

## Report on Taking a Course of International English and Professional Programs UC Davis Extension

Six faculty members of Graduate School of Engineering, Kyoto University (Takuya Kubo, Kohei Miyazaki, Kenji Sugase, Toshimichi Ohmura, Satoshi Watanabe, and Eiichi Kayahara) took a course of international English and professional programs UC Davis extension from May 14<sup>th</sup> to May 25<sup>th</sup>. The programs comprised Dr. Mikaela Huntzinger's lectures and hands-on training on undergraduate education, conference talk, and English pronunciation. We also attended two actual classes regarding basic chemistry at UC Davis and discussed the way of their teaching. Here, we report on what we have experienced, learned, and done at UC Davis.

### UC Davis

The University of California, Davis (UC Davis) is a large state university which offers 102 undergraduate programs and 90 master's programs. It consists of four faculties and six graduate schools, and over 30,000 students are learning on the vast campus full of greenery. Because UC Davis was started as the agricultural extension for UC, Berkeley, especially it has a reputation for very high education in environmental science, farm management, biology etc. English education has been carried out for many years, and there are several professors who have global recognition as developers of English teaching materials, providing high quality education.



UC Davis is located in Davis City, California, where is located 11 miles west of Sacramento and 72 miles northeast of San Francisco, a suburban city with good access to the big cities. Half of the citizens are UC Davis' students or its staff, and Davis has the hallmarks of a classic college town. Thus, Davis has the advantages of a small town coupled with the numerous convenient retail, café, and drinking places. In such college

town, a long-standing favorite is “Davis Farmers’ Market”, held on every Wednesday afternoons and Saturdays mornings in central park of the city. Its market was an interesting experience for us. In addition to fresh vegetables and fruits sold by local farmers, we can find gourmet foods, wine- and beer-tastings, and so on. Additionally, because Davis is encircled by the flat agricultural land and the climate is mild year-round, Davis is sometimes referred to “The Bicycle Capital of the U.S.”. As seen in the city logo, Davis is the only city in the U.S. that features a high wheel bicycle in its logo. Thus, bicycle was appeared to be the main transportation means of the college and city.



## **Learning and Practicing Effective Teaching Methods**

In the two-week course, we learned more about teaching students effectively. To achieve the effective teaching, a concept “flipped classroom” was introduced as an alternative to traditional classrooms in which instructors give lectures. Traditional classrooms and flipped classrooms allocate time inside and outside of the classroom differently. In the flipped classroom, students learn by themselves through documents, videos, podcasts, etc. before attending classes, and in class, they tackle with material and get feedback from an instructor immediately. The immediate feedback is a key for students to effectively learn. Of course, in traditional classes, students can get feedback, but it is delayed, the timing of which is a critical difference. The flipped classroom idea is an innovative way to approach modern higher education, and its effectiveness has been demonstrated by several scientific researches of education.

To conduct the idea of the flipped classroom, we learned the following concepts:

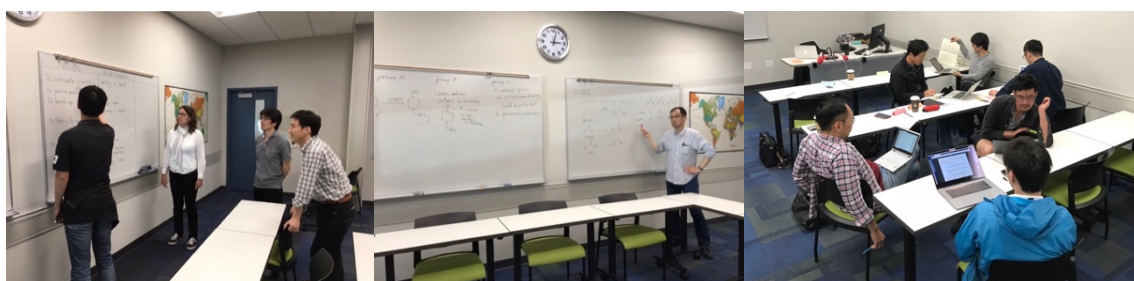
1. Backward design
2. Bloom’s Taxonomy
3. Formative assessment
4. Think/pair/share

Here we do not explain the details of each item, but briefly, the backward design is a methodology used to determine what and how to do in class with the help of Bloom's taxonomy that classifies cognitive activities from simplest to most difficult. Formative assessment and think/pair/share are techniques used during class.

The two-week course was conducted in a flipped classroom style, instead of lecturing the concepts for effective teaching, so that we were able to realize how effective the teaching concept is. Some homework was assigned, and in class, we discussed what we thought on the homework in a small group and explained conclusions through the discussion to other groups.

In addition, based on the techniques we learned, we did short teaching demonstrations of topics of our choosing in our field. We planned how to teach following the backward design, prepared materials, and did demonstrations in front of the other members who played a role of students. We gave feedbacks to presenters so that we can improve the teaching techniques. The instructor (Mikaela) also gave us a feedback not only on teaching but also pronunciation, accents, and usages, which was really helpful to us.

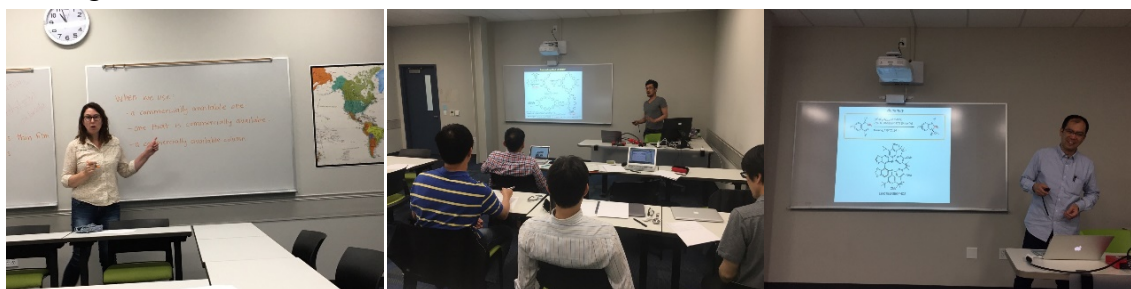
The concept we learned in this course was new to us, but we found it interesting and it can help us improving teaching. Overall, the course was meaningful and enjoyable.



## Presenting in English

We learned English presentation skills, especially such for international conferences. We demonstrated our own research presentations and improved the formats of slides and/or oral expressions based on the American preference. The most important difference between typical Japanese and American presentation is using a “telling story”. In typical Japanese presentation, we usually use “起承転結” as a royal road of the presentation. On the other hand, “telling story” can emphasis a take-home message and avoid the boring in audiences. Additionally, we learned the significance of “Beginning, middle, and end”, “Signposts”, and “Single and complete story” as further presentation skills to have

audiences' fun and exciting. Finally, our presentations have been much better than before visiting UC Davis.



## Classroom observations

Dr. Bryan Enderle (<https://chemistry.ucdavis.edu/people/bryan-enderle>)

Analytical Chemistry (May 17, 2018)

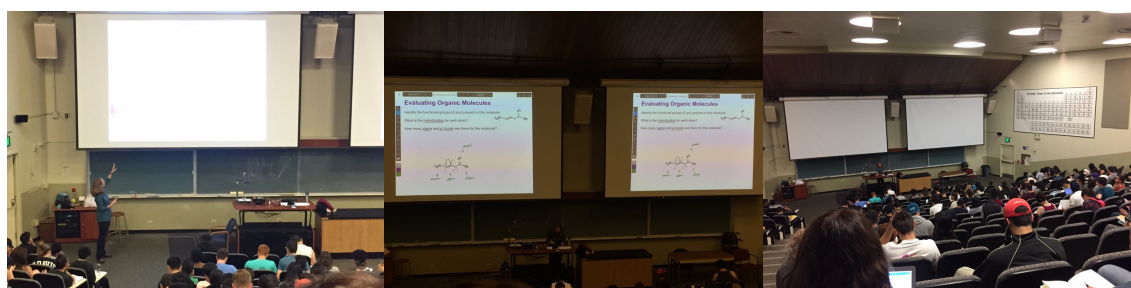
Before his class started, he played a pop music on his PC to make students relaxed in the classroom. Dr. Enderle used OHP films and hand writing to explain chemical equations and calculations. He showed a demonstration of a chemical experiment (acid-base titration) in the middle of class. During his demonstration, he silently proceeded the experiment and sometimes showed funny gesture, with playing a music, and students laughed occasionally.



Dr. Julia Chamberlain (<https://chemistry.ucdavis.edu/people/julia-chamberlain>)

Organic Chemistry (May 18, 2018)

Dr. Chamberlain effectively used iPad and Pencil in her class. She wrote chemical formula and electronic orbitals of organic compounds on iPad. About every 15 minutes, she gave students in-class quizzes about functional nomenclature and electronic orbitals. Students who sat in the front row of the classroom asked her sometimes, and she repeated their questions and answered.



## English pronunciation

In the lesson for improvement of English presentation, we received training of pronunciation. The instructor Mika repeatedly told us being aware of the syllable of words, paying attention to the shape of the mouth, how to use the tongue, and clearly speaking. We repeatedly practiced pronunciation of r/l sound, Th sound, F/V sound, B/V sound, ar/er sound, I/i: sound, and schwa sound. As a result, our pronunciation was improved significantly.



## Summary

We have experienced and learned a lot of things during this program, some of which may be suitable for practical use. For instance, group discussion, poll, and Bloom's Taxonomy in teaching and signposts in presenting in English. We also find it important to keep practicing English pronunciation on a daily basis.



This UV Davis training course would be very instructive to faculty members of Kyoto University in terms of not only techniques that one can learn but also experiences that one can have in Davis. Hence, we hope that this great activity will be continued to be supported by JGP to provide a similar opportunity to every faculty member who has not had it.