

(For JSPS Fellow)

Form B-2  
(FY2018)

Date (日付)

(Date/Month/Year: 25 日 / 7 月 / 2017 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): Midori Estefani Amano Patino (ID No. P17039)

- Participating school (学校名): Shiga Prefectural Hikone Higashi High School

- Date (実施日時): (Date/Month/Year: 17 日 / 07 月 / 2017 年)

- Lecture title (講演題目): The Materials that Have Built my World

- Name and title of your accompanying person (講義補助者 職・氏名)

Professor Yuichi Shimakawa

- Lecture format (講演形式):

◆Lecture time (講演時間) 90 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))

Slides on a projector, material for the students to see and touch, activity that required participation of the students

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

Growing up in Mexico City, in a not so rich family, I never imagined myself working in one of the most prestigious universities and learning from the kind of professors and colleagues that I have gotten the chance to meet over the past 12 years. It all started with a seminar about materials sciences which awoke my curiosity for its interdisciplinary approach. After a long journey, today I research the preparation of inorganic solid-state materials and their physical and chemical properties (such as magnetic properties, electric properties, composition and structure). There is no question for me that science can take us to unimaginable places. I hope that you will find interesting the brief story about the materials that so far have built my world.

The lecture was divided into four parts: (1) an introduction about myself (life in my home country and how my high school was), (2) an introduction to the background needed to explain what we do in our research (this part involved an activity for the students to identify the different types of materials and also several materials were passed around for them to see and touch so that they felt active in this middle part of the talk), (3) two practical problems were presented to the students for thinking together and explaining some of the projects in the research group, (4) time for questions and answers.

- Overall advice or comments to future participants in the program (今後の講師へのアドバイス):

For me, it was a great support to have Professor Shimakawa as the accompanying person because we could invite the students to ask questions in Japanese as well as in English and this allowed for the students to make the most of the discussion of the scientific part.

Professor Shimakawa also translated some of my English answers, just so that the students could have both the practice of English and also a full understanding of the answers in Japanese.

Of course for my accompanying person to be a Professor is an exceptional case (Professors are very busy), but my overall advice would be for the JSPS invited lecturer to bring along an accompanying person who is familiar with the topics being discussed. This way the students can make the most of the experience: practicing their English listening and speaking skills, as well as learning/studying some science with the lecture.

- Other noteworthy information (その他特筆すべき事項):

My impression is that it is absolutely key to try to make the students interested and use very simple English. For most cases, this will be the first time that they have to try to understand a full lecture with complex content in English. So it is really important to find ways to keep them motivated during this exercise.

- Impressions and comments from the accompanying person (講義補助者の方から、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。)

今回の Midori Amano さんのレクチャーは高校生向けとしては素晴らしいものだったと思います。家族や自分の生い立ちから含めて「社会的」な単語を含む話から始まり、専門分野に関する「科学的」な単語を含む話までを非常に分かりやすく紹介していました。事前配布の単語解説も、非常に多く取り上げており(これには研究室の学生が協力しました)、良く練られたものだったと思います。高校生からの質問でも日本語で補足したのは、ほんの一部です。

本事業の難しい点は、レクチャーをする PD の能力や人柄に大きく依存してしまう点かと思います。JSPS-PD で受け入れている研究者にも、このような事業に明らかに向いている人と向いていない人がいます。彼女はまさに適任でした。この辺りの人選が JSPS でどのようにしているのかは課題かと思えます。

また、90 分のレクチャーはおそらく多くの高校生にとって、やや長くて辛いかとは思いますが。単に「専門外の人に分かり易く」というだけでなく、もう少しモデルレクチャーのタイムテーブル的なもの(例えば、途中で QA を入れるとか、実験的なデモンストレーションを入れるなど)を提示してあげると、このような経験の少ない PD には少しは役立つかもしれません。