Proposal and Evaluation of Online Community Which Are Modeled on School Club Activities for Promoting Pro-Environmental Behavior

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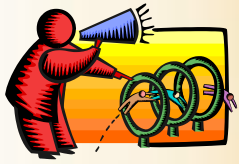
Introduction

- Energy saving in household is a pressing issue in Japan.
- Promotion of Pro-Environmental Behavior(PEB) is necessary in Japan.
  - Example: "switch off electronic appliances when they are not used"
- Communication in a group with distributed CMC* tool is effective for promoting PEB.
  - Members mutually promote PEBs and keep doing them.
  - Members can join the group when they are staying home.

* Computer Mediated Communication

Purpose

- Group norms which promote some actions are often formed and are disliked by members.
  - Dropout from mixi, a Japanese famous SNS, was caused by a norm which forces them to give comments to their friends.



In this study,

- An online community "eco-club" which members can accept a norm for promoting PEBs was proposed.
- The proposed community was evaluated through an experiment.

Approach

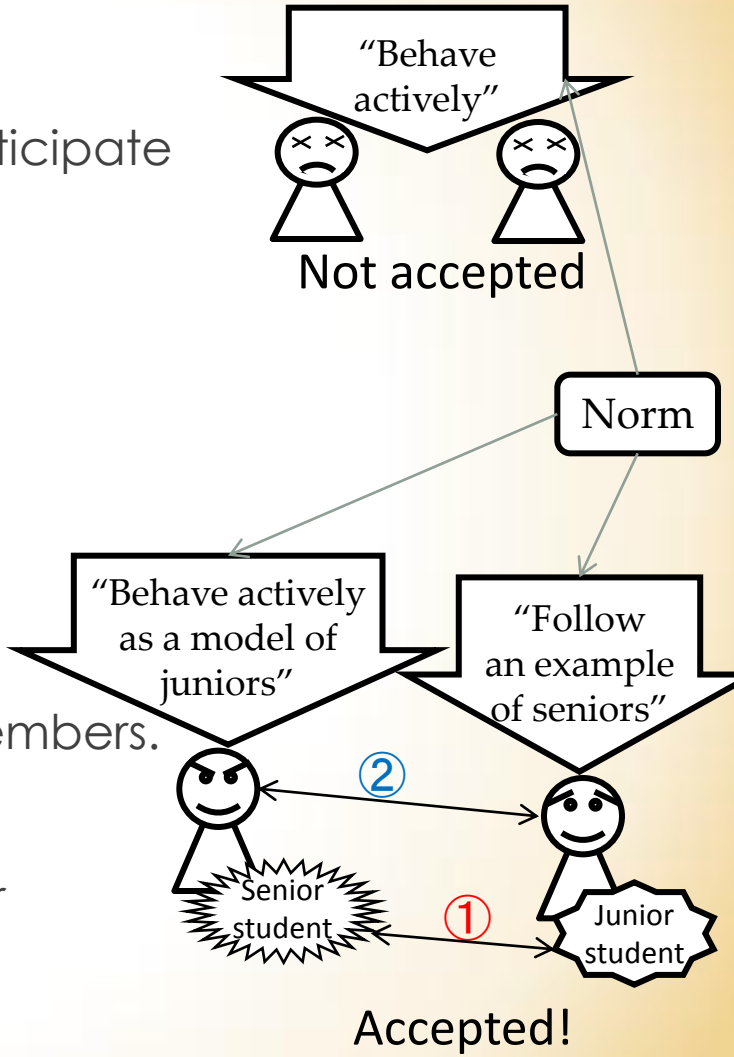
- A group norm gives a implicit pressure to participate in the community and to keep doing PEBs.

– "Eco-club"

① Giving members of community the roles of junior/senior students which are modeled on Japanese school club activities.

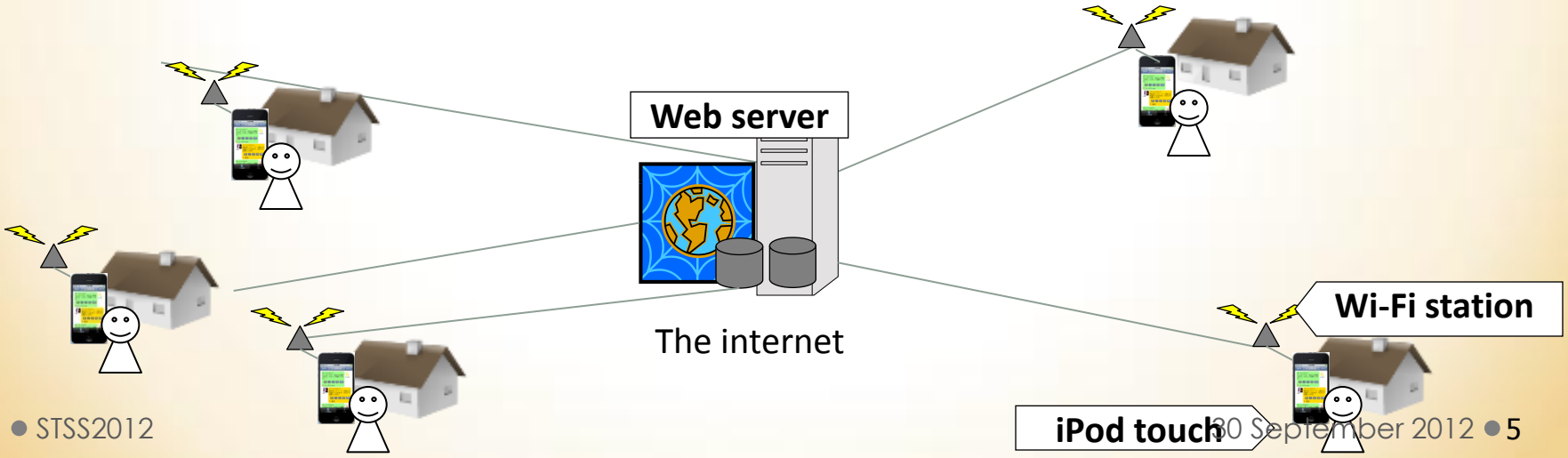
② Forming positive relationships between members.

→ Norms will be accepted because most Japanese take junior/senior relationship in club activities for granted.



Outline of activities of Eco-club

- Group members carry an iPod touch in their houses.
- iPod touch are connected each other through the Internet
- Members communicate their PEBs with an iPod touch application.

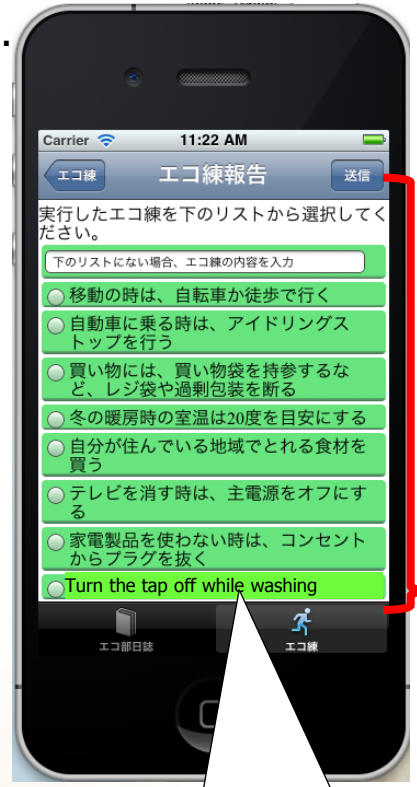


Reporting PEB practice (ECO-ren)

① When a member does (practices) a PEB…

Turn the tap off while washing

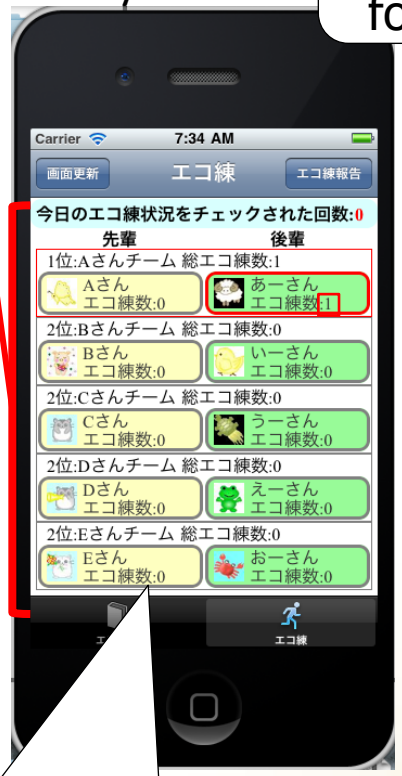
Just after doing PEB



② Choose the practiced PEB from PEB list.

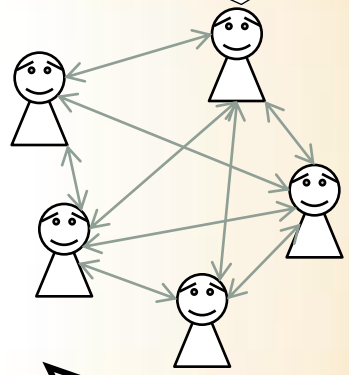
The number of PEBs members practiced today

PEB list



③ Every members can see others' practiced PEBs on this display.

④ Mutual monitoring will form group norms for promoting PEBs.



Communication board among members

Posting
a message

"Eco-club journal (BBS)"

- Electronic bulletin board system
- Members communicate each other using this function and make positive relationship.

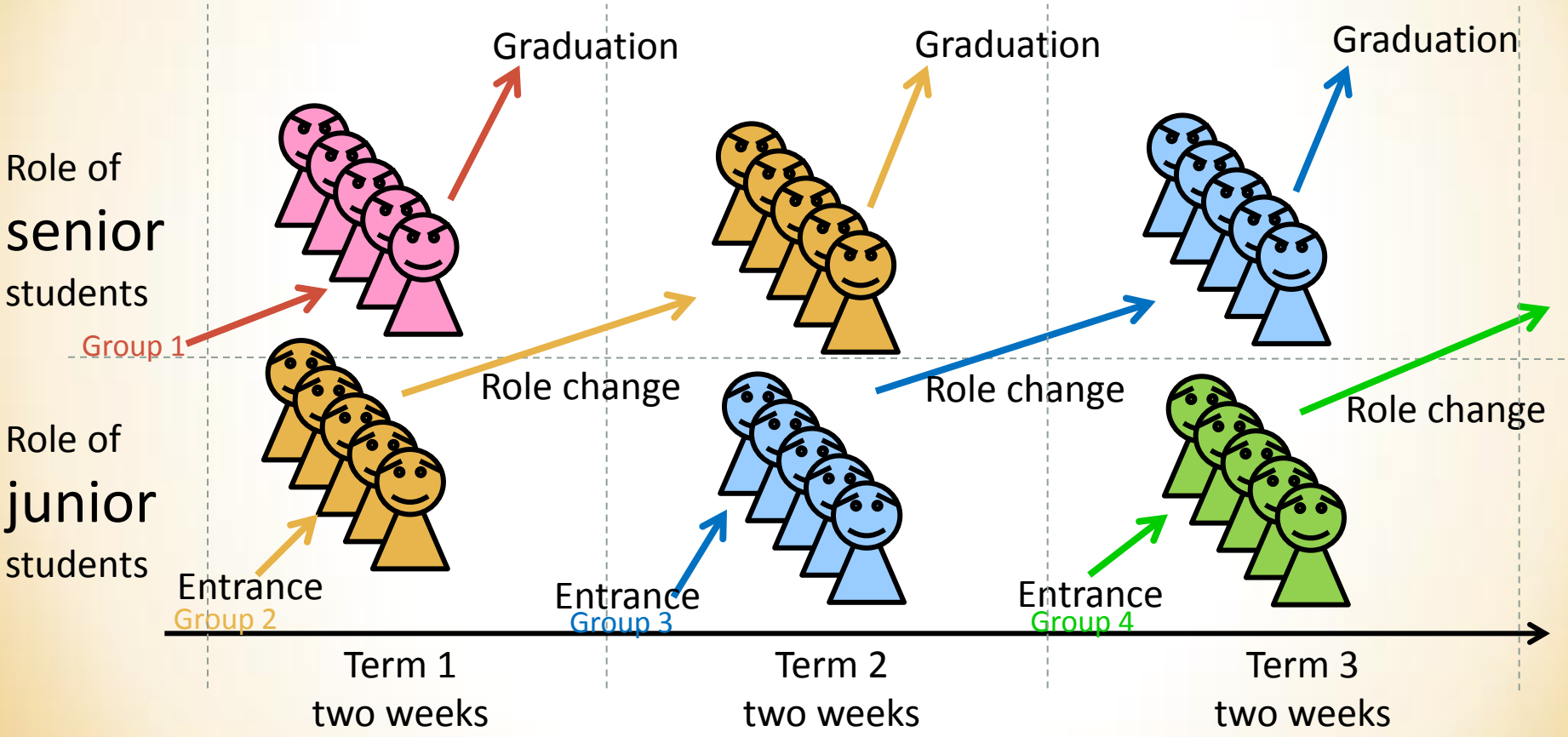
Messages

Posting
a message

Posting
a message

Time flow

Role play and entrance/graduation system

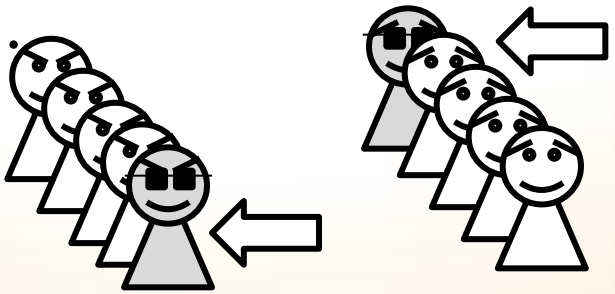


- Role-play helps norms to be accepted easily.

SAKURA for norm of active posting

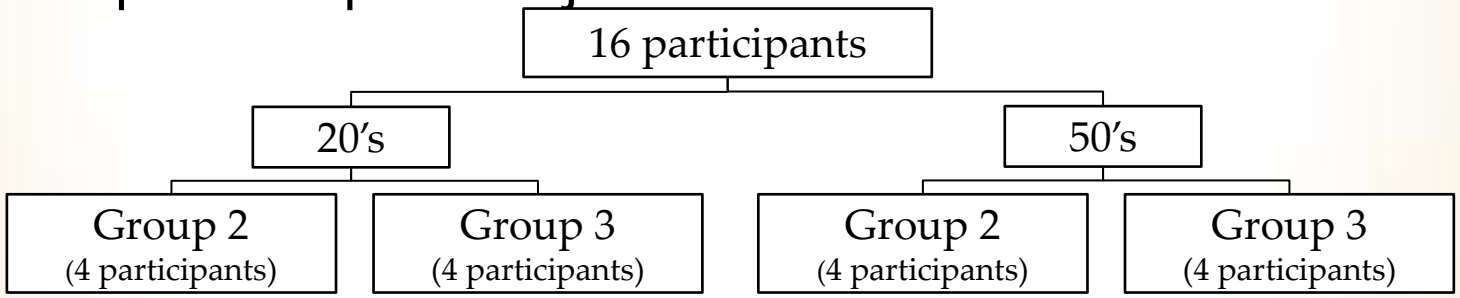
- SAKURAs are special members who are requested to
  - Post many positive, favorable messages to eco-club journal.
  - Report many PEB practices.
- Other members don't know existence of SAKURAs.

→Positive relationship among members and a norm of active posting PEB practices will be formed.



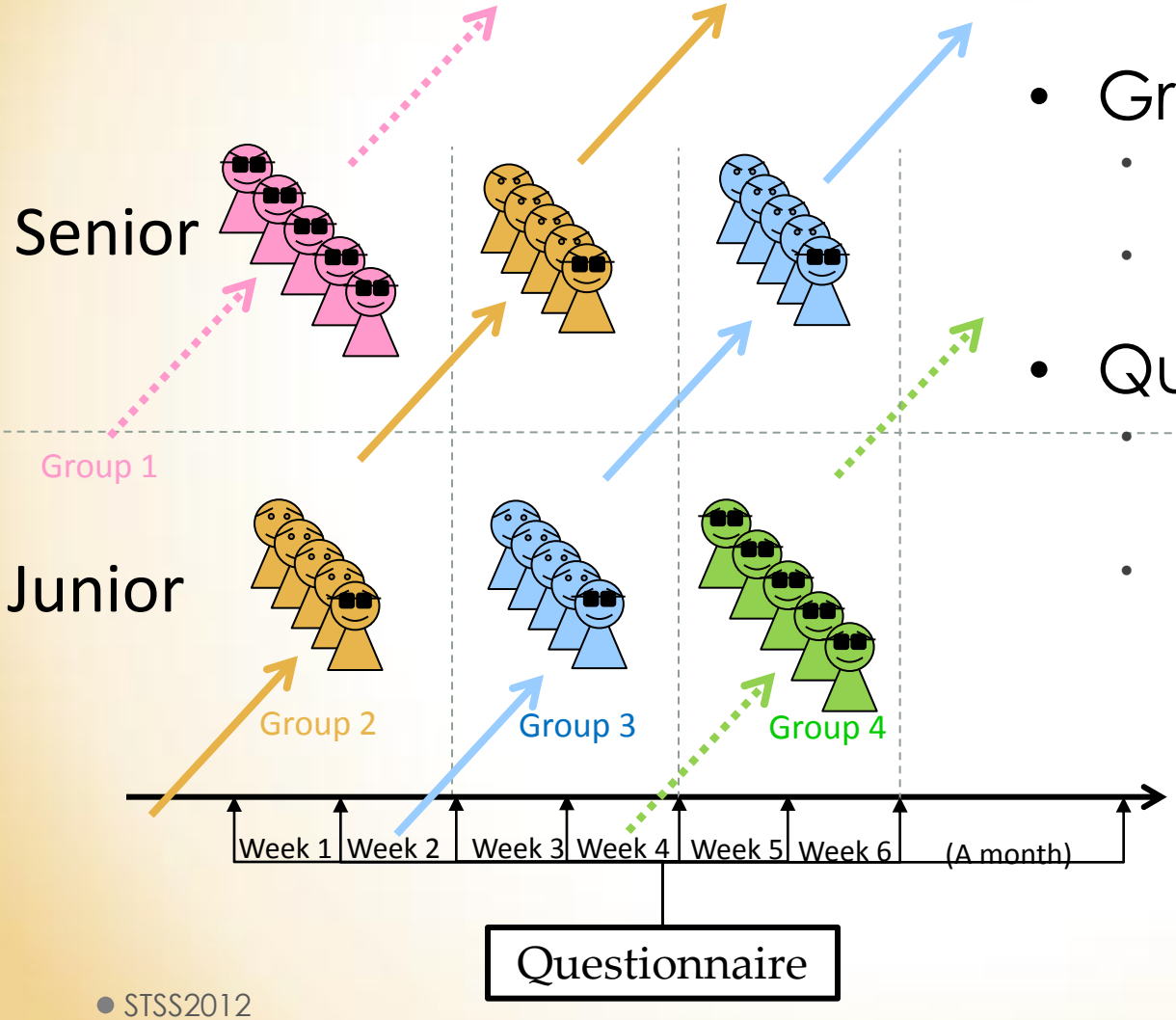
Experiment
Purpose and method

- Purpose
  - To evaluate the proposed community and Promotion effect of PEBs.
- 16 participants joined



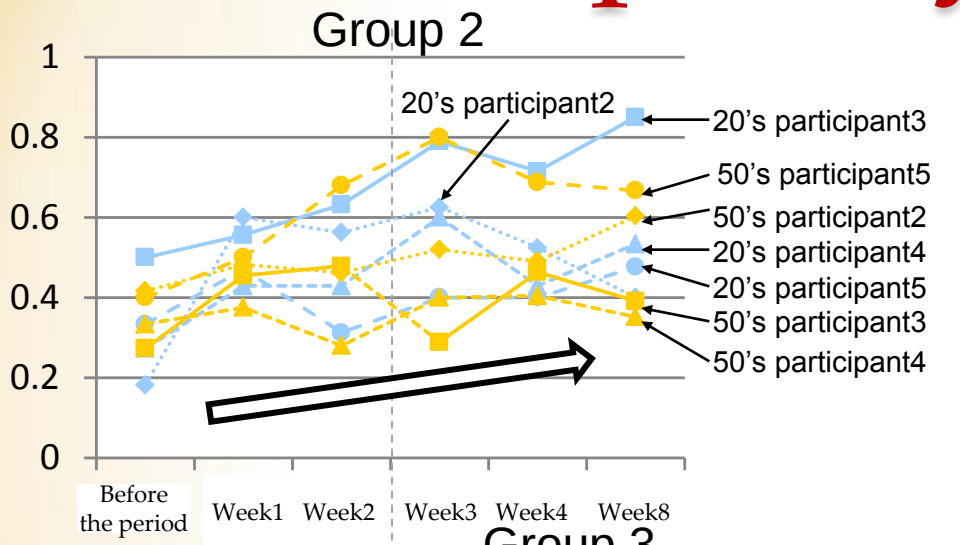
  - They used the iPod touch application in their houses for a month.
- The experimental period
  - From 2012 November 14 to 2012 December 25

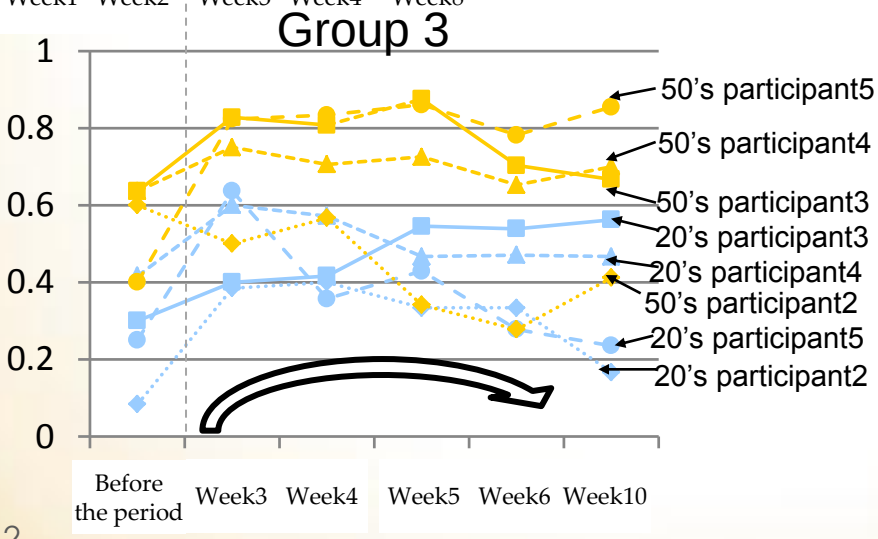
Experiment
Schedule and procedure



- Group members
  - Group 1 and group 4 are all SAKURAs.
  - Group 2 and group 3 include four participants and a SAKURA.
- Questionnaire
  - PEB frequency was measured once a week and a month after the period of participation.
  - Subjective evaluation of the community was conducted just after the period of participation.

Results
Frequency of PEB

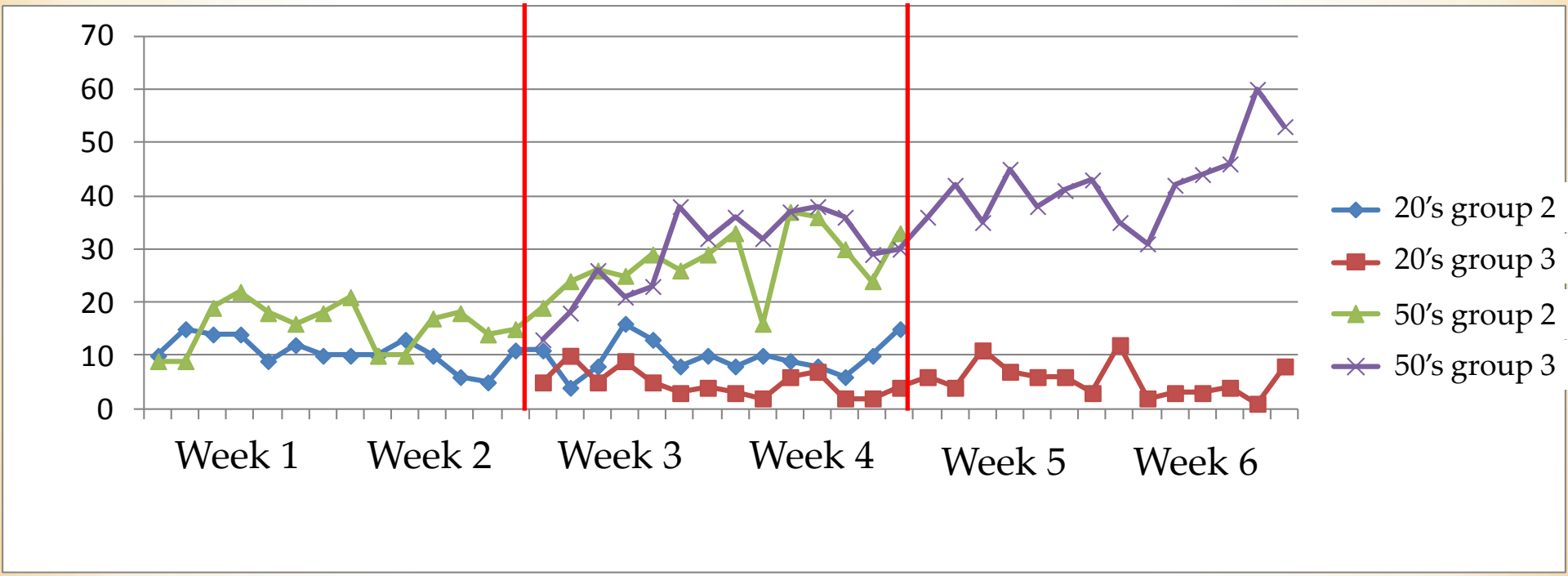




- PEB frequency of Group 2 increased.
- That of Group 3 did not significant.
  - Base levels of 50's were high before the experimental period.
  - The experimental period was close to new year holiday. (Daily behaviors were probably disturbed)

*Ratio of "Always" and "Often" in five-grade Likert scale

Reports of PEB practices



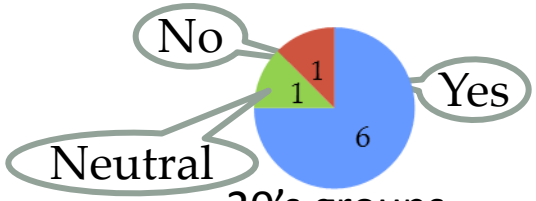
- 50's group reported many PEB practices.
  - Reports by 50's increased after their role change.

Results and discussion
Norm and positive relationship

Questionnaire results

"I felt I had to participate in the activities of the community."

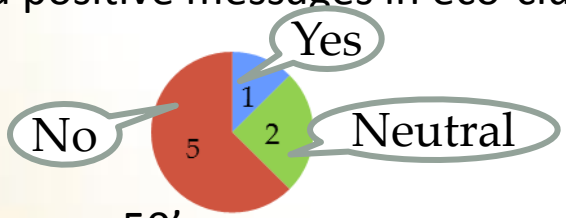
50's groups



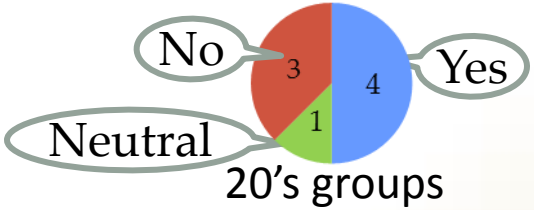
20's groups

- Seven participants of 50's groups and five participants of 20's groups answered "yes". ⇨ Most participants had norm consciousness.

"I posted positive messages in eco-club journal."



50's groups



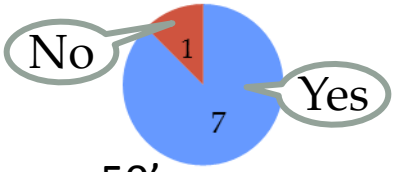
20's groups

- One participant of 50's groups and four participants of 20's groups answered "yes". ⇨ Positive relationship could not be formed.

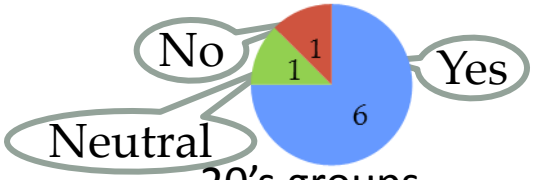
Results and discussion
Continuous participation

Questionnaire results

"I could participate in the community continuously."

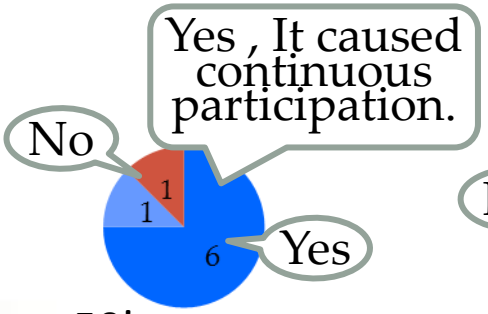


50's groups

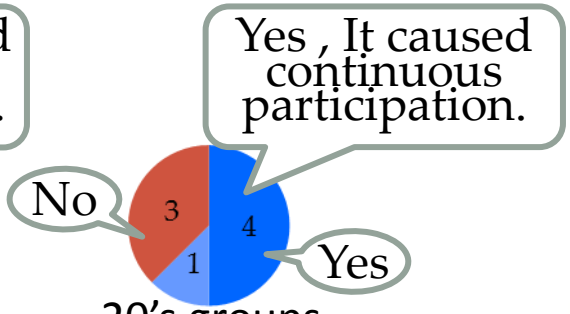


20's groups

"I had the norm for participating in the community."



50's groups



20's groups

- Feeling the norm for participation is effective.
- Positive messages are not indispensable?

Summary

- An online community "eco-club" was proposed for promotion of PEBs.
  - Imitate Japanese school club activity.
- The norm for participation in the activities can be accepted by the participants.
  - Positive relationships is not indispensable, however, it may promote participation.

Thank you

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