Must be typed

（For JSPS Fellow）

Form B-2
(FY2018)

Date（日付）
06/02/2019 （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）: Giovanni SALA （ID No. 17F17313）

- Participating school（学校名）: Yamashiro High School

- Date （実施日時）: 19/01/2019 （Date/Month/Year:日/月/年）

- Lecture title（講演題目）: How Statistics Can Solve Scientific Controversies

- Name and title of your companying person（講義補助者 職・氏名）
None

- Lecture format（講演形式）:
◆Lecture time（講演時間） 75 min（分）, Q&A time（質疑応答時間） 15 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

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

We often read about some scientific discovery in blogs, fora, and newspapers, especially in the fields of social and life sciences. Unfortunately, not all the reported discoveries are trustworthy. In order to be valid, a scientific result must be replicable and replicated.
In Psychology and Neuropsychology, it is often the case that the findings about a particular phenomenon are mixed: someone finds something, someone else finds nothing. Now, in this situation, statisticians employ a technique that is called meta-analysis. Meta-analysis allows the researcher to pool all the data from different studies in one single model. The model estimates several parameters such as the mean effect, the precision of the effect, and the degree of true between-study heterogeneity (i.e., how different are the effects).
I applied this technique on a sample of more than 200 studies regarding cognitive training (a field of research with a lot of mixed findings). The results showed that the overall effect in those studies with the best esperimental design (the most trustworthy) the overall mean is zero. Moreover the distribution of the effects was entirely explained by random error. Thus, we know that cognitive training does not work regardless of the claims of the companies and researchers involved in it.

Must be typed

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

It’s better to convey the ideas in the easiest way possible. The accompaying person, I think, it is a necessity.

- Other noteworthy information（その他特筆すべき事項）:
None.

- 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。）
I had no accompanying person.