

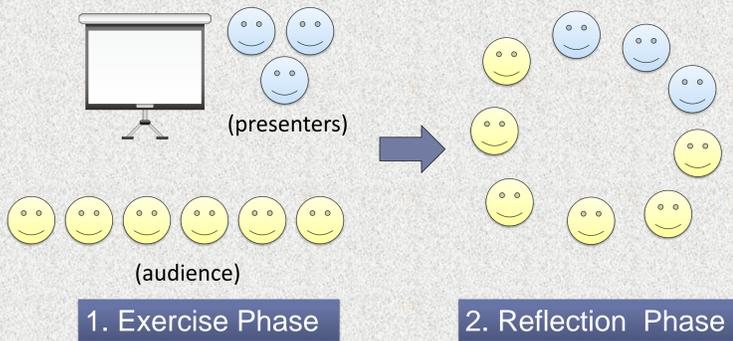
Development of a Mobile Observation Support System for Students: FishWatchr Mini

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Background and Objectives

Cooperative Activity in Classroom (Presentation Exercise)



Video annotation systems (VAS) must be effective for such activities

Problems in Introducing VAS in Classrooms

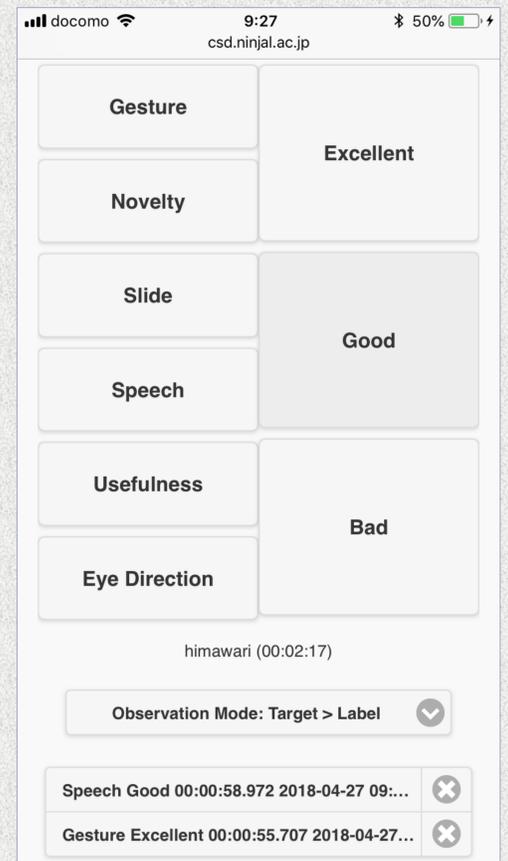
- Preparation of devices for real-time annotation systems
- Burden of learning the system
- Means of using annotation results

Objectives of This Study

- To develop FishWatchr Mini (FWM) to solve the problems
- To validate the effectiveness of FWM in a presentation exercise

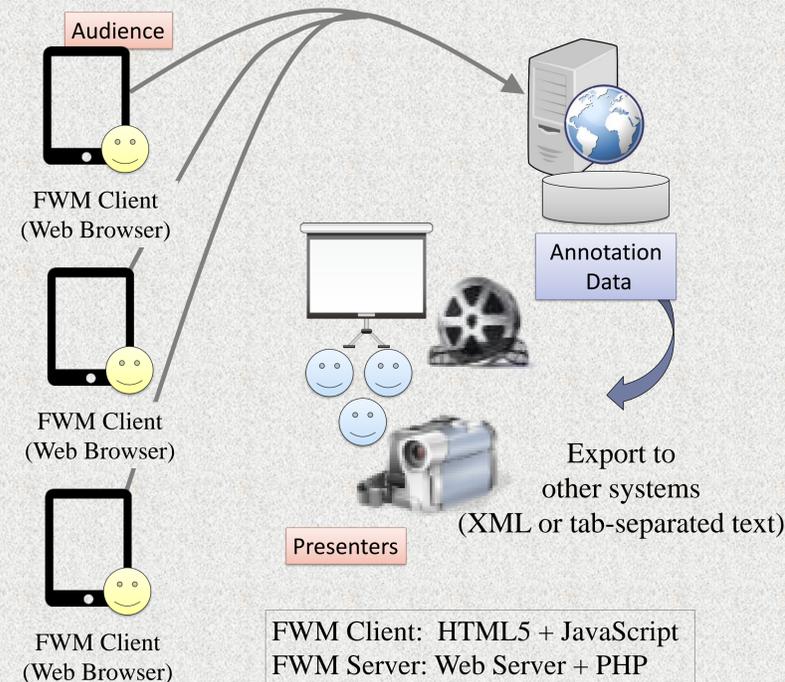
Characteristics of FWM

- Running on the mobile devices of students
- No software installation on the devices
- Automating as many operations as possible except annotation
- Students can visualize their annotations right after the exercises
- Easy to export annotation data to VAS synchronizing with the video



Development of FishWatchr Mini

System Structure



Introduction to Presentation Practice

Conditions

- Two class periods (90 min + 90 min) in a university
- 13 students (divided into 5 groups)
- Procedures

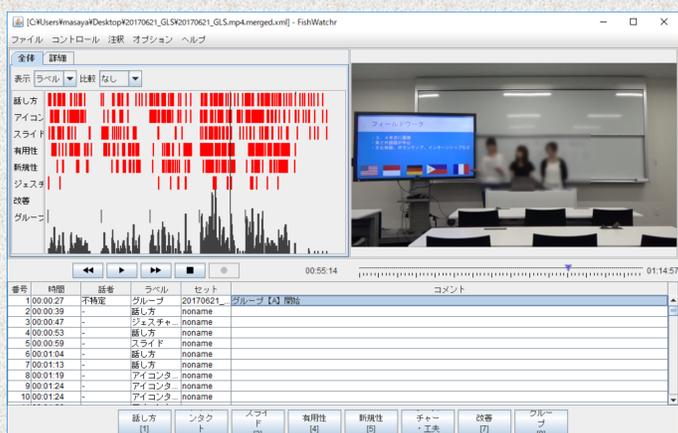
- Presentation exercise
 - A group conducts a 10-min presentation.
 - Other students make annotations (six evaluation points) on the presentation with FWM
 - All groups perform exercises.
- Reflection
 - A teacher synchronizes all annotation data with the video using FW.
 - Each student reflects on his/her group's presentation using FW.

Results

- No significant problem occurred during classes
- 838 annotations by 13 students

Question	Score (1-5)
[EASE of USE] Could you observe practices with FWM smoothly?	4.29
[ADEQUATE ANNOTATION TYPES] Were the evaluation points sufficient for evaluating the presentations?	4.36
[HELPFUL TO KNOW ONE'S STRONG POINTS] Was it helpful for you to know when your group's practice was evaluated positively in correspondence with the video	4.21
[HELPFUL TO FIND IMPROVEMENTS] Did it help you find problems in your presentation by reflecting on scenes where other members of your groups were evaluated positively?	4.00

Importing Annotation Data to FishWatchr (VAS)

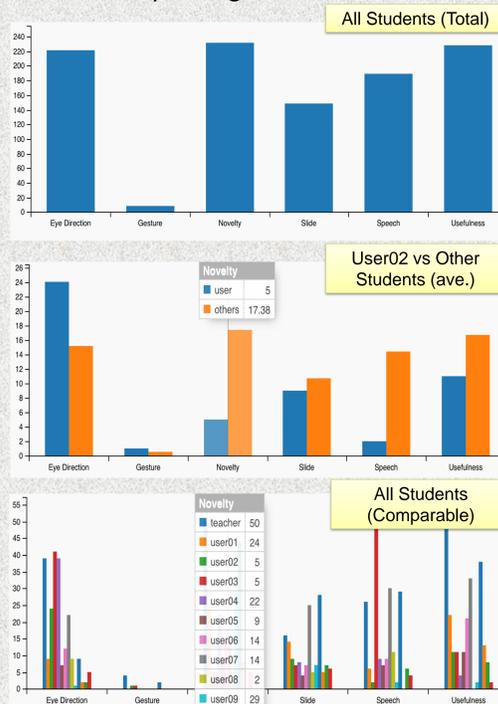


Synchronizing annotation data with the video by dragging and dropping the folder that includes them

- PC application written in Java
- Editing the annotation data
- Making new annotations

Visualization of Annotation Data

Summary Histograms



Time-Series Histogram

