ishige N. *History of Japanese Food Culture.* Tokyo: Iwanami Shoten; 2015. (in Japanese)
52. Ueda H. Sociology of Japanese gastronomy: a comparative perspective. In: *Food Education and Gastronomic Tradition in Japan and France.* 2022. pp. 149–63.
53. Maruyama M. The ancient layer in history of Japanese philosophy. In: *Loyalty and Treason.* Tokyo: Chikuma Shobo; 1998. p. 353–423. (in Japanese)
54. Kato S. *Japan as a Hybrid Culture.* Tokyo: Chikuma Shobo; 1974. (in Japanese)
55. Chen Y-J. *History of Taiwanese National Cuisine.* Taipei: Linking Books; 2020. (in Chinese)