**Report of Food Science & Technology Students at Oregon State University**

**Participating in the**

**Oregon State University – Fu Jen University Food Science Cultural Exchange**

**Taipei, Taiwan**

**September 13-20, 2011**

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**1. Our comparison between Oregon State University (OSU) and the Fu Jen University (FJU) Food Science Club**

On September 14, we were given presentations by FJU food science students about two various product development products that they had developed. In their junior year students spend two terms developing a product and covering everything from prototyping to marketing strategies. It was really interesting! (Not for the first time did we wish that OSU offered something similar.) Then we gave a presentation about our OSU Food Science department and our FST club to the students, but not without first being fed Boba (Bubble) tea! That lasted until early evening and we had just enough time to go back to our rooms for a few minutes before we were treated to a welcome party hosted by the juniors in the FJU food science club.

On Sept. 16 we were hosted by last year's FJU Food Science Club officers. The FJU Food Science Club is something that students must join as an incoming freshman food science student. It costs $4000NT for four years (to convert to US dollars divide by 29 or 30, depending on the exchange rate) and seems a bit more like a student union than what we think of as a club. Third-year FJU students are the officers in the club and are elected in a similar manner as at OSU, self-nomination and election-style. Both clubs had very similar officer roles, and similar number of officers. Activities for each club differed throughout the year, as did the role of each of the officers, but overall the duties were the same. We also noticed that the graduate students are not as involved in the FJU food science club, while they were supportive and familiar with the way that the club was structured, they did not seem to be part of it.

The FJU club makes and sells soft-serve ice cream, waffles, and jam at specific points during the year but because of University regulations they must use mixes, and are only allowed to sell one time throughout the year. We are not clear as to exactly how the FJU club funds were divided between the club and the university or how they document what they are spending and profiting, but we think that there was a difference in the way that each club negotiates and controls the money that is made through fund raising. The FJU food science club said that they do not get to keep all of the money that they earn from the ice-cream sales, and that the school gets some portion of what is profited directly from the sale of the ice-cream. Oregon State University will recognize our club if we abide by our mission statement, have a faculty advisor, and follow other guidelines that all campus clubs have to follow. The OSU Food and Fermentation Science Club does not give the university a portion of our club funds, but is required to have all of our monetary transactions recorded, and our club account is with the university. The focus of the FJU club on selling food products is very different from the emphasis that the OSU Food and Fermentation Science Club places on the learning opportunities that we gain by getting together and preparing food. We also get around the issue of selling food by making it more about the production experience than the final product. FJU students were very surprised that we make cheese, sausage, and especially beer (though we know a few clubs in the US that would also love to be able to do that as well).

The most fascinating thing is how integrated culture and performance is with the FJU Food Science club. Their club did a lot more activities that focused on welcoming new students and entertaining each other with skits, dances, and other performances. We noticed that they were all very enthusiastic about this aspect of the club and encouraged everyone to be creative and get involved in these activities. This was a really great thing to experience because we could tell that this was a great way to build a community within the department and get students to get to know each other in ways that they may not otherwise have known them. They are in charge of the new student welcome celebration, freshman camp, graduation party, and other events like a Halloween party. Each event is accompanied by a form of entertainment (or two or three) such as music, dance, acting, or other performance. For example, we were treated on the evening of Sept. 14 to a baton routine, a fire-rope spinning routine, a traditional Chinese flute solo, and some spontaneous dancing. This is all something that they work on as a group and is integral to the club. They participate in athletics, hold a Food Science singing competition as a form of fundraising, and do various other events throughout the year that are not focused on food. We had been asked to share a talent that we had as a group to the students and after much deliberation we chose to sing. Marlin played a borrowed guitar and we sang Hotel California (a very popular song here) as well as a few others. It was a very eye-opening experience and we had a great time sharing stories and trading differences about cultures. It was by far the most relaxed that we had been with the students since we arrived.  The difference between our cultures when it came to integrating fun and performance into the club was astounding. We think of our food science club as fun, but those are usually planned activities that incorporate food production or the enjoyment of food and drink. The club meetings themselves, while informal, are very business-like in their structure. We meet, information is presented and disseminated, questions or comments are addressed, and then we leave. Occasionally snacks are provided and students chat afterwards but we are rather serious in how we go about our meetings. The thought of incorporating singing, dancing, or other performances into the meeting as simply a way to bond and have fun is very foreign to us. In fact, the concept was so alien to us that at first we did not understand what was being asked of us when we received a request to “show ourselves” or “show our skills”. Truthfully, the translation of “show ourselves” is probably the most accurate, as what one chooses to perform speaks volume about a person and allows the other students deeper insight into the individual club members. Our new goal is to adapt some of the cultural integration learned from the FJU students into our own club meetings.

**2. What we learned from the company field trips**

On Sept. 15 we toured two food manufacturing facilities about an hour northwest of New Taipei City where we are staying. The first, which is the second-largest tofu and soymilk concentrate producer in Taiwan, was a good representation of some of the major differences between food production in the United States and in Taiwan. For example, their food product is produced using a HACCP plan (Hazard Analysis Critical Control Point) as well as the European standard of ISO 9000. These safety plans are not required by the government and are a point of pride for those who use it. In fact, it is declared on the label. The production environment however, is lacking in some areas. They are not able to say that the building is GMP certified, and again, are not required to do so.

We wish that we knew more about the required practices in Taiwan, because we saw a few things that would not be allowed in the US such as dirty ceilings. We had a good discussion about genetically modified crops, and we learned that most Taiwanese do not want them in their food. They do not have an "organic" certification like the U.S. (which requires that food manufacturers meet other checkpoints), but instead can declare "No GMOs", again a point of pride.

We ate lunch on the bus and then traveled to a large company that manufactures a lot of food products, such as ready-to-eat rice, frozen bread and pastry dough, ice cream, and soap. The difference between this and the last food company was startling. This is an international company with a very large reach, something very apparent as soon as we walked in the door. We were given a short tour of the frozen pastry production line and then given samples of pastries to taste. We were also introduced to the company, the products that they produce, and the practices that they use to guide the company.

The FJU students seemed just as interested as we were to learn about these food production facilities. It was a rare experience for us to learn alongside the FJU students instead of them showing us a part of their program.

**3. Our comparison between US Food & Drug Administration (FDA) and the Taiwan Food & Drug Administration (TFDA)**

On Sept 16 we had a tour of some of the Research and Analysis Laboratories of the Taiwan Food and Drug Administration. We began with an introduction to the TFDA and a question-and-answer session about the way things are run there. They base their system primarily off of the US FDA and have many of the same concerns regarding food safety, testing procedures, food analysis and trace-ability.

We noticed that the Taiwan FDA had a different population to protect, with resources and needs different from our own. The Taiwan FDA had a branch for checking the safety of traditional Chinese medicine for example, this is something that we don’t have in the US, but is interesting because this part of the government is serving a population that uses this type of medicine commonly, and we think that it was an important department to add to the agency. The fact that Taiwan is an island that imports a lot of its food requires the TFDA to ensure that they know what is entering their country. We think that as this part of TFDA develops, the United States and other countries may be able to learn how to most effectively monitor food that is more commonly grown in other parts of the world. These two aspects of the Taiwan FDA are unique but we also thought that it was nice to see how they are evaluating the specific needs of their country and were actively working on increasing the safety of products that Taiwanese people have been using, as well as new products that may come into Taiwan.

Some of the things that struck us as very different are the concerns over allergens and labeling issues, and the emphasis on foreign imports regulation and testing. Allergens are not something that are tested for and are not required to be declared in a food. This also makes sense because it seems that they do not have any labeling requirements for food products. (We will apologize in advance if we misunderstood anything that was said.) There is a high emphasis on testing for the presence of GMOs, heavy metals, and chemical residues in food that is produced and imported into Taiwan (as opposed to the microbial concern that is a focus in the U.S.). Foreign imports are especially important, as almost 70% of the food consumed comes from outside of Taipei. (Taiwan has 23 million people in a landmass that is less than 1400 square miles.) The primary import is agricultural crops and the highest percentage comes from the United States.

We were particularly struck by the impressive research and testing labs that the TFDA maintains. Coming from a university setting, the abundance and variety of testing equipment was amazing. We saw some technicians/scientists working to analyze food products to ensure that the actual nutrition content matched what was stated on the packaging label.

The Taiwan FDA also uses much more whimsical imagery than the United Stated FDA. As a government agency the USFDA maintains a somber image, with very formal images and logos. The idea is to convey a sense of professionalism, but can come across as stiff and boring. However, the TFDA embraces a much more approachable style when it comes to their advertising and logos. The official symbol for the TFDA is a butterfly with the island of Taiwan acting as the butterfly’s body. They also have advertising with small children reaching for food. Altogether, it adds a sense of fun to their workplace that is missing from the American agency. The welcoming atmosphere that the TFDA presented to the public went beyond the cheerful logos. When we entered the building we saw a large friendly-looking room specifically set up for the public to come in and ask questions and gather information. Presumably they field phone calls as well. This also helps to make the TFDA much more approachable than the USFDA.

**4. Our comments and suggestions for the cultural exchange program**

We should start by acknowledging that the short time we had at Fu Jen University was not enough. The students attempted to show us as much of New Taipei City and Taipei City as possible, which was fantastic, but exhausting. These are a few comments we had at the end of our trip, when we were so tired we could barely make the trip to the airport. Perhaps the next group of exchange students will benefit from our observations.

First, we highly recommend that the students sit in the Fu Jen classes early in the trip, perhaps on their second full day in Taiwan. We observed classes the day before we left, and had a difficult time concentrating on the class and absorbing the material because we were so weary. The students should observe the classes while they are still fresh and full of energy.

Second, whenever the Fu Jen students are guiding the exchange students throughout the city, perhaps it would be best to break up into smaller groups. It is extremely difficult to herd 18 people through crowded areas, and would be much easier to break up into groups of 3 or 4 students. We could have 2 or 3 exchange students with 1 Fu Jen student acting as guide and interpreter. This way the students get to know one another better, instead of just learning names and faces.

Third, we would have liked to see what a normal day is like for a Fu Jen student, both undergraduate and graduate. It would be very informative to see what the similarities and differences of student life are like across cultures. If possible, each exchange student could partner with a Fu Jen student and be their “shadow” for a day, following them to classes and meals. It also allows for the students to bond and potentially start a friendship.

Fourth, please allow one day in the middle of the trip for a rest or break. This allows both the exchange students and Fu Jen students to rest and recharge and then continue with all the fun and education through the remainder of the trip. As mentioned earlier, we were exhausted by the end of the trip from all the activities. We had an amazing time, and all the activities were very fun, but we did not get much sleep and so each day we were slightly more tired than the day before.

Towards the end of our trip, we began to think about our general impressions of the overall exchange. “Sensory overload” are the first two words that come to mind when we think of how to describe our Saturday on Sept. 17 (and even though it has been less intense the rest of the time, the entire trip could be described by those words as well)

We first took a bus to Carrefour, a large hypermart or grocery store, (imagine Target on one level, Safeway on the second, and Best Buy on the third), ate lunch in the mini mall below the store, caught another bus to the train station, road a train for 45 minutes (standing in the most crowded train I have been in in my life) then road another bus up a windy narrow road to Jioufen. There we were crammed into narrow walkways filled with little shops that sold everything! This was followed by a ride back down the hill (very similar to a roller coaster ride) to Keelong and the night market there. Each place was more crowded than the last. The press of bodies, the visual stimulation, and the smells all combined to form this amazing sensory experience that is frankly indescribable.  I don't know how to begin to describe all of the smells: the smell of fresh seafood, of raw sewage, of frying oil, of cooking meat and the fuel used to cook it, of sweaty bodies, the very distinctive spice blend that seems to permeate everything, and of course the very distinctive smell of stinky tofu.

The visual stimulation has been constant since we arrived. Signs are everywhere: sides of buildings, banners on awnings, paper, neon, glass windows, cars, busses. Everywhere. When you can't read the written language you tend to not focus on it as words but rather it blends into this giant canvas of art. There are English words in many places and we find our eyes leaping there, for some sort of understanding of what is written. Are they selling car insurance or shoes? Telling you to eat healthy or giving directions to the nearest bathroom? We learned to communicate by recognizing symbols that we needed to know like exit, bathroom, and learning to recognize the symbol for New Taiwanese Dollars. Pointing and gesturing usually works to purchase something, though sometimes we have needed translation by our student guides. They have been so patient and tolerant of our constant questions, educating us about the culture, and making sure we all get to the right places at the right time (have you ever had to herd 18 people through a market so crowded that you could hardly breathe?). We would not have been able to see nearly so much without them and there are not enough words to thank them for the time that they have spent with us.

Sept. 18 was a fascinating lesson in communication. We spent the day with students from a different professor's lab than on Sept. 17, one of the groups that we have come to know quite well during our stay. After a wonderful dumpling lunch and a visit to the top of 101, they had less specific plans to take us anywhere and wanted to make sure that we did everything that we wanted to do. Unfortunately with 6 people it made it kind of difficult to decide. The students didn't seem to understand that we just wanted to wander around and not see anything in particular, and we had trouble communicating it to them. We came to realize that this was not only an issue with our students but among themselves. They really are just like us! We developed some wonderful camaraderie with them and because of this we opened a line of communication to compare cultural differences. This was really the first time that they had felt comfortable enough with us to ask US questions. We talked about curfew, food, traditions, and games. We taught them about U.S laws and customs and were treated to the same. None of this was done on a formal basis; it was simply from spending time together and asking lots of questions. We learned so much about their culture from their perspective and wish that we had time to tell you more about it.

Dinner was another lesson in food culture, and was very similar to the hotpot that we had the first day (Shabu Shabu). The best part about dinner, however wasn't the food, it was the time that we spent with the students. All of the students who had participated in any activities with us were there. It was a fantastic way to say goodbye to all of them and was much more special than I had imagined. We can't even count how many pictures we posed for, both in groups and one-on-one. On the last day at the farewell party, we were also presented with gifts from our host, Prof. Marie Kuo and specific groups of students. Honestly when the signed pictures of our time together were presented to us, we were very emotional. We had not expected to make so many connections with the students here and feel like this experience has been one of the best of our lives.