**The 1st Shanghai Undergraduate Symposium**

**Call for Submissions**

Symposium Theme: **Environment and Sustainability**

**Symposium Time:** June 12, 2015

**Symposium Venue: College of Foreign Languages, Liberal Arts Department, Shanghai Second Polytechnic University, Shanghai**

**Symposium Goals:**

* To provide undergraduate students from various disciplines with opportunities to interact and share their views on the issue of environment and sustainability from different perspectives;
* To raise the awareness of future engineers and scientists of the role of environment in their respective research fields and workplaces;
* To foster college and university students’ ability of using English to engage their disciplinary study, research and work in the international context.

Topic areas are broadly defined as, but not limited to, the following:

* human evolution and the environment
* environment and transportation
* environment and economy
* environment protection and legal system
* environment and urbanization
* future of our planet
* environment and human health
* environment and food safety
* humanistic reflections on environment
* global environmental protection
* role of the double-edge sword
* powering the future
* higher education and environmental protection

**Guidelines for Submissions**

A full paper of no less than 1200 words in length is required, which shall include the following elements:

1. a title page (title of research, author’s name, date, school/university)
2. body of the paper (content comprised of abstract, key words, introduction, clear statement of research questions and your thesis, a brief review of the literature, methodology, results/findings, discussion and conclusion)
3. headings and subheadings
4. documentation, including in-text citations and footnotes or endnotes (you may add notes to your paper if necessary)
5. works cited (bibliography that gives credit to the primary and secondary information or an annotated bibliography)
6. visuals (you are encouraged to include tables, charts, pictures, etc. in the paper to better illustrate your idea)

**Preliminary Schedule**

The one-day symposium will consist of:

1. *Parallel discussion(morning session)*

You are expected to make a 6-minute presentation (with PPT) to briefly introduce your research to the audience in your parallel. Get prepared to be challenged by the questions from other authors from the group after your presentation.

*2) Plenary presentations (afternoon session)*

Two top-performing presenters selected from each parallel session will make an 8-minute presentation (with PPT), followed by a 5-minute Q & A session.

**Deadline:** Please submit your full paper by May 15, 2015

**Submission to:** jinghe@fudan.edu.cn

**Working Language**: English

**Symposium host:** Shanghai Advisory Committee on College English Teaching (SACCET)

**Symposium website:** http://www.shtefl.org.cn/

Shanghai Advisory Committee on College English Teaching (SACCET)

China English for Academic Purposes Association （CEAPA）

Feb.3, 2015

**Paper Sample:**

**A Survey of College Students’ Attitudes towards GM Foods**

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**Abstract**

Consumers’ attitudes towards GM (genetically modified) foods are important for policy makers if they want to promote such foods. The paper attempts to find to which extent college students will accept GM foods and whether their attitudes towards GM foods are product specific or not. A survey was conducted in a total of 210 students with different academic background at Fudan University and Tongji University. The result showed that there was a great difference between the attitudes towards GM foods of students with or without the academic background of biology and medicine. It also suggested that the acceptance of GM foods was product specific and that the perceived naturalness of food products would influence college students’ choice. Price was also a factor for their willingness to purchase GM foods.

**INTRODUCTION**

Biotechnology is now widely used in agriculture fields to raise crop productivity and in the food industry to produce novel food and food ingredients. However, there is a growing concern over GM foods as they might have a negative impact on human health. There have been many studies on the public acceptance of GM foods. Grunert, Bredahl, and Scholderer (2003) showed that public attitude towards GM in food production is negative. Consumers in European and Japan tend not to accept GM foods (Hoban, 1997; Macer & Ng, 2000). A study in Shanghai, Guangzhou and Beijing by Greenpeace (2004) indicated that Chinese consumers are generally not accept GM foods, while Zhang (2002) revealed that the majority of consumers in Tianjin city were willing to pay up to 20% premium for GM foods over non-GM foods. The uncertainty of consumers’ attitudes towards GM foods may influence the government in terms of making policies on the development of biotechnology. Hence to have a better understanding consumers’ attitude is important. But few studies relate GM acceptance to specific features of products. According to Gamble et al. (2000), the way tomatoes are produced affect consumers’ acceptance more than the quality, taste and price of the product. Interestingly, when it comes to chocolate biscuits, the evaluation is reversed. Their study concluded that evaluation of foods is product specific. But will the consumers’ acceptance of GM foods vary from food to food? Is there any different change in the college students attitudes toward different GM food products? Which one will they choose, a genetically modified tomato or a biscuit made from genetically modified crops? The study reported here attempted to explore this issue and answer some of these questions by conducting a survey at Fudan University and Tongji University. The paper is organized as follows: I first describe the methods used, especially the content of the questionnaire, then discuss the results obtained and their significance. Finally, the conclusion is drawn.

**METHODS**

***Participants***

The study sample comprised 210 students randomly selected from Fudan University and Tongji University. The mean age of respondents was 19.20 years (S.D. =0.031 range from 18-20). Males accounted for fifty percent. Respondents were also divided into two groups as knowledge is a key factor which influences general attitude toward GM foods. Group A consisted of the students who majored in Biology and Medicine while Group B were the students with other majors.

**Table 1. The percentage of the paricipants with or without biology-related knowledge**

Fudan University (N=160)

|  |  |  |  |
| --- | --- | --- | --- |
| male | Female | Medical students & Bio majors | Non-medical students & Non-bio majors |
| 45.63%(73) | 54.37%(87) | 56.25%(90) | 43.75%(70) |

Tongji University (N=50)

|  |  |  |  |
| --- | --- | --- | --- |
| male | Female | Medical students & Bio majors | Non-medical students & Non-bio majors |
| 64%(32) | 36%(18) | 44%(22) | 56%(28) |

***Procedure***

The survey was conducted in May, 2012 with the help of my friends. Questionnaires designed for anonymous response were distributed to all participants. There are total 8 questions in the questionnaire, which are classified into three parts according to their content.

1) The general attitude was measured by Q1 to Q4. In order to know the correlation between the knowledge of biotechnology and attitudes towards GM foods, I set up two questions (Q1 and Q2) to test respondents’ knowledge. If the “true or false” question item was answered correctly, it would be given one point. Otherwise it would be given no point. Q3 and Q4 were set to evaluate students’ perceived risks and perceived benefits of GM foods, which were found to be crucial for the acceptance of GM foods (Bredahl, 2001). These two questions were also rated on a two-point scale ranging from 1 (agree) to 2 (disagree).

2) Q5 to Q7 were set to ascertain whether students’ acceptance of GM foods were product-specific or not. Participants were asked to choose two kinds of tomatoes, one being genetically modified and the other non-genetically modified (they were of the same price but the GM tomato taste better). In Q6, tomatoes were replaced with chocolate biscuits. The purpose of Q5 and Q6 was to find whether the perceived naturalness of products would affect students’ acceptance of GM foods. Q7 was to investigate whether the foods incorporated with pest-resistant genes would be accepted by students. Q5 to Q7 were also measured on a 2-point scale ranging from 1 (I choose non-GM product) to 2 (I choose GM product).

3) The last question gauged the students’ willingness to buy GM foods. We first asked them whether they would be willing to buy GM foods if prices of GM foods and non-GM foods were the same. If the answer was no, we would proceed with the question as to whether they would be willing to buy GM foods if their price was 10 percent lower than non-GM foods. If the respondents further responded with no, we would ask at what price discount level they would accept the GM foods.

**RESULTS**

As the mean rating of perceived risks of GM foods was 12% higher than perceived benefits(Table 2), the general attitude towards GM foods is negative. The result that the higher scores in knowledge test, the lower rating of general attitudes indicated that the knowledge of biology correlated negatively with the attitudes toward GM foods (Table 4). In comparison with tomatoes, the rating in the acceptance of chocolate biscuits made from genetically modified crops was 20% higher. The result suggested that the acceptance of GM foods was probably determined by how natural the GM product was perceived. The GM tomatoes with pest-resistant genes were widely accepted by students.

Although no significant differences were found between males and females (Table 3) and two school students (Table 5) in terms of their attitudes towards GM foods, there was a sharp contrast between the ratings of general attitude of Group A and Group B(Table 4). Students without bio-related knowledge tended to perceive more benefits than risks of GM foods while students with Biology and Medicine majors seemed more cautious about GM foods.

The result (Table 6) also suggested that the percentage of respondents who were willing to purchase GM foods increased from 36.6% to 45.5% if the prices of GM foods were 10% lower than those of non-GM foods. More than half of them preferred GM foods if there was a discount. It seems that price of GM foods significantly affects consumers’ acceptance of GM foods.

**Table 2. The total results of questionnaires**

|  |  |  |
| --- | --- | --- |
|  | M |  S.D. |
| Knowledge（Q1-Q2) | 1.79 | 0.029 |
| Perceived Risks(Q3) | 1.56 | 0.025 |
| Perceived Benefits(Q4) | 1.39 | 0.022 |
| Perceived Naturalness(tomatoes)(Q5 ) | 1.49 | 0.012 |
| Perceived Naturalness(biscuits)(Q6) | 1.78 | 0.014 |
| Pest-resistance(Q7) | 1.86 | 0.022 |

M= Means; S.D.= Standard Deviations

**Table 3. The different attitudes between male and female**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Male | Female | S.D. |
| Knowledge（Q1-Q2) | 1.81 | 1.77 | 0.02 |
| Perceived Risks(Q3) | 1.54 | 1.59 | 0.025 |
| Perceived Benefits(Q4) | 1.41 | 1.37 | 0.02 |
| Perceived Naturalness(tomatoes)(Q5 ) | 1.5 | 1.49 | 0.005 |
| Perceived Naturalness(biscuits)(Q6) | 1.77 | 1.8 | 0.015 |
| Pest-resistance(Q7) | 1.84 | 1.88 | 0.02 |

S.D.= standard deviations

**Table 4. The different attitudes between the respondents with different majors**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Group A(112) | Group B(98) | S.D. |
| Knowledge（Q1-Q2) | 1.91 | 1.72 | 0.095 |
| Perceived Risks(Q3) | 1.82 | 1.26 | 0.28 |
| Perceived Benefits(Q4) | 1.28 | 1.52 | 0.12 |
| Perceived Naturalness(tomatoes)(Q5 ) | 1.43 | 1.56 | 0.065 |
| Perceived Naturalness(biscuits)(Q6) | 1.75 | 1.81 | 0.03 |
| Pest-resistance(Q7) | 1.84 | 1.86 | 0.01 |

Group A: Bio majors and medical students; Group B: Non-Bio majors and Non-medical students

**Table 5. The different attitudes between schools**

|  |  |  |  |
| --- | --- | --- | --- |
|  | M(FDU) | M(TJU) |  S.D. |
| Knowledge（Q1-Q2) | 1.82 | 1.694 | 0.029 |
| Perceived Risks(Q3) | 1.56 | 1.56 | 0.025 |
| Perceived Benefits(Q4) | 1.38 | 1.41 | 0.022 |
| Perceived Naturalness(tomatoes)(Q5 ) | 1.5 | 1.48 | 0.012 |
| Perceived Naturalness(biscuits)(Q6) | 1.79 | 1.77 | 0.014 |
| Pest-resistance(Q7) | 1.86 | 1.85 | 0.022 |

FDU= Fudan University; TJU= Tongji University; M=mean

**Table 6. Reasons for willingness to purchase GM foods**

|  |
| --- |
| same price(36.6%) |
| 10% discount(45.3%) |
| 10% discount to 50% discount(15.9%) |
| won't buy at any discount(2.2%) |

**DISCUSSION**

Overall, this survey indicated college students generally had a negative attitude towards GM foods. The more respondents learned about biology, the less optimistic they were about GM food products. Students who had specific knowledge believed that GM foods had a long-term negative effect on human health and it took years to show the effects. The result also suggested that students’ attitudes towards GM foods were product-specific. Although they preferred non-GM tomatoes to the GM ones, they did not quite object to the GM food products with pest resistant genes and nor care much about chocolate biscuits made by GM crops.

The findings are not quite consistent with the conclusions of Gamble et al. (2000) who believed that the taste factor outweighed health factor in terms of chocolate biscuits. There are three possible explanations for our results. For one thing, to most Chinese college students, chocolate biscuits are already seen as being unhealthy, it seems that they do not care much the way they are produced if the quantity is small. For another, most respondents think that GM foods incorporated with pest resistant genes are free of pesticides such as DDT, thus reducing the risk of cancer. Finally, cost seems a decisive factor. If GM foods are thought to offer substantial financial benefits, they might take the perceived risk.

This study contained only 210 participants with or without biology-related knowledge, hence it is important to note that all of these findings should be approached with caution. Further research, however, should be done to probe the effect of the commercialization of GM foods on the consumers’ attitudes apart from the use of more participants. .

**References**

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