## **APPENDIX**

Appendix 1: Knowledge Building Environment Scale (KBES) Questionnaire for Pretest

## Knowledge Building Environment Scale questionnaire I

姓名 Name:	學號:	
本問卷調查目的是為瞭解我對 研究使用並作為授課調整的參		內經驗,對於問卷調查的資訊只做 K的積極參與!調查問卷說明:
1. 本次調查採用不記名方式遊	<b></b>	
2·本調查問卷表共有 24 道題 同意、同意及 非常同意等四項		说的經驗,共分為非常不同意、不 <b>頁目空格中打√即可</b> 。
性別: □男性 Male □	女性 Female	

Working with idea		非常不 同意 Strongly disagree	不同意 Disagree	同意 Agree	非常同 意 Strongly agree
W11	就我過去在課堂中的學習經驗來看,大家所提出來的想法都會被視為值得列入考量的。In your past learning experience, all ideas in class were worthy of consideration.				
W12	就我過去在課堂上的學習經驗來看,在課堂上分享想法是不被鼓勵的。In your past learning experience, sharing of ideas in class was not encouraged.				
W13	就我過去在課堂中的學習經驗來看,非常重視從不同角度去學習新的事物。In your past learning experience, it was helpful to learn new things from different perspectives.				
W14	就我過去在課堂中的學習經驗來看,非常容易在課堂上分享和互相交換想法。In your past learning experience, ideas were shared and interchanged.				

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W15	就我過去在課堂中的學習經驗來看,非常重視促進每個想法之間的互動。In your past learning experience, the interaction about the ideas was helpful to facilitate.		
W16	就我過去在課堂中的學習經驗來看,非常重視包容不同想法。 In your past learning experience, it was important to embrace divergent ideas.		
	ideus.		
W17	就我過去在課堂中的學習經驗來看,常常透過整合大家的想法,讓 社群的知識更進步。In your past learning experience, the integration of ideas helped the community to advance knowledge.		
	Assuming agency		
AA1	在我之前上過的課程中,每個人都需要規劃自己的學習計畫並且執行它。In your previous courses, one needed to plan and execute one's learning plan.		
AA2	在我之前上過的課程中,非常重視 持續反思自己的學習狀況是很重要 的。In your previous courses, it was important to constantly reflect on one's own learning status.		
AA3	在我之前上過的課程中,班上同學總是會思考如何改進知識的成長。 In your previous courses, students were always reflecting on the process of how to improve knowledge.		
AA4	在我之前上過的課程非常重視生活 當中真正用得到的知識。In your previous courses, it was important to pursue real life knowledge.		
AA5	在我過去的課程中,非常重視判斷學習過程中的困難。  In your previous courses, it was important to identify the difficulties		

	that occurred in the process of learning.		
AA6	在我過去的課程中,社群成員一同 貢獻時間合作是有意義的。In your previous courses, it was meaningful for members to spend time beyond.		
AA7	在我過去的課程中,經常性的反思自己的學習歷程是有意義的。In your previous courses, it was meaningful to constantly reflect on one's learning process.		
AA8	在我過去的課程中,非常重視在課程結束時反思自己的學習。In your previous courses, it was important to reflect on one's learning at the end of the courses.		
	Fostering community		
FC1	就我過去在教室中的學習經驗,非常重視社群成員的共同參與。In your previous learning experience, participation of all members in the community was important.		
FC2	就我過去在教室中的學習經驗,小組成員都會主動參與討論。In your previous learning experience, all members had to actively participate in discussion.		
FC3	就我過去在教室中的學習經驗,小組成員都會對小組學習的成果負起責任。In your previous learning experience, all members needed to take responsibility for the learning outcomes of the community.		
FC4	就我過去在教室中的學習經驗,所有社群成員都擁有平等的機會貢獻他們的想法。In your previous learning experience, all members had equal opportunities to contribute ideas.		
FC5	就我過去在教室中的學習經驗,非 常重視個人和社群知識一同進步。 In your pervious learning experience,		

	both individuals' learning outcomes and the community knowledge advances were equally important.		
FC6	就我過去在教室中的學習經驗,所有小組成員都會一同創新想法。In your previous learning experience, all members worked collaboratively with the ideas.		
FC7	就我過去在教室中的學習經驗,非常重視每一個人在小組貢獻一己之力對於小組的學習和成長很重要。 In your previous learning experience, contributing to community's learning and growth was important.		
FC8	就我過去在教室中的學習經驗,非常重視社群內每一個人的想法如何促進知識的成長。In your previous learning experience, every member's ideas were seen as important contribution to community knowledge advances.		
FC9	就我過去在教室中的學習經驗,每一個小貢獻對於社群而言都是有意義的。In your previous learning experience, even small contributions to the community were regarded as meaningful.		

Adapted from Lin. K. Y., Hong, H.-Y., and Chai, C. S. (2014). Development and validation of the knowledge-building environment scale. *Learning and Individual Differences*, *30*, P.124-132.

## Appendix 2: Knowledge Building Environment Scale (KBES) Questionnaire for Post-test

## **Knowledge Building Environment Scale questionnaire III (LA2)**

姓名 Name:	學號:	座位:
本問卷調查目的是為瞭解我	我對於知識建構學習環境的 <b>約</b>	經驗,對於問卷調查的資訊只做

研究使用並作為授課調整的參考並嚴格保密, 感謝您的積極參與!調查問卷說明:

- 1. 本次調查採用不記名方式進行;
- 2·本調查問卷表共有 24 道題目,請就題目的描述我的經驗,共分為非常不同意、不同意、同意及 非常同意等四項,**請就符合我的經驗項目空格中打√即可**。

性別: □男性 Male □女性 Female

Working with idea		非常不 同意 Strongly disagree	不同意 Disagree	同意 Agree	非常同 意 Strongly agree
W11	在這幾週設計的活動中,大家所提出來的想法都會被視為值得列入考量的。In this learning activity, all ideas in class were worthy of consideration.				
W12	在這幾週設計的活動中,大家所提出來的想法都會被視為值得列入考量的。In this learning activity, all ideas in class were worthy of consideration.				
W13	在這幾週設計的活動中,大家所提出來的想法都會被視為值得列入考量的。In this learning activity, all ideas in class were worthy of consideration.				
W14	在這幾週設計的活動中,大家所提出來的想法都會被視為值得列入考量的。In this learning activity, all ideas in class were worthy of consideration.				
W15	在這幾週設計的活動中,大家所提出來的想法都會被視為值得列入考量的。In this learning activity, all ideas in class were worthy of consideration.				

			1
W16	在這幾週設計的活動中,大家所提出來的想法都會被視為值得列入考量的。In this learning activity, all ideas in class were worthy of consideration.		
W17	在這幾週設計的活動中,大家所提出來的想法都會被視為值得列入考量的。In this learning activity, all ideas in class were worthy of consideration.		
	Assuming agency		
AA1	在這幾週設計的活動中,每個人都需要規劃自己的學習計畫並且執行它。In this learning activity, one needed to plan and execute one's learning plan.		
AA2	在這幾週設計的活動中,班上同學 總是會思考如何改進知識的成長。 In this learning activity, students were always reflecting on the process of how to improve knowledge.		
AA3	在這幾週設計的活動中,非常重視 生活當中真正用得到的知識。In this learning activity, it was important to pursue real life knowledge.		
AA4	在這幾週設計的活動中,非常重視 判斷學習過程中的困難。In this learning activity, it was important to identify the difficulties that occurred in the process of learning.		
AA5	在這幾週設計的活動中,社群成員一同貢獻時間合作是有意義的。In this learning activity, it was meaningful for members to spend time beyond.		
AA6	在這幾週設計的活動中,經常性的 反思自己的學習歷程是有意義的。 In this learning activity, it was meaningful to constantly reflect on one's learning process.		

AA7	在這幾週設計的活動中,非常重視 在課程結束時反思自己的學習。In this learning activity, it was		
	important to reflect on one's learning at the end of the courses.		
AA8	在這幾週設計的活動中,每個人都需要規劃自己的學習計畫並且執行它。In this learning activity, one needed to plan and execute one's learning plan.		
	Fostering community		
FC1	在這幾週設計的活動中,非常重視 社群成員的共同參與。In this learning activity, participation of all members in the community was important.		
FC2	在這幾週設計的活動中,小組成員都會主動參與討論。In this learning activity, all members had to actively participate in discussion.		
FC3	在這幾週設計的活動中,小組成員都會對小組學習的成果負起責任。 In this learning activity, all members needed to take responsibility for the learning outcomes of the community.		
FC4	在這幾週設計的活動中,所有社群成員都擁有平等的機會貢獻他們的想法。In this learning activity, all members had equal opportunities to contribute ideas.		
FC5	在這幾週設計的活動中,非常重視個人和社群知識一同進步。In this learning activity, both individuals' learning outcomes and the community knowledge advances were equally important.		
FC6	在這幾週設計的活動中,所有小組成員都會一同創新想法。In this learning activity, all members worked collaboratively with the ideas.		

FC7	在這幾週設計的活動中,非常重視每一個人在小組貢獻一己之力對於小組的學習和成長很重要。In this learning activity, contributing to community's learning and growth was important.		
FC8	在這幾週設計的活動中,非常重視 社群內每一個人的想法如何促進知 識的成長。In this learning activity, every member's ideas were seen as important contribution to community knowledge advances.		
FC9	在這幾週設計的活動中,每一個小 貢獻對於社群而言都是有意義的。 In this learning activity, even small contributions to the community were regarded as meaningful.		

Adapted from Lin. K. Y., Hong, H.-Y., and Chai, C. S. (2014). Development and validation of the knowledge-building environment scale. *Learning and Individual Differences*, *30*, P.124-132.

Appendix 3: Experimental Group Knowledge Building-Based Learning Outcomes Results

Weeks/ Question	Group	Outcomes	Keywords Category
(Week 1) What do you think of when we talk about genetically modified	1	<ol> <li>What are the specifications for GM foods in various countries?</li> <li>The benefit of genetic modification is to increase crop yields, but what are the disadvantages?</li> <li>Which GM foods can be sold in the international market?</li> </ol>	<ol> <li>Specifications</li> <li>Disadvantages</li> <li>Specifications</li> </ol>
foods? What are you trying to understand?	2	<ol> <li>Will it be harmful to the human body?</li> <li>Will it affect nature?</li> <li>Which foods are genetically modified foods?</li> <li>Has Taiwan begun to develop genetically modified foods?</li> <li>What are genetically modified foods?</li> <li>Will the GM food be allergic if it is eaten?</li> <li>Who invented the GM food?</li> <li>What are the disadvantages of GM food?</li> <li>Which country has the most GM foods?</li> </ol>	<ol> <li>Health</li> <li>Ecological</li> <li>Example</li> <li>Definition</li> <li>Health</li> <li>Person</li> <li>Disadvantages</li> <li>Example</li> </ol>
	3	<ol> <li>Is the GM food toxic?</li> <li>Is GM food good for humans?</li> <li>Will eating genetically modified foods produce an allergic reaction?</li> <li>Is GM food safe?</li> </ol>	<ol> <li>Health</li> <li>Health</li> <li>Health</li> <li>Health</li> <li>Health</li> </ol>
(Week 2) What are the benefits and disadvantag es of genetically modified foods?	1	<ol> <li>Increase crop productivity</li> <li>Make crops more adaptable to adverse growing environments, such as drought.</li> <li>Improve the nutrients of crops, such as increasing the protein content of rice.</li> <li>Enhance the resistance of crops to pests, thereby reducing the use of pesticides.</li> <li>Improve the appearance and taste of food.</li> <li>Improve the characteristics of crops, making them easy to process, reducing costs and reducing production costs.</li> <li>Remove certain allergenic ingredients from food.</li> </ol>	<ol> <li>Impact on Plant</li> <li>Impact on Plant</li> <li>Impact on Plant</li> <li>Impact on Plant</li> <li>Benefit</li> <li>Impact on Plant</li> <li>Benefit</li> <li>Health</li> <li>Impact on Animal</li> <li>Impact on Plant</li> <li>Disadvantages</li> <li>Ecological</li> <li>Disadvantages</li> </ol>

	Disadvantages:	
	<ol> <li>8. Harmful to human health.</li> <li>9. Inflicts damage to insects.</li> <li>10. Affect the growth of surrounding plants.</li> <li>11. Insects and germs increase resistance during evolution, creating new species that may subsequently damage crops.</li> <li>12. This has led to reduced species diversity, disease transmission across species and disruption of ecological balance.</li> <li>13. The time for genetically modified food production is too short, and some genetically modified foods carry an unascertained risk.</li> </ol>	
2	Benefits:  1. Increase crop productivity 2. Make crops more adaptable to adverse growing environments. 3. Increase nutrition 4. This will reduce the use of pesticides. 5. This can change the taste and properties of the food. 6. Easy to process and reduce costs. 7. Remove certain foods that cause allergies in food. Disadvantages:	<ol> <li>Impact on Plant</li> <li>Impact on Plant</li> <li>Benefit</li> <li>Benefit</li> <li>Benefit</li> <li>Benefit</li> <li>Health</li> <li>Health</li> <li>Health</li> <li>Impact on Plant</li> </ol>
	<ul> <li>8. Harmful to human health. It causes the normal secretion of body hormones after long-term consumption, which in turn destroys the body's metabolism.</li> <li>9. It may cause loss of nutrients or increase toxins and allergens.</li> <li>10. Crops are transplanted with insectresistant genes that may produce new allergen toxins and may even produce super-drugs that are resistant and difficult to treat.</li> </ul>	
3	The safety of the third group of genetically modified foods  1. Genetically modified foods can be harmful to human health - many genetically modified crops are transplanted with pest-resistant genes that may produce new allergens and	<ol> <li>Health</li> <li>Benefit</li> <li>Impact on Plant</li> </ol>

		new toxins.  2. Insufficient safety testing - The American Soybean Association also refused to separate genetic soybeans and traditional soybeans, saying that it is "substantially equivalent to" traditional soybeans.  3. Genetic modification of crops can cause mutations in the virus and recombination of viruses; the use of genetically modified foods to accelerate the growth of crops may change the original nutrients.	
(Week 3)	1	<ol> <li>National regulations for genetically modified foods</li> <li>The unintentional rate of nongenetically modified food ingredients changed from 5% to 3%.</li> <li>As long as the food uses any genetically modified food ingredients or additives, it must be marked with "genetically modified" GM food ingredients.</li> <li>For high-level processed products such as soy sauce and soy salad oil, it should be marked as "This product is made by genetic modification oo, but this product no longer contains genetically modified ingredients."</li> <li>Expand the scope of implementation and expand the current packaged foods to food additives and bulk foods.</li> <li>To regulate the food raw materials to be marked as "non-genetically modified", it is necessary to have the relative genetically modified food raw materials that have been reviewed and approved for use as food raw materials, and must be marked; National standards (or equivalent meanings) are marked with actual unintentional rates.</li> </ol>	<ol> <li>National         Regulation</li> <li>National         Regulation</li> <li>National         Regulation</li> <li>National         Regulation</li> <li>National         Regulation</li> </ol>
	2	<ul> <li>What is the impact of genetically modified foods on the human body and nature?</li> <li>1. The time for genetically modified food production is too short, and some genetic foods have an unascertained risk.</li> <li>2. Causing allergies.</li> </ul>	<ol> <li>Disadvantages</li> <li>Health</li> <li>Health</li> <li>Impact on         <ul> <li>Animal</li> </ul> </li> <li>Impact on Plant</li> <li>Impact on</li> </ol>

		<ol> <li>Tissue hypertrophy, including the large intestine; brain development is incomplete; immune system damage.</li> <li>Inflicts damage to insects.</li> <li>Inflicts damage on plants.</li> <li>Animal cells will shrink.</li> <li>Easy to get sick.</li> </ol>	Animal 7. Health
	3	<ol> <li>The benefits of GM food</li> <li>Improve the appearance and taste of food.</li> <li>Remove certain ingredients that can guide allergies in food.</li> <li>Increase the resistance of crops to pests.</li> <li>Improve the nutritional content of crops.</li> <li>Make crops more adaptable to adverse growing environments.</li> <li>Increase crop yields.</li> <li>The status of GM food in Taiwan and the world</li> <li>About 10% (240,000 tons) of imported soybeans from Taiwan provide direct</li> </ol>	<ol> <li>Benefit</li> <li>Benefit</li> <li>Impact on Plant</li> <li>Impact on Plant</li> <li>Impact on Plant</li> <li>Impact on Plant</li> <li>Example</li> <li>Example</li> </ol>
		consumption, and the rest are used for feed and oil extraction.  8. The GM foods are the most produced in the United States. As an intensive agricultural country, the annual output is also the world's number one.	
(Week 4) Do you agree with the use and developmen t of GM foods and why?	1	<ol> <li>Disagree</li> <li>The reason</li> <li>Violation of natural laws and damage to ecological balance.</li> <li>Injury to crops, damage to insects, and species can also change.</li> <li>It is risky to people and may be ill and endanger human health.</li> </ol>	<ol> <li>Ecological</li> <li>Disadvantages</li> <li>Health</li> </ol>
	2	Disagree  The reason:  1. There may be risks.  2. Harm to humans: hormones can damage metabolic function, easily infect diseases, may cause allergies, damage the immune system, cells will shrink,	<ol> <li>Disadvantages</li> <li>Health</li> <li>Impact on Plant</li> <li>Impact on         Animal     </li> </ol>

	and the brain will cause harm.  3. Inflicts damage on plants.  4. Inflicts damage to insects.	
3	<ol> <li>Agree         The reason:         1. Change the appearance and taste of the food.         2. Protect biodiversity and save farmland.         3. Change the characteristics of crops to make them easier to process to reduce waste and reduce production costs.     </li> <li>4. Can increase crop yields, and there will be no food in the future.</li> <li>5. Enhance the resistance of crops to pests, thereby reducing the use of pesticides.</li> <li>6. Remove some of the food ingredients that may cause allergies.</li> <li>7. Improve the nutrients of crops, such as increasing the protein content of rice.</li> <li>8. Make crops more adaptable to unfavorable production environments, such as drought.</li> </ol>	<ol> <li>Benefit</li> <li>Ecological</li> <li>Impact on Plant</li> <li>Impact on Plant</li> <li>Impact on Plant</li> <li>Benefit</li> <li>Impact on Plant</li> <li>Impact on Plant</li> </ol>

Appendix 4: Control Group Knowledge Building-Based Learning Outcomes Results

Weeks/ Question	Group	Outcomes	<b>Keywords Category</b>
(Week 1) What is Genetically Modified Food?	1	<ol> <li>Artificially extract the genes of plants and animals and transfer them from doctor objects to another organism with specific genes. (GMO, GM organism). The above method is used to develop animals and plants for consumption, and these products are GM food.</li> <li>Currently available products: herbicide tolerant, pest and disease resistant</li> <li>GMO: Implant DNA into cells of crops to alter the characteristics of crops.</li> <li>Currently developing food: apple, mango, banana, pineapple, barley, sweet potato, coconut.</li> <li>(Genetically modified) soybeans often eat panic organ lesions</li> </ol>	<ol> <li>Definition</li> <li>Example</li> <li>Definition</li> <li>Example</li> <li>Definition</li> </ol>
	2	<ol> <li>Good for farmers and bad for ecology. Scientists have developed a plant that can prevent cholera.</li> <li>Can improve the nutritional value.</li> <li>Can accelerate the growth rate.</li> <li>The gene of Bacillus thuringiensis, he can only cause insect death.</li> <li>Genetically modified foods in the United States are primarily the responsibility of the US Food and Drug Administration (FDA).</li> <li>The current genetically modified foods are soybeans, corn, tomatoes, cotton, and beets.</li> </ol>	<ol> <li>Ecological</li> <li>Benefit</li> <li>Benefit</li> <li>Benefit</li> <li>Example</li> <li>Example</li> </ol>
	3	<ol> <li>Why develop GM foods? Is GM food safe?</li> <li>Good or bad for the environment - less pesticides are good for the environment.</li> <li>Genetically modified organisms: DNA from other organisms, recombinant DNA technology, genetic engineering.</li> </ol>	<ol> <li>Health</li> <li>Ecological</li> <li>Definition</li> </ol>
	4	<ol> <li>Why are genetically modified foods?         Reduce pests and increase production.     </li> <li>Supported by the World Health         Organization, but 60% of Americans believe it is not safe.     </li> </ol>	<ol> <li>Benefit</li> <li>Health</li> <li>National Regulation</li> <li>Example</li> </ol>

		<ol> <li>Violations can be severely punished by 4 million. "Non-genetic transformation" must comply with the regulations, otherwise it can be punished by more than 4 million.</li> <li>The basic food for research and development: apple, pineapple, barley, coconut, mango, banana, sweet potato.</li> <li>GM foods that have been marketed: soybeans, corn, papaya, beets, tomatoes, canola, potatoes, beets, cotton, pumpkin, rice.</li> <li>Countries most interested in genetic modification: Canada, China, Spain, the United States, Brazil, India, Argentina, South Africa, Mexico, etc.</li> </ol>	5. Example 6. Example
(Week 2) What are the benefits and disadvantag es of genetically modified foods?	1	<ol> <li>Allow crops to grow in an unfavorable environment, such as drought.</li> <li>Remove some of the food ingredients that may cause allergies.</li> <li>Increase crop yields.</li> <li>Improve the appearance and taste of food.</li> <li>Crops slow down maturation, increase tolerance, and resist pests</li> <li>Disadvantages.</li> <li>High seedling fees, pest-resistant resistance, and crops are adversely affected by genetic modification and are subject to foreign boycotts.</li> <li>The time for genetically modified foods to develop is too short, and some genetic foods carry an unascertained risk.</li> <li>It reduces the diversity of species, the transmission of diseases between species and the destruction of ecological balance.</li> </ol>	<ol> <li>Impact on Plant</li> <li>Benefit</li> <li>Impact on Plant</li> <li>Impact on Plant</li> <li>Impact on Plant</li> <li>Impact on Plant</li> <li>Disadvantages</li> <li>Ecological</li> </ol>
	2	Benefits:  1. Remove certain allergenic ingredients from food.  2. Increase crop yields.  3. Enhance the resistance of crops to pests, thereby reducing the use of insecticides.  4. Make crops more adaptable to	<ol> <li>Benefit</li> <li>Impact on Plant</li> <li>Impact on Plant</li> <li>Impact on Plant</li> <li>Benefit</li> <li>Health</li> <li>Impact on Animal</li> </ol>

	unfavorable environments, such as drought  5. Improve the appearance, taste and taste of food.  Disadvantages  6. Harm to human health.  7. Injury to insects and increased mortality have led to a significant reduction in	8. Health
	other species.  8. Produce new toxins or allergens.	
3	<ol> <li>Benefits:         <ol> <li>Easy management: fertile soil causes weed growth, and control is not easy, while anti-herbicide genetic crops are effective against weeds.</li> <li>Increased yield: Genetically modified crops have insect-resistant and disease-resistant properties that reduce crop losses and increase yield.</li> <li>Reduce the pollution of groundwater.</li> </ol> </li> <li>Make crops more adaptable to unfavorable environments, such as drought.</li> </ol>	<ol> <li>Impact on Plant</li> <li>Impact on Plant</li> <li>Ecological</li> <li>Impact on Plant</li> <li>Health</li> <li>Impact on         Animal     </li> </ol>
	Disadvantages:  5. Harm to human health: allergies to food (who know what is in the food), increase the chance of human cancer.  6. Injury to insects - larvae eat genetic crops to increase mortality.	
4	<ol> <li>Benefits:         <ol> <li>Change the characteristics of crops to make them easy to process to reduce waste and the cost of production of sauces.</li> <li>Make crops more adaptable to unfavorable environments, such as drought.</li> <li>Increase crop yields.</li> </ol> </li> </ol> <li>Improve the nutrients of crops, such as increasing the protein content of rice.</li> <li>Enhance the resistance of crops to pests, thereby reducing the use of insecticides.</li>	<ol> <li>Impact on Plant</li> <li>Benefit</li> <li>Benefit</li> <li>Health</li> <li>Ecological</li> <li>Impact on Plant</li> <li>Impact on Plant</li> <li>Impact on Animal</li> <li>Health</li> </ol>

		<ul> <li>6. Improve the appearance and taste of food.</li> <li>7. Remove certain allergenic ingredients from food.</li> <li>Disadvantages:</li> <li>8. Harm to human health: allergic to food.</li> </ul>	
		<ol> <li>It reduces the diversity of species, the transmission of diseases between species and the destruction of ecological balance.</li> <li>Affect the growth of surrounding plants.</li> <li>Inflicts damage to insects.</li> <li>Researchers have found that genetically modified potatoes destroy the consumer's immune system and increase the chances of human cancer.</li> </ol>	
(Week 3) What are the	1	Soy, chestnut, tomato, corn, potato, soybean, cotton, rape, beet, soy sauce, tofu, soy milk.	1. Example
genetically modified foods that are	2	Soybeans, corn, rape, cotton, tomatoes, potatoes, papaya, pumpkin, rice, animals, aquatic products, carrots	1. Example
currently available?	3	1. Soy, mango, watermelon, corn, lotus, tomato, guava, orange, apple, papaya, banana, corn, bean, green pepper, potato	1. Example
	4	Pumpkin, papaya, soybean, eggplant, mung bean, corn, mango, alfalfa, coix seed, beet, black bean, red bean	1. Example
(Week 3) How do you think the government should regulate GM foods?	1	<ol> <li>You can't experiment with the human body and make the food nutritious.</li> <li>Don't use animals as white mice and change foods to organic and natural foods.</li> </ol>	<ol> <li>National         Regulation</li> <li>National         Regulation</li> </ol>
	2	Voting, compulsory law, screening, discussion of additives in Sanzhuang food, nutrition labeling, and raw material labeling.	1. National Regulation
	3	<ol> <li>mandatory labeling: packaged foods, food additives, genetically modified foods in the form of bulk energy products, food materials.</li> <li>standard bulk primary processing</li> </ol>	<ol> <li>National         Regulation</li> <li>National         Regulation</li> <li>National</li> </ol>

		products. 3. bulk primary processing products not processed?	Regulation
	4	<ol> <li>Can not combine people and animals.</li> <li>Animals cannot be genetically modified and tested.</li> <li>Security testing must be performed for its characteristics.</li> <li>From the perspective of government initiatives, the GM foods comprehensively mark the laws that banned agricultural products and primary processed products from being banned on campus.</li> <li>It is impossible to use humans for genetic modification.</li> </ol>	<ol> <li>National         Regulation</li> <li>National         Regulation</li> <li>National         Regulation</li> <li>National         Regulation</li> <li>National         Regulation</li> <li>Mational         Regulation</li> </ol>
(Week 4)  Do you agree with the use and developmen t of GM foods and why?	1	<ol> <li>Disagree         The reason:         1. Because although the appearance, taste and taste of food can be improved, some of the sources of the basic food change are unknown, and chemical toxins may be eaten.         2. Some ingredients are not good for humans, and eating may cause diarrhea.         3. The production time of GM foods is still too short, and some GM foods carry unpredictable risks.         4. Some GM foods have side effects.     </li> </ol>	<ol> <li>Disadvantages</li> <li>Health</li> <li>Disadvantages</li> <li>Disadvantages</li> </ol>
	2	Disagree  The reason:  1. It's not good for health.  2. New toxins or allergens may be produced.  3. Plants may produce mutations.  4. Harmful to insects.	<ol> <li>Health</li> <li>Health</li> <li>Impact on Plant</li> <li>Impact on         Animal     </li> </ol>
	3	<ul> <li>Disagree</li> <li>The reason:</li> <li>1. Increase the chance of human cancer.</li> <li>2. Harmful to insects (fear of larvae eating genetic crops and increasing mortality).</li> <li>3. Causes allergies (who knows what is in the food?)</li> </ul>	<ol> <li>Health</li> <li>Impact on         Animal     </li> <li>Health</li> <li>Health</li> </ol>

	4. Harmful to human health.	
4	<ol> <li>Agree         <ol> <li>The reason:</li> </ol> </li> <li>Because the insects are killed without pesticides.</li> <li>It is possible to remove any ingredients in the food that can trigger allergies.</li> <li>Crops are more adaptable to unfavorable growing environments such as drought.</li> <li>Increase crop yields.</li> <li>It can change the appearance and taste of food.</li> </ol>	<ol> <li>Benefit</li> <li>Benefit</li> <li>Impact on Plant</li> <li>Impact on Plant</li> <li>Benefit</li> </ol>

Appendix 5: Research Documentation







