



กลุ่มโรงเรียนวิทยาศาสตร์ภูมิภาค  
PRINCESS CHULABHORN SCIENCE HIGH SCHOOLS

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RITSUMEIKAN

# **The New Method of Cooperative Science Project in Student Academic Exchange Program**

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# ▶ Background and Introduction



Ritsumeikan Keisho



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PCSH Pahumthani

SSH Project:  
Develop

Cooperative Students Science Research

ICU High

Sapporo Kaisei

## ▶ Methodology - Cooperative science project

Six-day academic exchange program at PCSHP



Pre-experiment in each school



LINE group discussion within integrated students



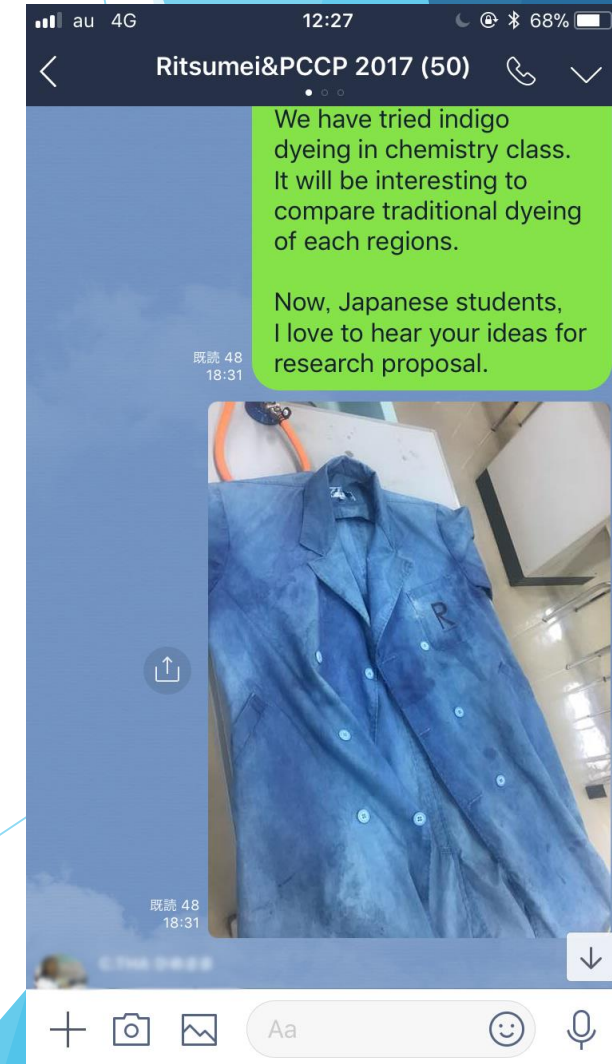
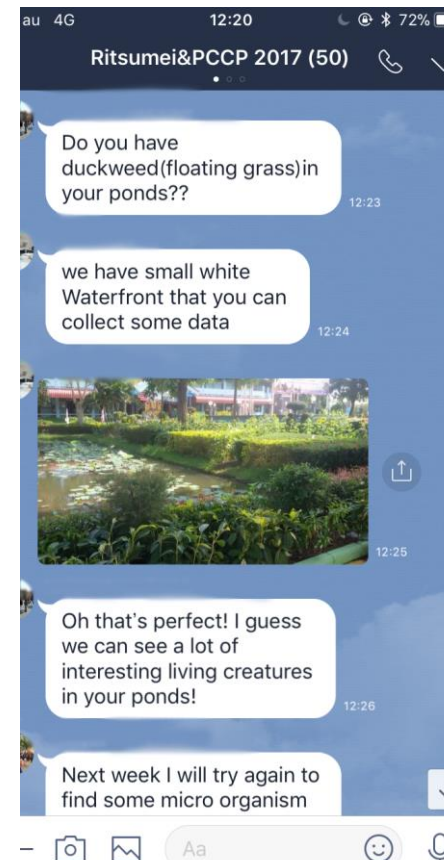
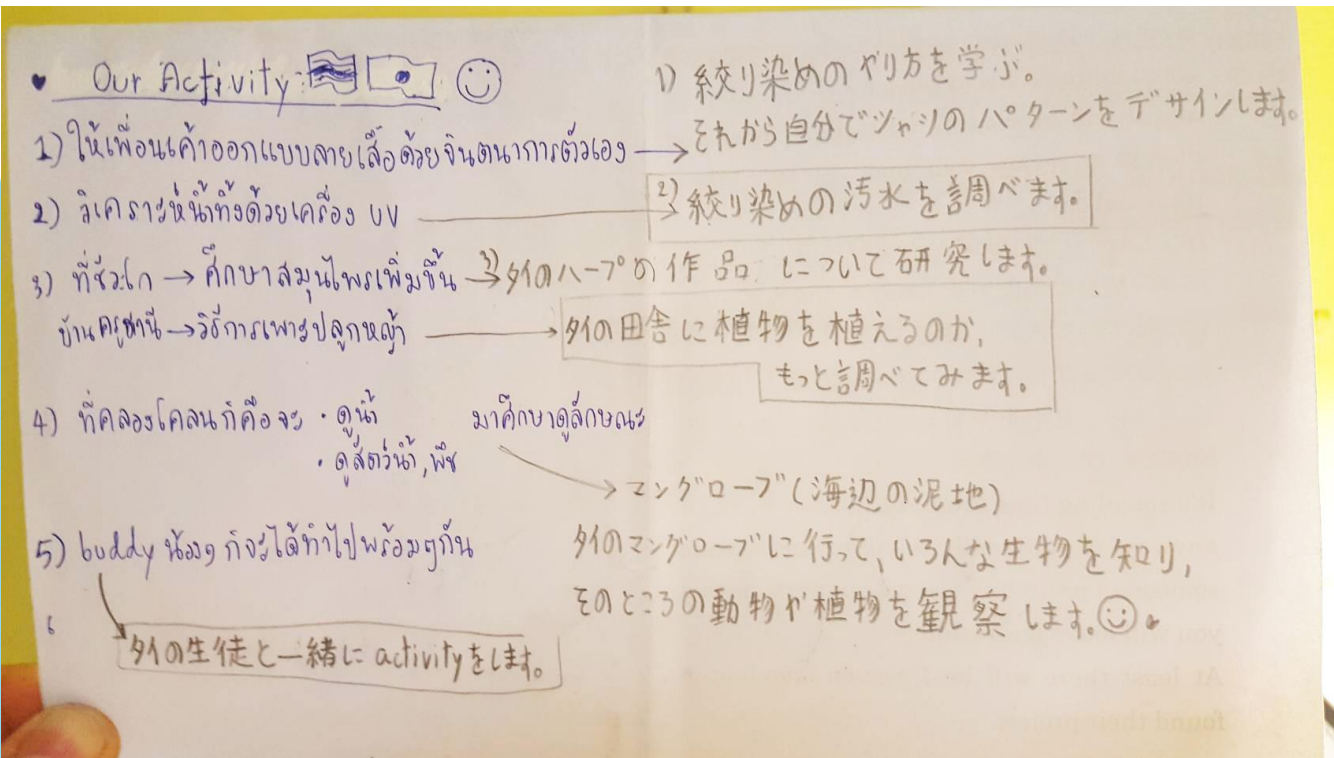
Discussion about activities and science project  
by contact persons (science teachers in each school)

About  
1.5 month



# ► Methodology - LINE group

Thai and Japanese students were gathered into LINE group to discuss research topic





## ▶ Methodology - Integrated students group coaching

Student groups (Thai-Japanese integrated)

Thai teacher

cooperative  
support

Japanese teacher



## ► Methodology - Academic exchange activities

Several science surveys and experiments

- Klongklone mangrove's environmental research
- Geoinformatics for environmental study
- Chemistry, physics experiments
- Statistic for scientific discussion
- Visiting research institute



## ▶ Results and Discussion – Science project

5 group presentations of science research were done;

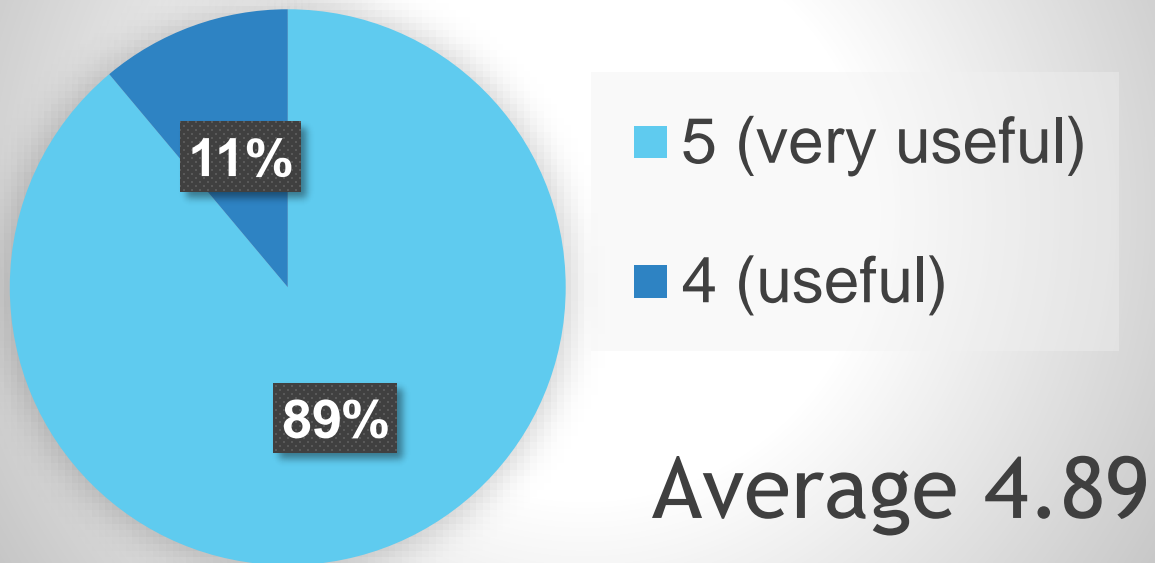
- Bio organism related to acidification; case study, Ukikusa (Duckweed)
- Natural sweetener extracted from Monk Fruit (*Siraitia grosvenorii*)
- How to make Thai tap water drinkable
- Water filter from bio-fiber
- Indigo dyeing



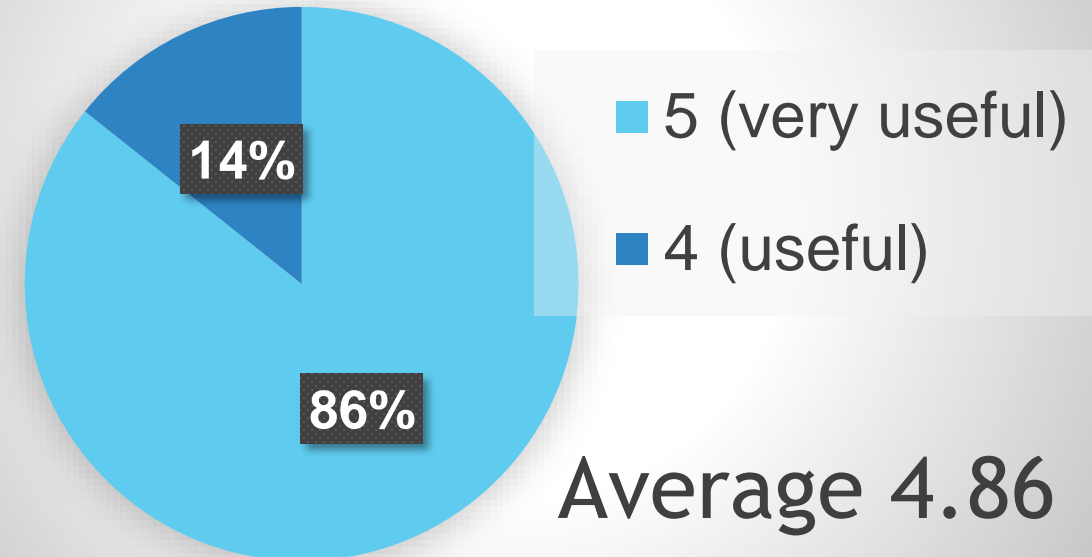
## ▶ Results and Discussion – Questionnaire analysis

- The usefulness of this program  
for your future science activities

### Japanese students



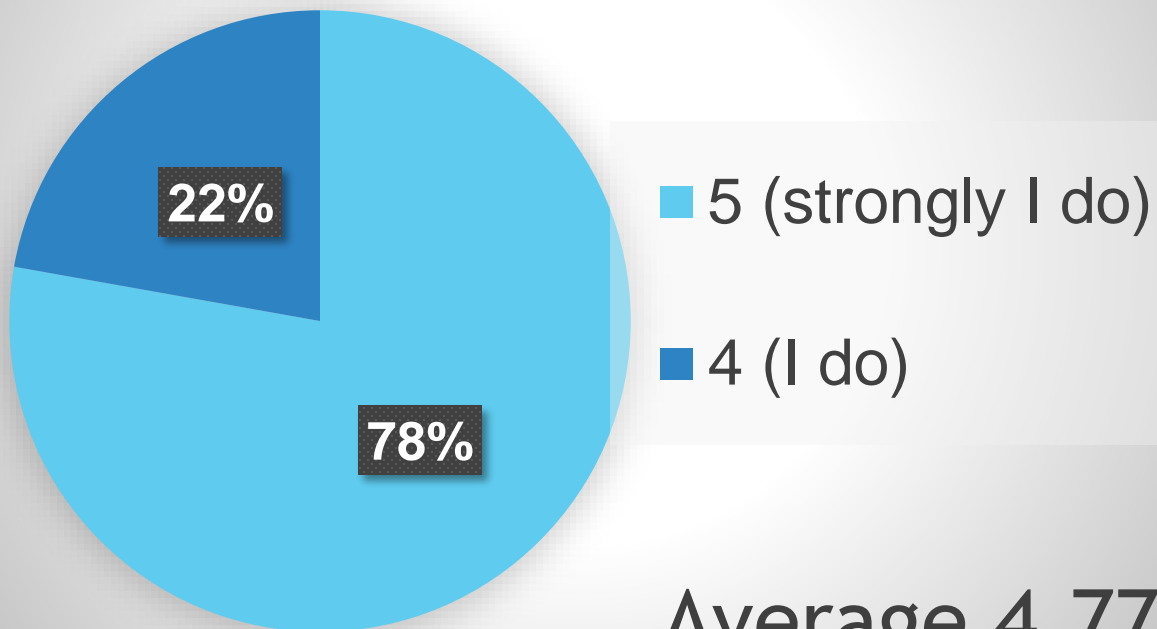
### Thai students



## ▶ Results and Discussion – Questionnaire analysis

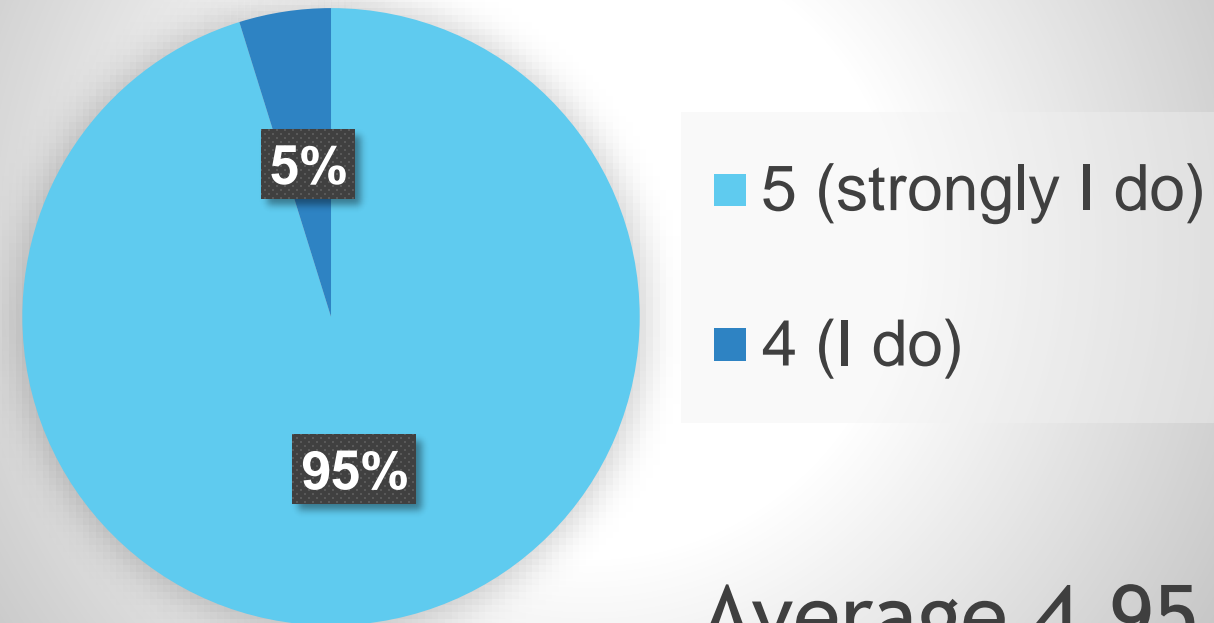
- Do you think you would like to join another science exchange program?

### Japanese students



Average 4.77

### Thai students

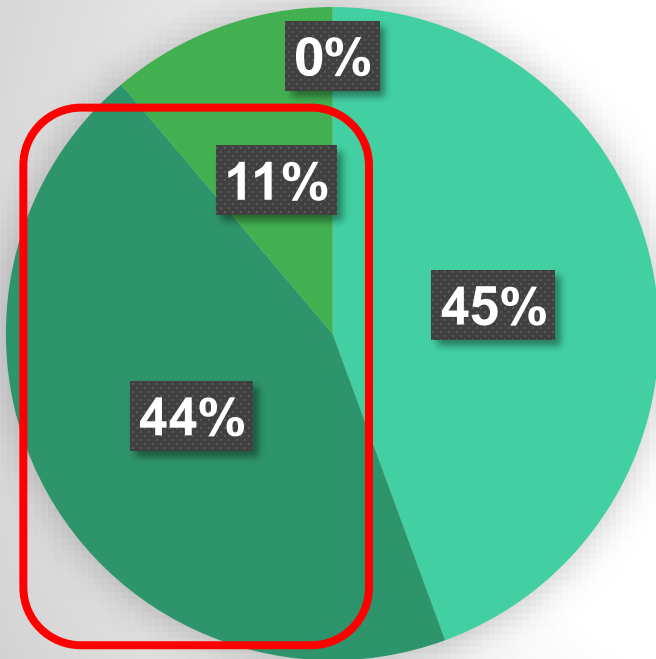


Average 4.95

## ▶ Results and Discussion – Questionnaire analysis

- The length of this program

Japanese students



■ too long (0%)

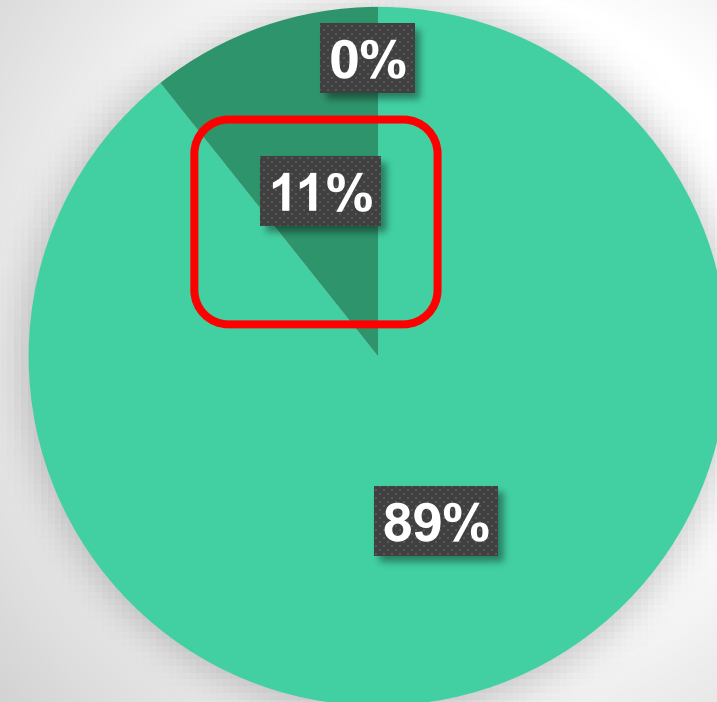
■ long (0%)

■ adequate

■ short

■ too short

Thai students



Requirement of more plenty time for their experiments

## ▶ Results and Discussion

Questionnaire revealed suggestions:

Japanese students

- We would better discuss how much time we will set for cooperative science project, since many students seemed to be eager to concentrate on their project.
- If they get some concrete result, they will be able to enjoy further a presentation activity outside of our program.
- Thai students are so kind and full of hospitality's , also teachers are.
- Science program was high level and quality for me, that was precious experience.



## ▶ Results and Discussion

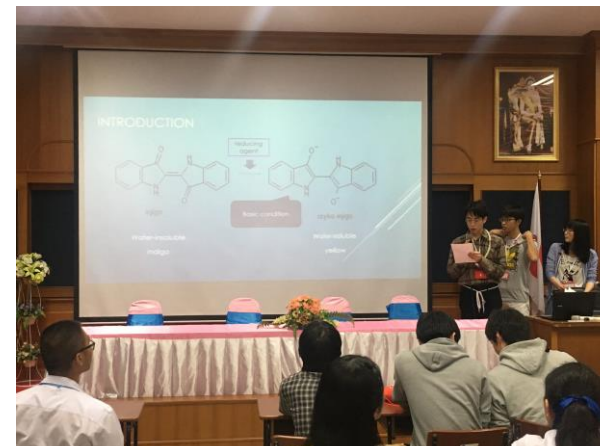
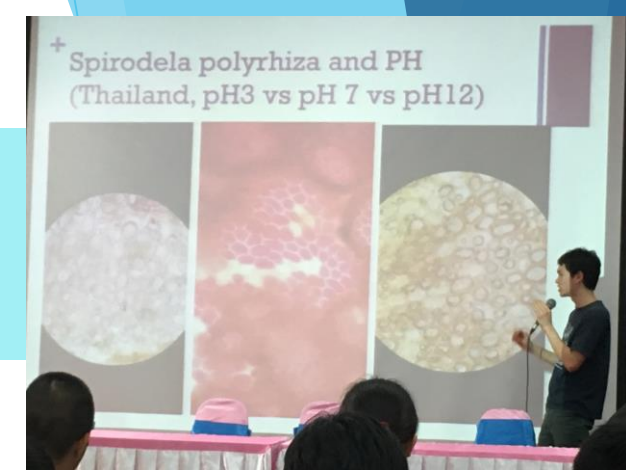
Questionnaire revealed suggestions: Thai students

- We need more time for doing science project, so we should start discuss about proposal earlier and do more forehand experiments.
- We would like to be partner with Japanese friends in all activities.
- Japanese students are great learner that they love to learn every thing not only in Science but also culture.
- After each academic program in a day we should do our experiments for science project every day.
- We need time for report writing in group face to face, writing report together via social media is very difficult

## ► Conclusion and Perspectives

Potentially successive in:

- encouragement of students in using English in cooperative science project
- development of alternative coaching techniques for integrated students group



# Further works

For the sake of further satisfying accomplishment in student projects

- Improvement of the contents
- Careful discussion on time schedule
- Raise of teachers' English proficiency





Thank you for your kind attention

