

# Foreign Language Education++ 2

## 2015 Summer-term FBL/PBL

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### 1. Problem and Objectives

#### Our aim:

To find a solution to help Japanese improve their English skills

#### Target:

Adult learners (university and later)

#### Problems:

- Thinking in Japanese
- Low speaking and listening skills
- Grammar-focused teaching in schools

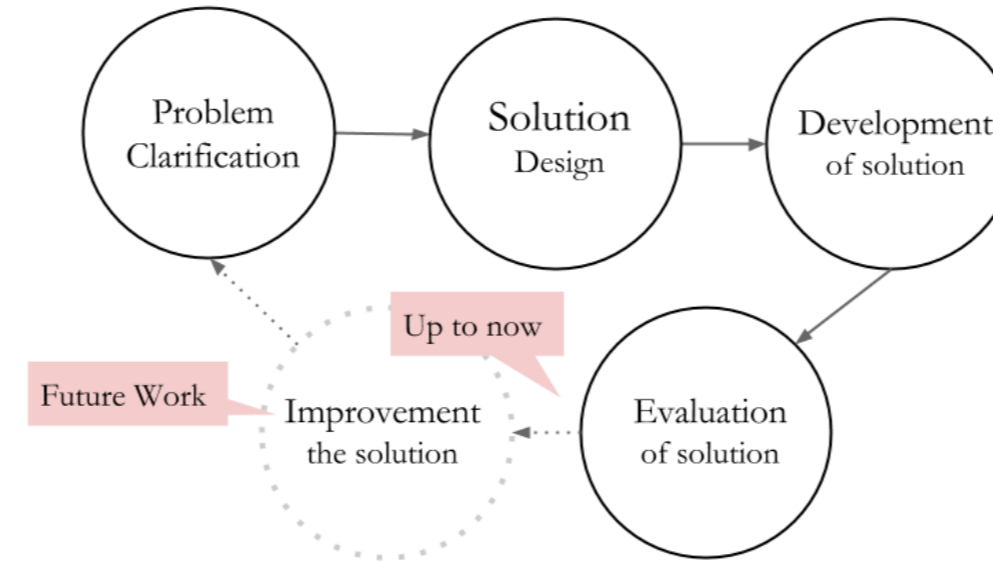
#### Target English skills:

- Real-time communication
- Casual/small talk

#### Solution objective:

- Decreasing anxiety
- Increasing motivation

### 2. Project Overview



#### Problem clarification:

1. Education on grammar and translation
2. Lack of practice and experience
3. Insecure learning environment
4. Time lag due to thinking in Japanese

#### Design solution:

Situation-based Learning (SBL), providing

1. Secure environment
2. Use of multimodal communication channel
3. Immediate feedback
4. Adaptive learning

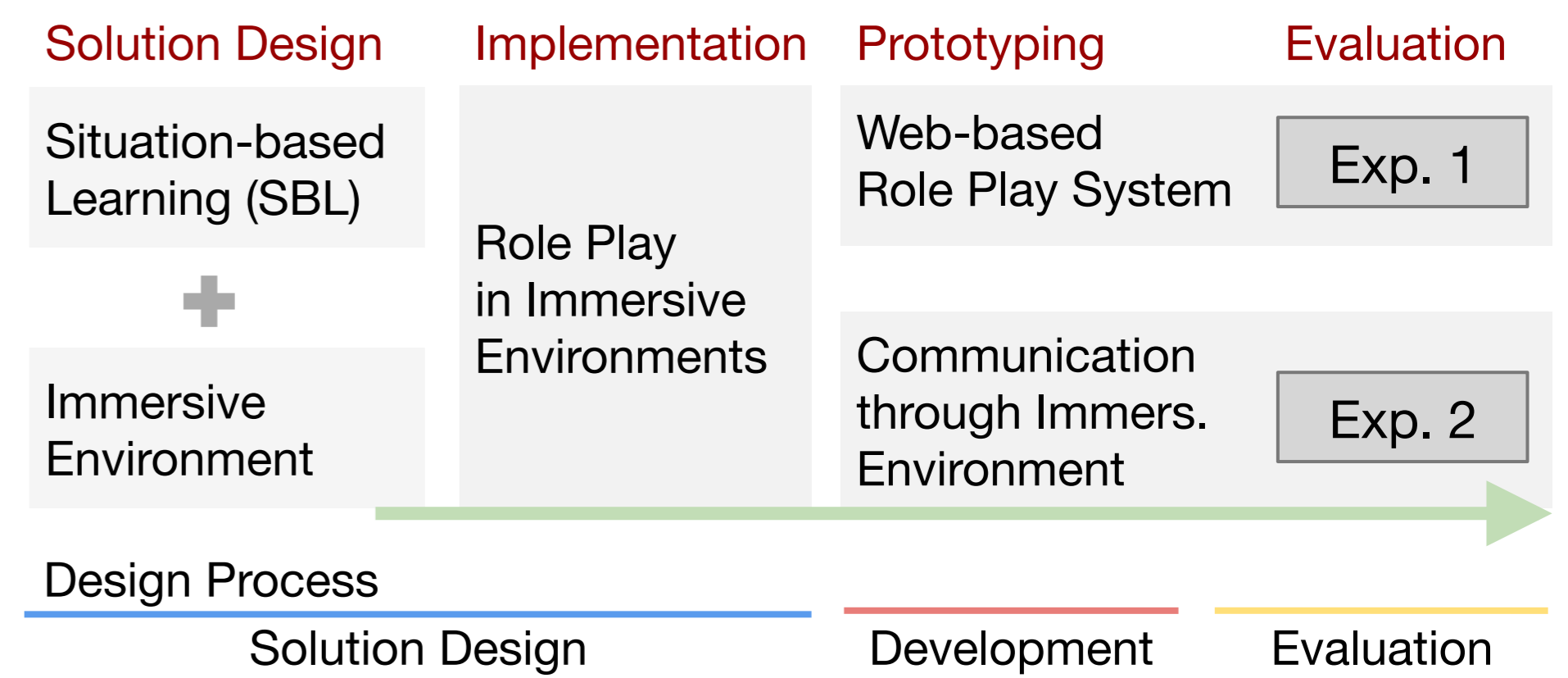
#### Development:

Role play system using immersive technologies

#### Evaluation:

Effects of solution on a learner's attitude to English

### 3. Solution



#### Solution Design:

- SBL enhanced by immersive technologies
- Role play system, with following novelties:
  - Avatars to reduce fear and anxiety
  - Multimodal communication channel
  - Immediate feedback from computer agents
  - Adaptive situation

#### Development:

Two baseline systems:

1. Web-based role play system
2. Communication platform with immers. environment

### 4. Study 1: Web-based Role Play System (RPS)

#### Objective:

Evaluate the effects of role play system on a learner's feeling

#### Hypothesis:

Role play eases anxiety and perfectionism, and increases the learner's motivation

#### System:

Web-based role play (RP) system using Web Speech API<sup>(1)</sup>

#### Participants:

46 adults recruited via Lancers<sup>(2)</sup> (crowdsourcing platform)

#### Procedure:

- Watch English video RP using our web-based RPS (only with-RP condition)
- Answer a questionnaire

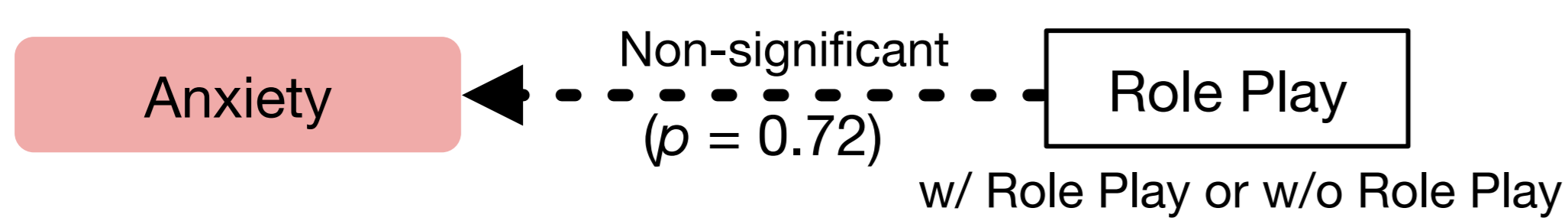
#### Questionnaires:

- Perfectionism Cognition Inventory (Kobori & Tanno, 2004)
- English Language Classroom Anxiety Scale (Kondo & Ying-Ling, 2003)
- Attitudes and Motivation Scale (Koizumi & Matsuo, 1993)

#### Results:

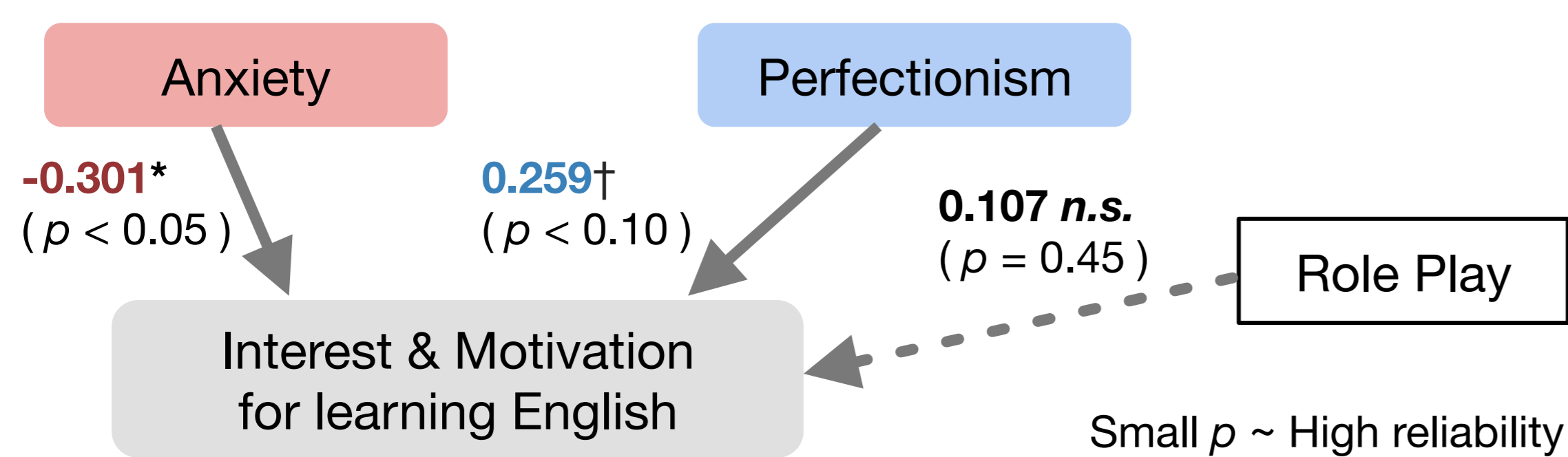
Structural Equation Modeling (SEM) with latent variables

#### [Result 1] Role Playing in this system didn't affect Anxiety



#### [Result 2] We observed the following relationships:

- Anxiety has negative effects on interest and motivation
- Perfectionism has positive effects on interest and motivation



#### Conclusion and future work:

- Our role play failed to increase Interest & Motivation and to lessen Anxiety
- We need to:
  - Evaluate the effect of role play in long run or multiple times
  - Hypothesize how role play can affect Interest & Motivation (directly or not)

<sup>(1)</sup> Web Speech API Specification, <https://dvcs.w3.org/hg/speech-api/raw-file/tip/speechapi.html>  
<sup>(2)</sup> <http://www.lancers.jp>

### 5. Study 2: Immersive Technology (IT)

#### Objective:

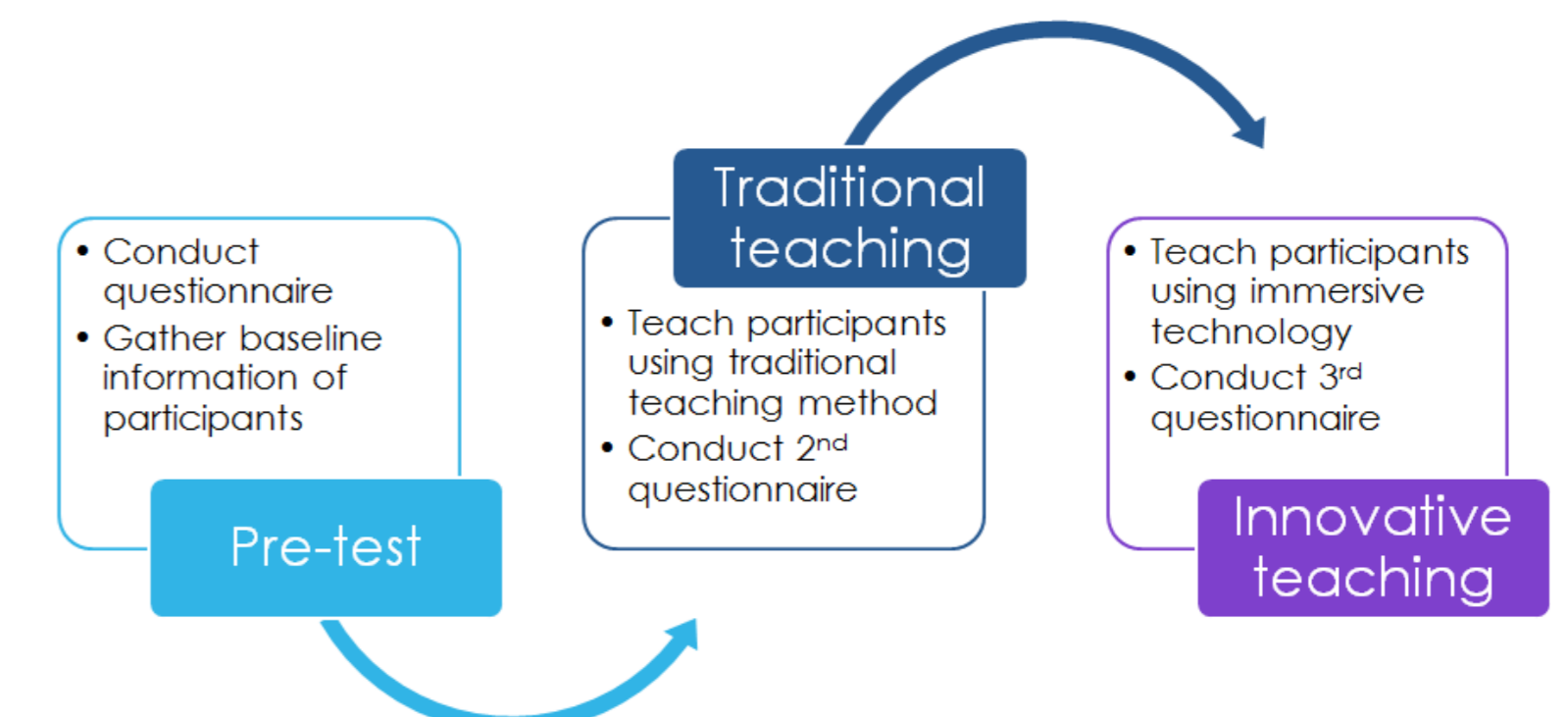
Compare traditional teaching vs. teaching using immersive technology (IT)

#### Hypothesis:

1. Use of IT will attenuate anxiety towards learning English
2. Use of IT will motivate students more compared to traditional teaching methods

#### (A) Experiment w/o IT

#### Procedure:



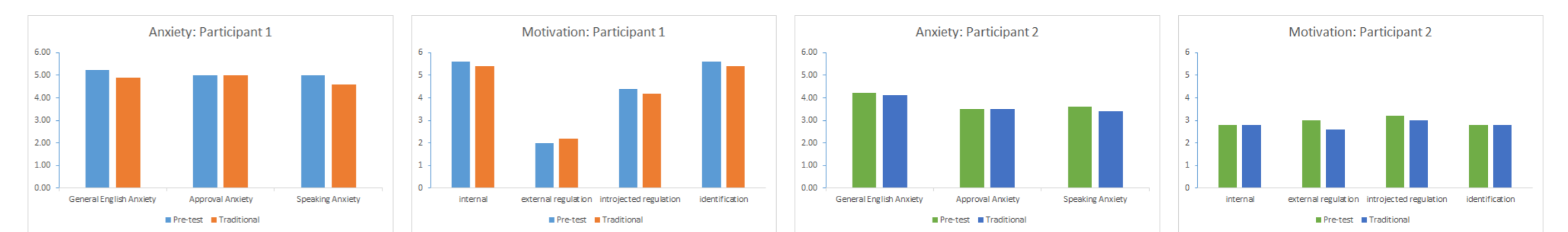
#### Questionnaires:

- English Language Classroom Anxiety Scale (Kondo & Ying-Ling, 2003)
- Motivation Scale (Tanaka & Hiromori, 2007)

#### Participants:

- Recruited from You∞ Me English conversation school
- Participant 1 (male, worker, age 40, learning English for skill up)
- Participant 2 (female, university student, age 18, learning English for school)

#### Results:



#### (B) Experiment w/ IT

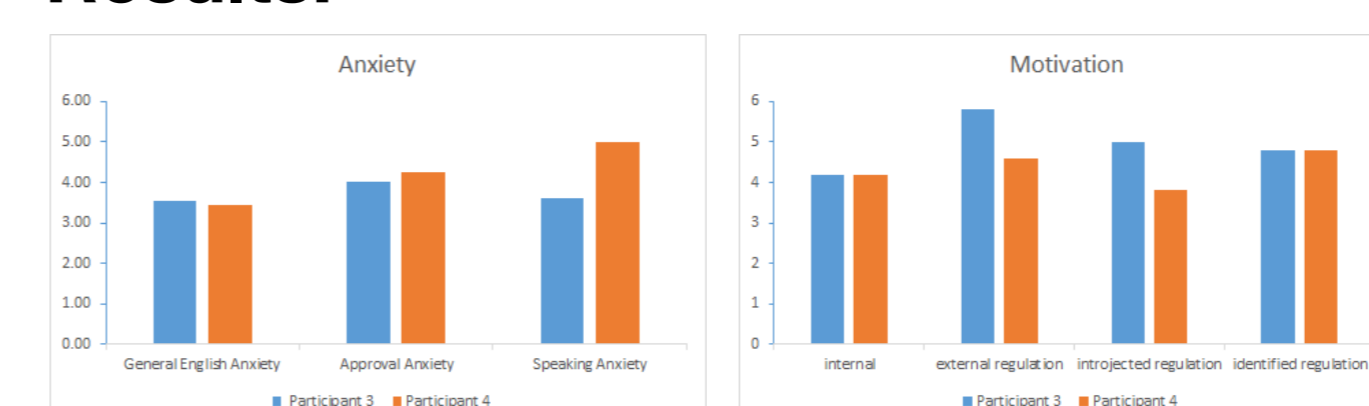
#### Procedure:

1. Questionnaire
2. English communication task in English,
  - interrupting the other
  - stating own opinion

#### Participants:

2 university students

#### Results:



#### Conclusion and future work:

- No significant changes in anxiety or motivation for pre-test and traditional teaching
- Future research should test effect of IT in reducing anxiety & increasing motivation

#### References

- Kobori, O., & Tanno, Y. (2004). Development of multidimensional perfectionism cognition inventory. Japanese Journal of Personality, 13, 34-43.  
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 Tanaka, H & Hiromori, T. (2007). The effects of educational intervention that enhances intrinsic motivation of L2 students. JALT Journal: Journal of the Japan Association of Language Teachers, 29(1), 59-80.

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