

Form B-5

Date (日付) 20/09/2016

(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): Manoj Kumar Singh (ID No. P 15371)
- Participating school (学校名): Jr. And Sr. High School, Komaba, University of Tsukuba,
- Date (実施日時): 10/09/2016 (Date/Month/Year: 日/月/年)
- Lecture title (講演題目): (in English) Thermal Comfort and its importance  
(in Japanese)
- Lecture summary (講演概要): Please summary your lecture 200-500 words.

**Lecture Was divided into two parts.**

**Part 1(about 15-20 mins). General Introduction.**

- I started the presentation talking about me, My family and from where I come to Japan.
- The education institutes I attended. Starting from schooling, college and university education.
- After PhD Experience. In Belgium and in India.
- **Why research and motivation for research?**
- Present day problem of Global warming and climate change(Pictures and cartoons were used for easy understanding).
- Effect of Global warming and how to mitigate it (Pictures and cartoons were used for easy understanding).
- How my research topic and today's presentation is related to present day problem of global warming and climate Change(Pictures and cartoons were used for easy understanding).
- Break of about 10 mins for discussion

**Part 2 (about 60 mins including instrument demonstration): Principle of thermal Comfort and its importance. I sent this part to Miss Naoko Tao, English Teacher at the school to circulate the presentation to students.**

- I started the presentation about comfort and defining it with examples. Also told students about International standard organization and its function.

- Then I told about importance of comfort and what happens when comfort is maintained? (Pictures and cartoons were used for easy understanding)
- Then I moved to explain about various Comfort Factors (Environmental + Personal)
- I explained about the physical meaning of thermal comfort its characteristics with examples involving students.
- Then I talked about what we as Designers/Engineers do and what is our job. Why we should be very careful in understanding thermal comfort?
- Now I moved to demonstration of instruments (CO<sub>2</sub>, temperature, relative humidity and air velocity) used for measuring Environmental factors. I handed over the instruments to students and asked them to explore it. It was nice to see the curiosity of students.
- Then I moved to explain them why thermal comfort measurements are important and how measurements are done (Pictures and cartoons were used for easy understanding). I also gave various examples using pictures.
- Then I talked about local thermal discomfort how and why it happens.
- After above explanation, now I moved to explain the science behind comfort, heat flow (Pictures and cartoons were used for easy understanding).
- Then I explained about my research so far with pictures.
- In last I talked about my research as JSPS postdoctoral fellow.

In my presentation I tried my best to explain the complex terms in simple words with examples. Some students asked questions also and I was happy to see this.

- Language used (使用言語): English

- Lecture format (講演形式):

◆Lecture time (講演時間) 75min (分), Q&A time (質疑応答時間) 30 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))

Use LCD projector and demonstrated indoor thermal environment measurement instruments. Also asked students to use the instruments and see its functions. Also explained the meaning of the reading it showed. Also showed them how measurements were taken.

◆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))

Teacher Incharge at the school

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

Not Applicable

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

It was a good learning for me as I could see the Japanese Schooling system. Students actively participated and asked questions. It was nice to see students relate their experience with my presentation.

- 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。): Not Applicable