

(For JSPS Fellow)

Form B-5

Date (日付)

28/10/2014 (Date/Month/Year: 日/月/年)

Activity Report -Science Dialogue Program-
(サイエンス・ダイアログ事業 実施報告書)

- Fellow's name (講師氏名) : Bernd Martin Michael Schmidt
(ID No. P14744)

- Participating school (学校名): 埼玉県立熊谷女子高等学校

- Date (実施日時): 17/06/2015 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): (in English) JSPS Science Dialogue Lecture Part 1: Origin & Motivation; JSPS Science Dialogue Lecture Part 2: Current Research

(in Japanese) - _____

- Lecture summary (講演概要): Please summary your lecture 200-500 words.

The lecture was divided into two parts, to make it easier for the students to understand each part. Therefore the teacher and I decided to do two lectures, each 30 min, followed by 10 min Q&A time and a short break. The first part was about my origin and motivation, so I first introduced myself briefly. Then we had a look where Germany is located in the world, including an introduction of the European Union. We discussed facts about Germany including the rich history of Germany as well as famous historical people from Germany. This was mostly illustrated using many pictures and helped the students to follow my talk. Then we slowly switched the focus to my hometown Berlin. It's historical background such as the Berlin Wall and the fall of the Berlin Wall in 1989 were again presented by pictures to the students. We slowly switched to science as I introduced Berlin's two most famous universities, which I both had the pleasure to work at. The focus was slowly switched to the abundance of science in daily life, which was exemplary illustrated on several examples taken from the daily life of the students. The examples "why is the sky blue during the day and red in the evening" and "the autumn color leaves change" were chosen to connect the students via simple but fascinating phenomena, that are observed by them every day. I explained why the work of scientist is fascinating and important and why I wanted to become a scientist.

The second part of the lecture was about my most recent research in the field of supramolecular chemistry at the University of Tokyo. I explained this rather novel field of chemistry by comparing it to other fields and then first explained about structural analysis in chemistry. After that, we talked about the importance of single-crystal X-ray analysis in chemistry. Then it was time to explain my current project to the students. We are using a self-assembled octahedral cage, to

obtain crystals suitable for single-crystal X-ray analysis of liquid compounds by using only 100 µg of compounds. The merits and drawbacks of this method were explained and potential applications in daily life were presented.

- Language used (使用言語): English and some little Japanese

- Lecture format (講演形式):

◆Lecture time (講演時間) 60 min (分), Q&A time (質疑応答時間) 20 min (分)

◆Lecture style (ex.: used projector, conducted experiments)

(講演方法 (例: プロジェクター使用による講演、実験・実習の有無など))

used projector,

◆Interpretation (ex.: assistance by accompanied person, provided Japanese explanation by yourself) (通訳 (例: 同行者によるサポート、講師本人による日本語説明))

assistance by accompanied person

◆Name and title of accompanied person (同行者 職・氏名)

Mister Taito Kato, M1 student in the same group as the me

◆Other note worthy information (その他特筆すべき事項):

none

- Impressions and opinions from accompanied person (同行者の方から、本事業に対する意見・感想等がありましたら、お願いいたします。):

国語や数学を始めとして様々な強化を満遍なく勉強していた高校時代に、この Science Dialogue のような事業に自分も出会いたかったと素直に思います。今勉強していることが将来何に繋がるのか、自分の興味は本当にどこにあるのかを見出すのが難しいからこそ、科学の分野で頑張っている人々の話は具体性を与えてくれます。実際この事業に携わってみて、そう感じました。大学・大学院で取り扱うテーマを英語で理解してもらうのは確かに難しいことですが、生徒からのアンケートなどを見る限り少しでも科学に興味を持ってくれたようです。ただ一点だけ補足するならば、人によって英語の理解力にバラツキがあるため、必ず講演者には日本人が付き添った方が良いと感じました。今回発表の合間に日本語で要約したり、高校生の質問を英語に訳したことで質問がしやすい環境になりました。なかなかフェロー1人ではカバーするのは難しいかもしれません。今後のより一層の発展を願っています。