

(For JSPS Fellow)

Form B-5

Date (日付) 29/12/2017

(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): Galle Hetti Arachchige Janaka J. Kumara (ID No. P17074)

- Participating school (学校名): Nagoya City Koyo Senior High School

- Date (実施日時): 13/12/2017 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): Radioactive Waste Management – General Background

- Name and title of your company (同行者 職・氏名)
Meijo University, JSPS Research Fellow

- Lecture format (講演形式):

◆Lecture time (講演時間) 50~60 min (分), Q&A time (質疑応答時間) 10 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))

Power point presentation with a projector (including some videos)

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

In the presentation, I covered about myself, Sri Lanka (my country) and the radioactive waste management as my current research. It started with the background of myself (e.g., where I came from, why I selected Japan for postgraduate studies, etc.). In here, I highlighted how we were impressed about Japan and their researches during our undergraduate program (e.g., as 12 Senior Lecturers in civil engineering out of 16 had PhDs earned from Japanese universities). I also talked how all five of Geotechnical Engineering Lecturers I ever had learned from, had earned PhDs from Japanese universities. It also covered the importance of being a researcher, and how I was motivated to be a researcher. Then, it covered the overall view of Sri Lanka, from its geographical background to sightseeing places. It compared Japan and Sri Lanka for easy understanding on simple geographical and economic indexes. The sightseeing places includes historical places as well as recreational places. I also showed some videos on Sri Lankan sports to make students understand them well.

Then, it covered the radioactive waste management. It started with "what is radioactive waste?", and the sources of radioactive wastes. It also covered the radioactive waste classification and why Japan produces large amount of high-level radioactive wastes (as coming from nuclear energy power plants). I also talked how more and more high-level radioactive wastes are supposed to produce in future, not only in Japan but also in many part of the world due to

closure of many nuclear power plants. Then, it covered treatment methods for each type of radioactive wastes, based on radioactive content and half-life time. I explained how each type of wastes are disposed on the ground or in the ground based on radioactive content. In here, high-level radioactive wastes and its disposal method of deep geological repository were highlighted as it is my main research. As deep geological repositories are yet to be constructed, I talked how high-level radioactive wastes are stored, particularly how spent nuclear fuel are stored in cooling tank for 5~10 years, and then how they are stored in compressed steel containers until deep geological repositories are constructed. Overall, I talked how radioactive waste management for high-level nuclear wastes would be a big challenge in future.

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

I conducted the presentation with PPT presentation with a projector, but I realised it would have been better if I had also conducted some sort of experiments with them. Having said that, I was only given a hour, and it was even not enough to cover all the contents of my presentation or involved with many questions and answers. Perhaps, if we could bring some posters on our researches, students may have better chance of learn and be involved (e.g., asking questions). I may consider this if I have opportunity again.

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

I was bit suprised how students understand English until I was learned that they study science both in English and Japanese, and this school is under a special program so they have native English teachers in their science classes.

I was also very impressed by how students understand the imortance and challanges of researches as they asked challanging and tricky questions.

- Impressions and opinions from a company (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。)

If I understand this question correctly, I guess I cannot write anything as I didnt accompany anyone with me.