

gPBL of Model Thinking Workshop

| Implementation period | Implementing country | SIT's implementation partner organization | Target students | participant | SIT instructor |
|---------------------------|----------------------|---|---|--|---|
| 2019/07/17 ~2019/07/29 | Japan | Prince of Songkla University | <ul style="list-style-type: none"> Department of Engineering and Design Undergraduate 1st grade, Undergraduate 2nd grade, Undergraduate 3rd grade | (SIT) Students 22, TA 10, Professor 3 (Prince of Songkla University) Students 20, Professor 2 | NODA Natsuko(Department of Engineering and Design), YAMAZAKI Kenichi(Department of Engineering and Design), SAKURAGI Shin(Department of Engineering and Design) |



Image1 drum circle

22 students from SIT and 20 students from Prince of Songkla University, Thailand, participated in this gPBL program. In this program, we conducted a workshop titled "Model-Thinking Workshop," which aimed to learn planning and designing with modeling techniques used in software development. The theme of the workshop was "Let's make your Friend Robot." Participants were separated in 7 groups, each group consisted of SIT students and 3 PSU students, and each group planned and designed own original robot with modeling techniques such as goal model, use case diagram, class diagram and state machine diagram. Also, to demonstrate each group's idea, each group developed a prototype with the robot programming kit Mindstorms EV3.

Some of the students have already studied modeling skills and programming languages, and some have little knowledge. They taught and helped each other to complete their tasks by themselves. Finally, all groups succeeded to develop their original robots. Participants were able to improve their practical English skills through team work and to develop the ability to express and explain their ideas using another form of language called a model.

At the start of the workshop, a drum circle was held by an off-campus instructor for ice breaking. Participants enjoyed this very much and the event worked well for the team building.

As a whole, the program had a positive effect on the participants' improvement of technical and communication skills.



Image2 group work : modeling



Image3 group work: making robot



Image4 final presentation