

Foreign Language Education++

Final Presentation

Sho Ishiguro (Psychology)

Ayano Tsuda (Psychology)

Victoria Abou Khalil (Social Informatics)

Naoki Otani (Computer Science)

Introduction

Have you always passed the english written exams,
but do you still feel that you cannot have a smooth
conversation in English?

A foreigner asks you for directions in English
with an accent hard to understand.

You're at university
and an exchange student starts a conversation

Would you feel anxious?

Would you feel annoyed?

Would you feel that you are taking forever to answer?

Are you trying to translate the japanese answers in
your head to english?

What do we propose?

A solution to help Japanese improve their speaking English skills

Who is targeted?

Adults (University or later)

What aspect of English?

Real-time communication

Casual situation

Small-talk

How will we do it?

Lower anxiety

Increase motivation

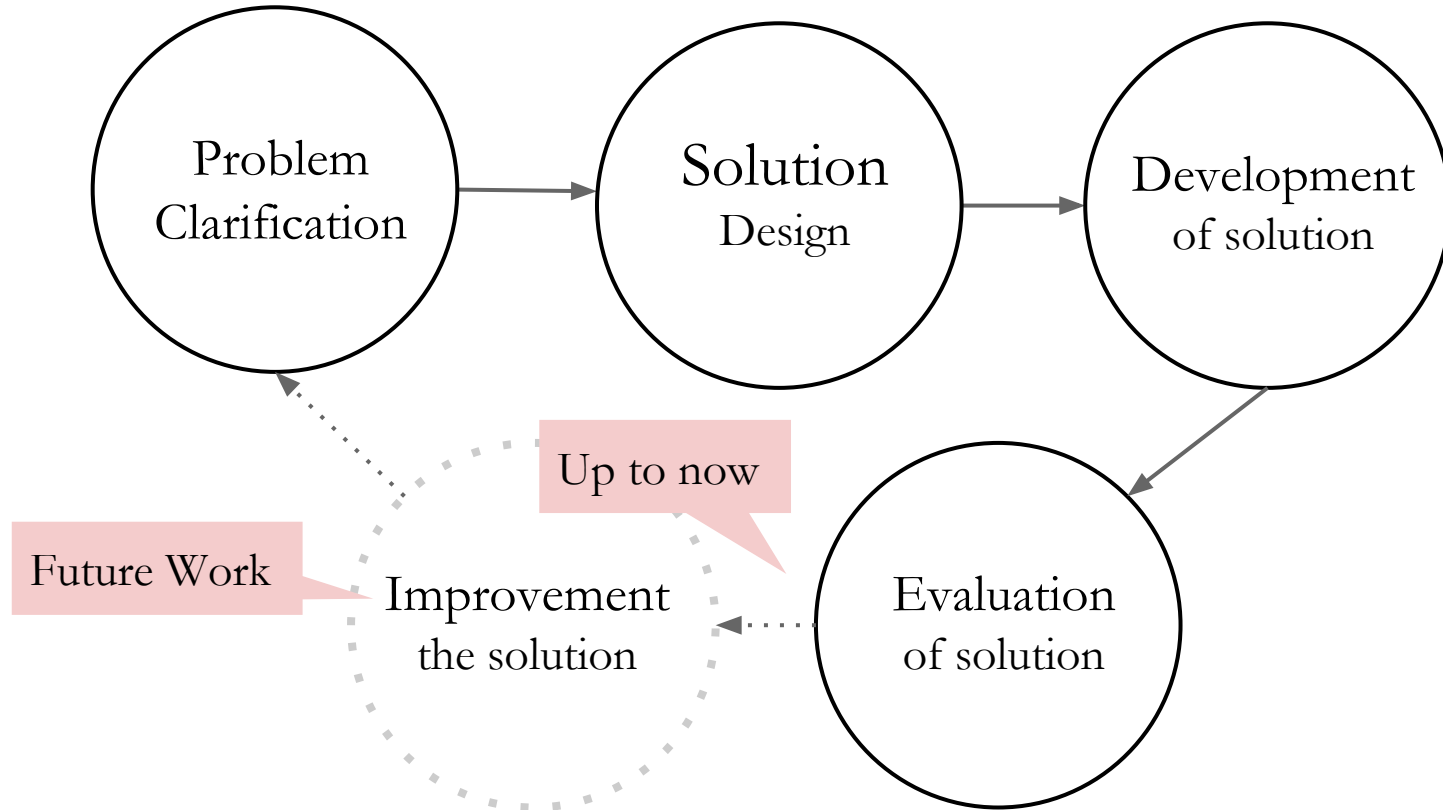
Quick response time

Stating one's opinion

And practically?

Wait and see!

Project Overview



Clarification of problem

Methodology:

- Explaining How we define the problem

Important subproblems/aspects we've found:

- Explaining problems

Solution Design

Goal:

Improve English speaking skills for Japanese L2 learners

Concept:

Situation-based learning

Immersive technology, e.g. avatars, role play

Development and Evaluation

Solution Design

Situation-Based
Learning



Immersive
Environment

Implementation

Role Play
in Immersive
Envs.

Prototyping

Web-based
Role Play System

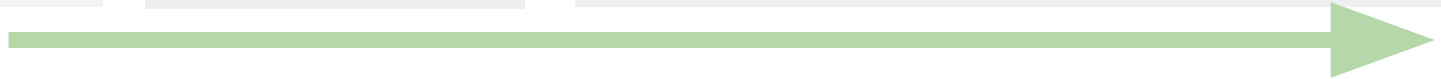
Communication
through
Immersive Env.

Evaluation

Exp.1

Exp.2

Design Process

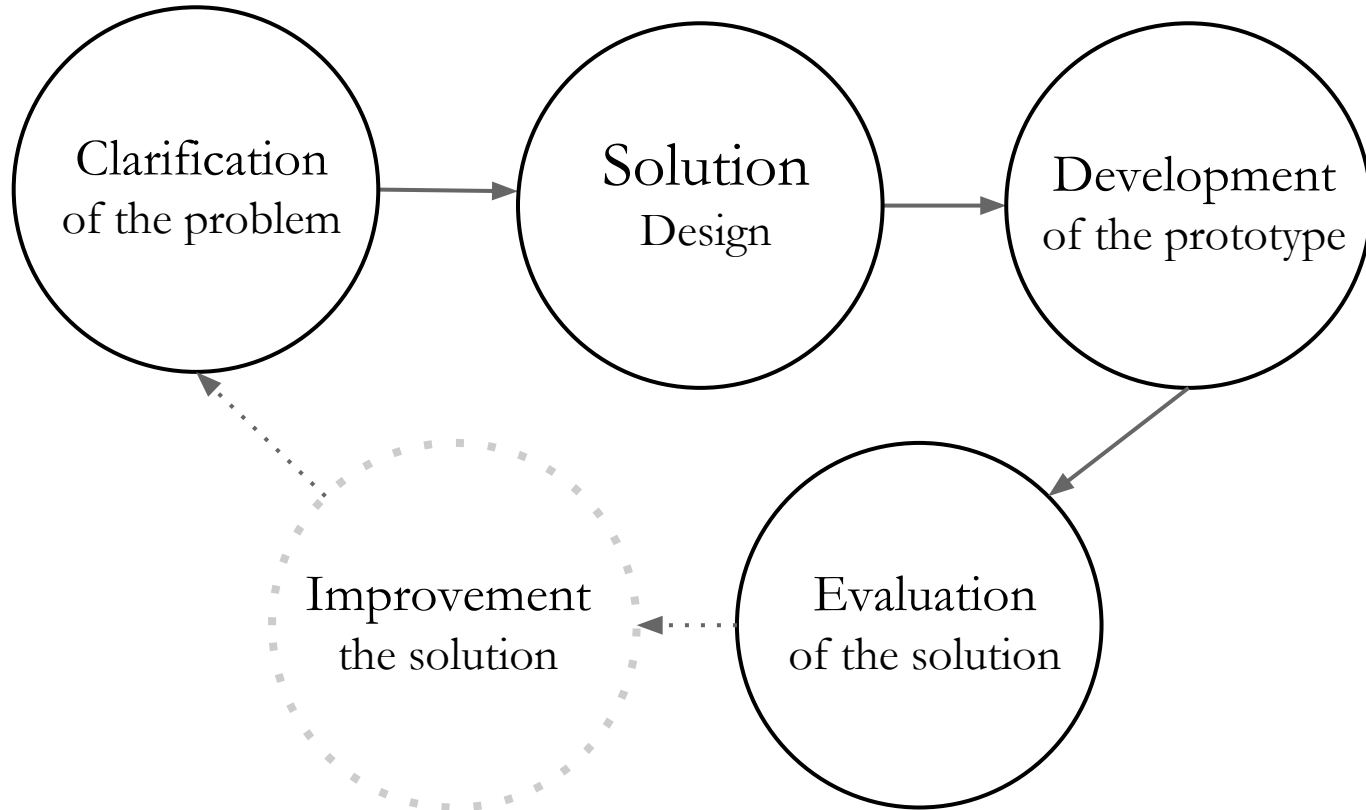


Solution Design
(Before Midterm Presentation)

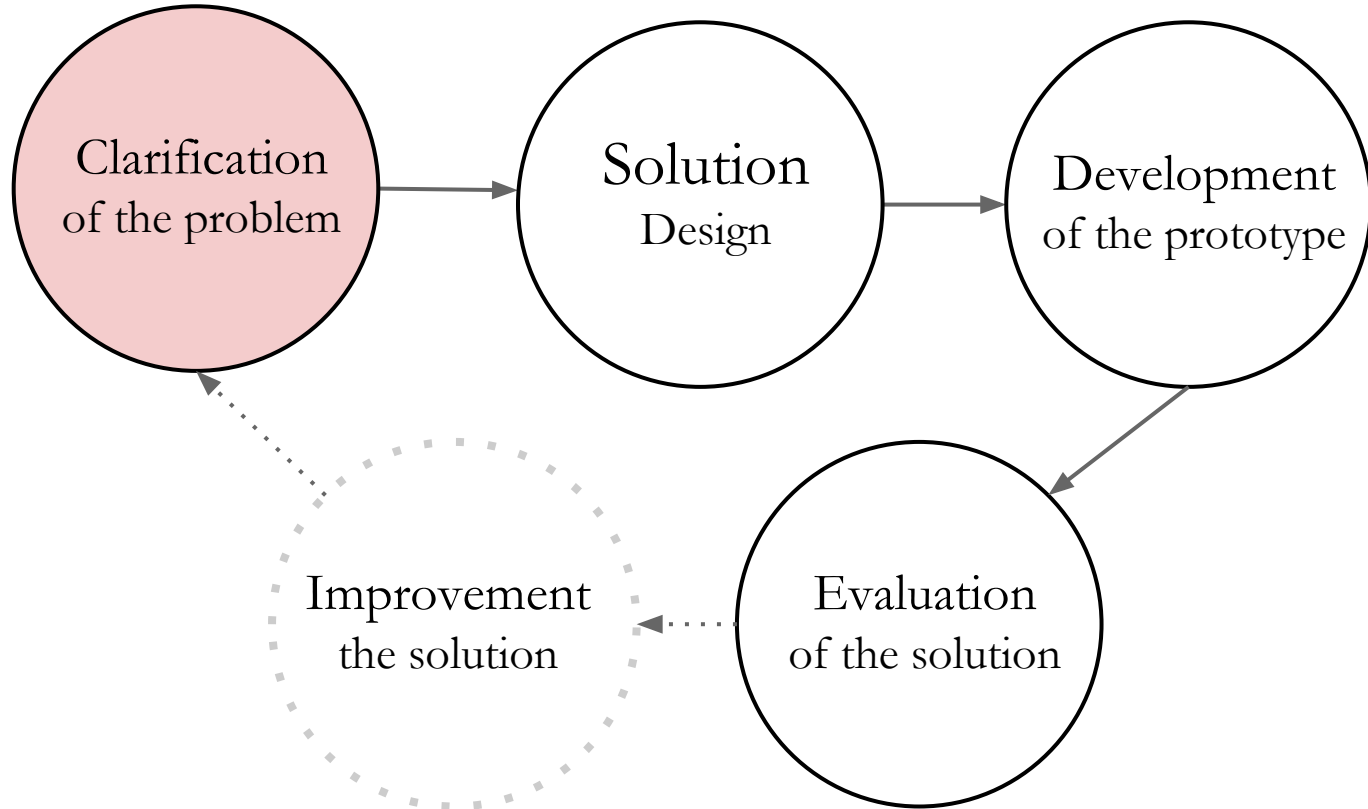
Development
(After Midterm Presentation)

Evaluation

Project Overview



Project Overview



Methodology

- Sharing personal experience and observation
- Discussion
- Seminar presentations
- Mr. Rossiter's talk and interview
- Prof. Kanamaru's talk and interview

First Seminar Presentation (6th, June)

Sho Ishiguro's point of view:

Supporting language learning through multimodal representations

Ayano Tsuda's point of view:

Competition as motivation in Japan & “Tall poppy syndrome”

Victoria Abou Khali's point of view:

Cultural interfaces

Naoki Otani's point of view:

How to integrate eye tracking into L2 learning, machine translation,

Mr. Rossiter's talk and interview (16th, June)

He arrived in Japan in 1975 and began teaching at Berlitz

He compared the situation in 70's to present situation.



Mr. Rossiter's talk and interview (16th, June)

Past:

Afraid of speaking English

Eikaiwa and Speaking English, Huge difference

Now:

No longer as afraid of Speaking English **but they are still afraid of it**

School education's improvement

What we've learnt:

Being Afraid of speaking English may affect learning English

Visit of Prof. Toshiyuki Kanamaru(15th, July)

Effective learning and education environment

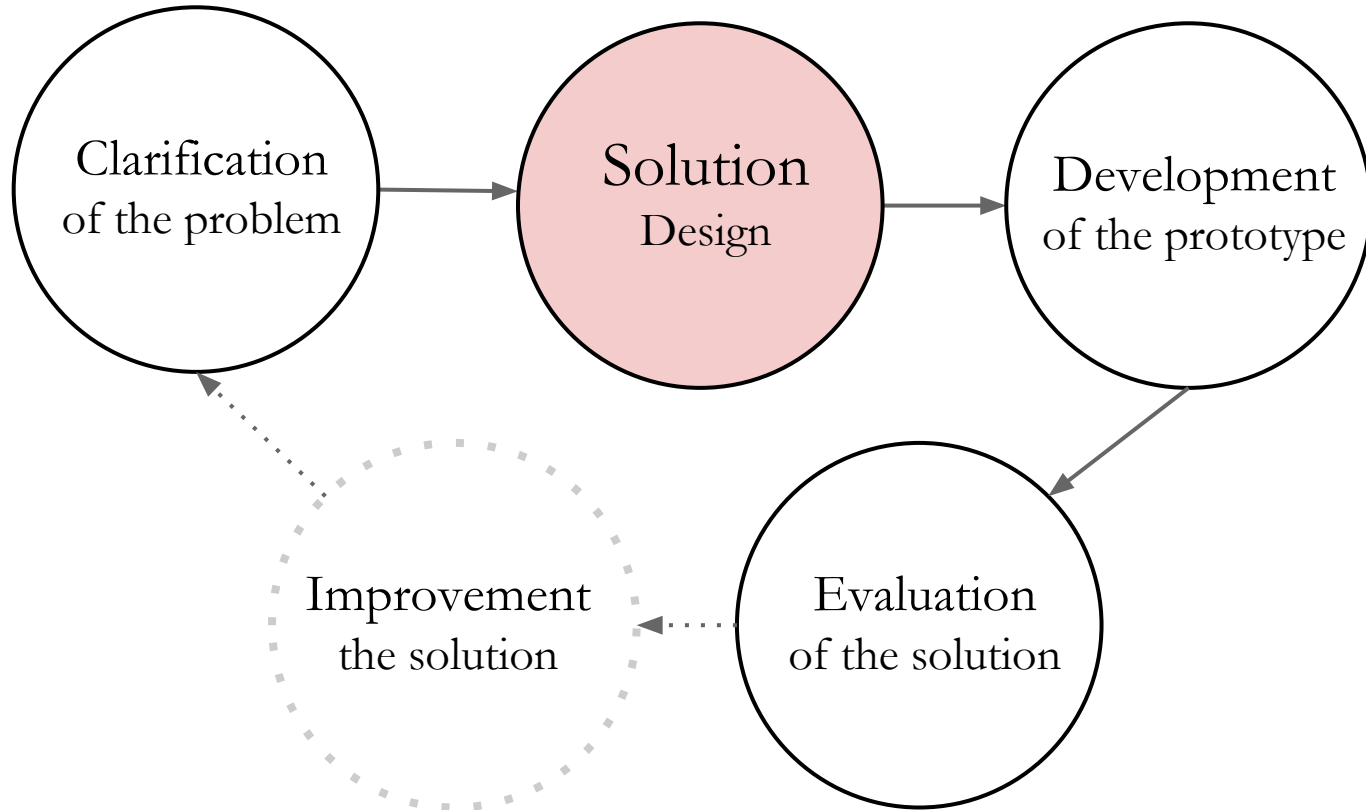
- Reading/Listening good but Speaking/Writing not good (TOEFL).
- Need to create a ‘road map’, e.g. understand the grammatical structure of English.
- English education/curriculum in Kyoto University.
- Use of e-learning environment.

→English for Academic Purposes vs. English for General Purposes

Important subproblems/aspects we've found:

- School English education focus on **Grammar and Translation**
- **Lack of practice and experience** for English communication
relating to being Afraid of speaking English
- **poor Learning environment** (insecure environment /
uncomfortable situation)
- **Thinking in Japanese vs. English**

Project Overview



Solution design

Goal: Improve English speaking skills for Japanese learners

Requirements:

1. **Secure** environment
2. Use of **multimodal** communication channel
3. Immediate **feedback** from systems
4. **Adaptive** learning to each learner and their goals

Solution design

1. **Situation-based Learning (SBL)**

- Extract meaning of new words in context
 - Similar to infant L1 acquisition
 - SBL in L2 is found to benefit real situational communication
- Make it adaptive to each learner and their goals

2. Immersive, ubiquitous, ambient technology

- What is this?

<https://youtu.be/JThUMDyVCho>

Immersive technology

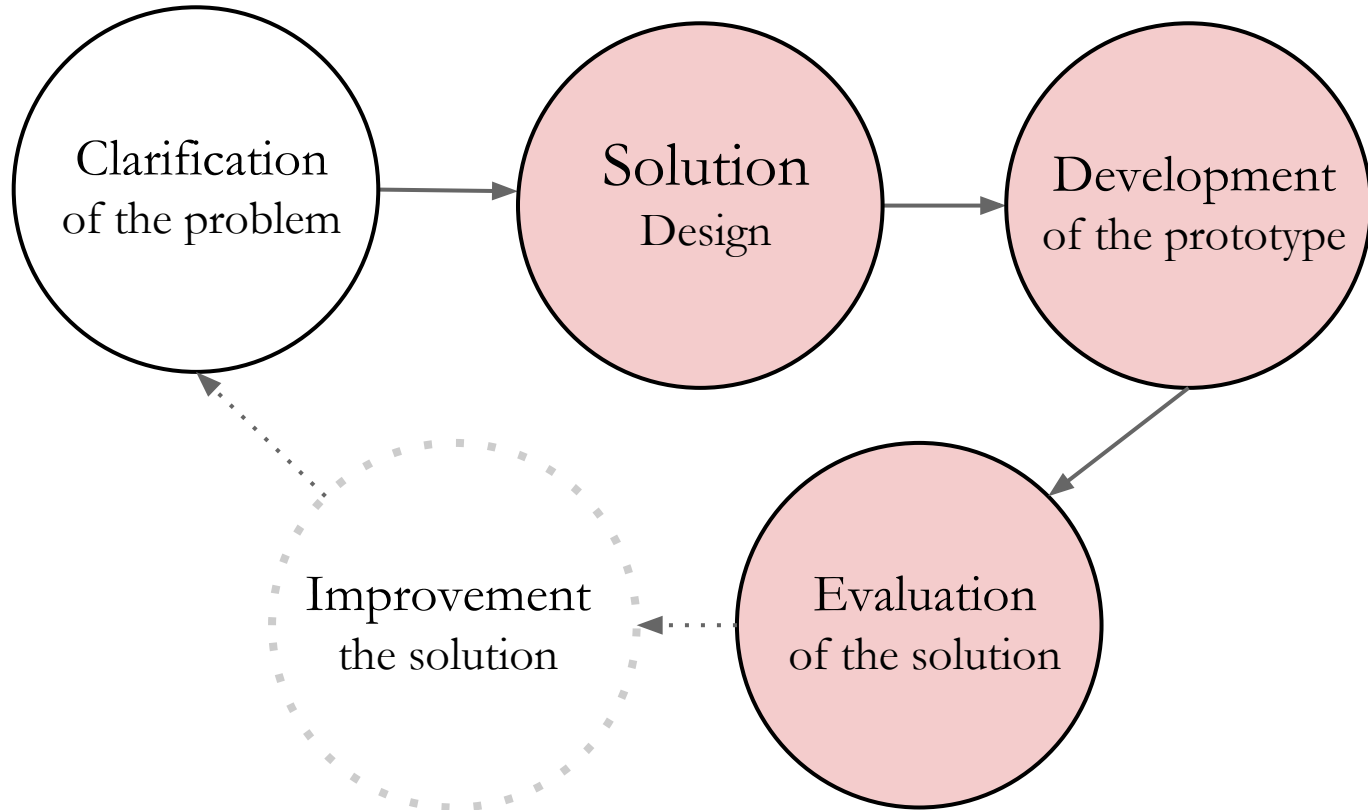
Game Engine

- Can identify and execute basic communication signals made through body movement
- Avatar

Motivation/benefit for its usage:

- to create secure environment (confidence)
- to give immediate feedback
- to create a multimodal communication channel

Project Overview



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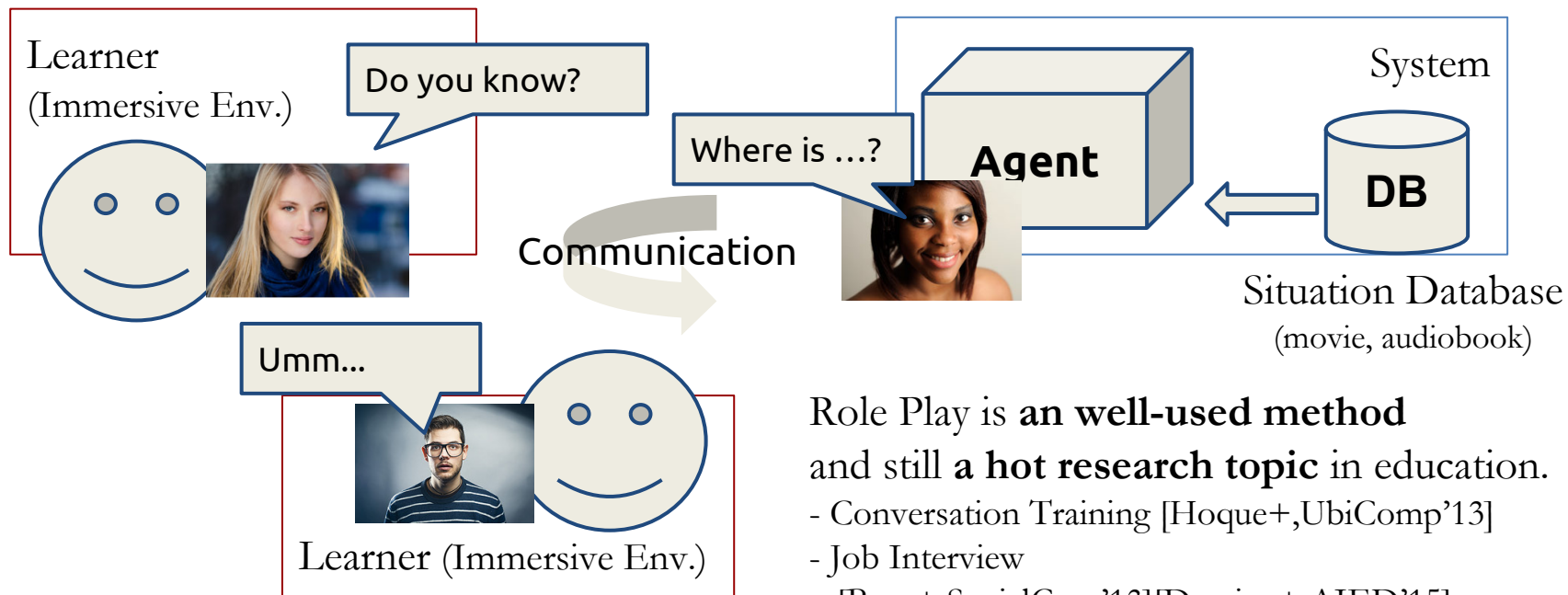
Solution Design
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Development
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Evaluation

Solution Concept (Implementation)

Situation-Based Role Play

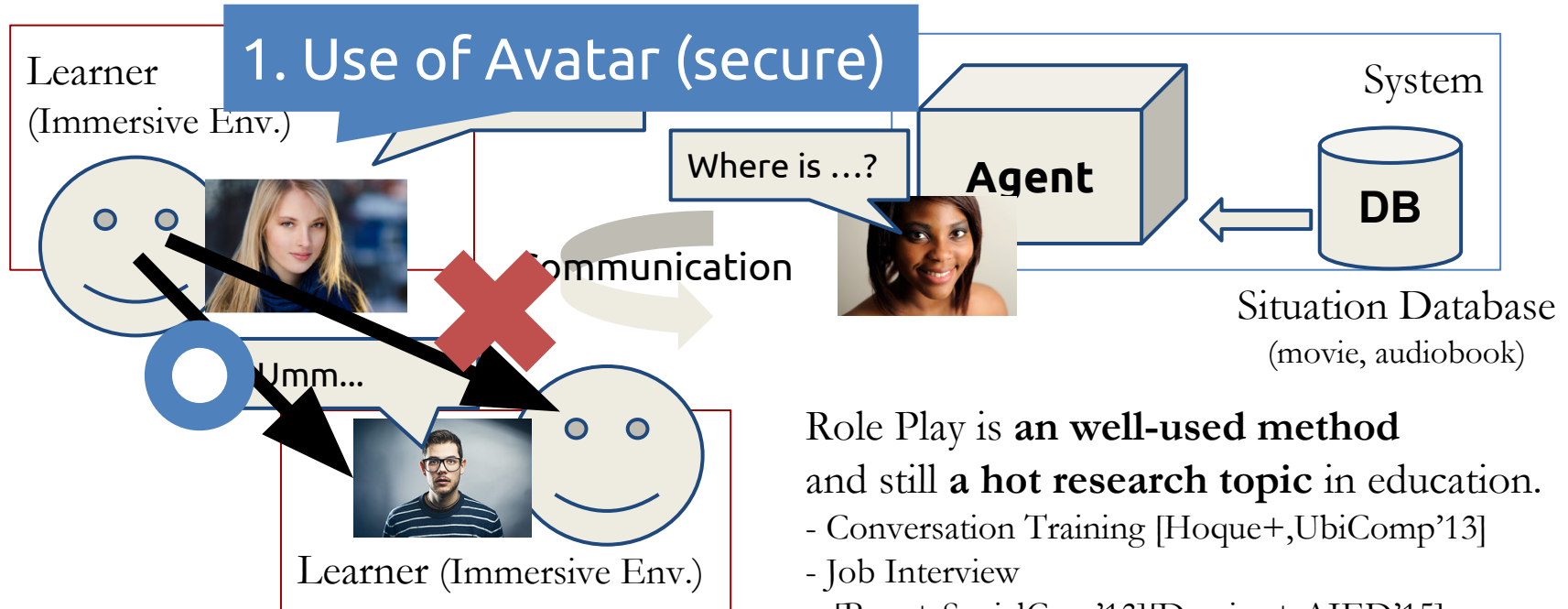


Role Play is **an well-used method**
and still **a hot research topic** in education.

- Conversation Training [Hoque+, UbiComp'13]
- Job Interview [Baur+, SocialCom'13][Damian+, AIED'15]

Solution Concept (Implementation)

Situation-Based Role Play

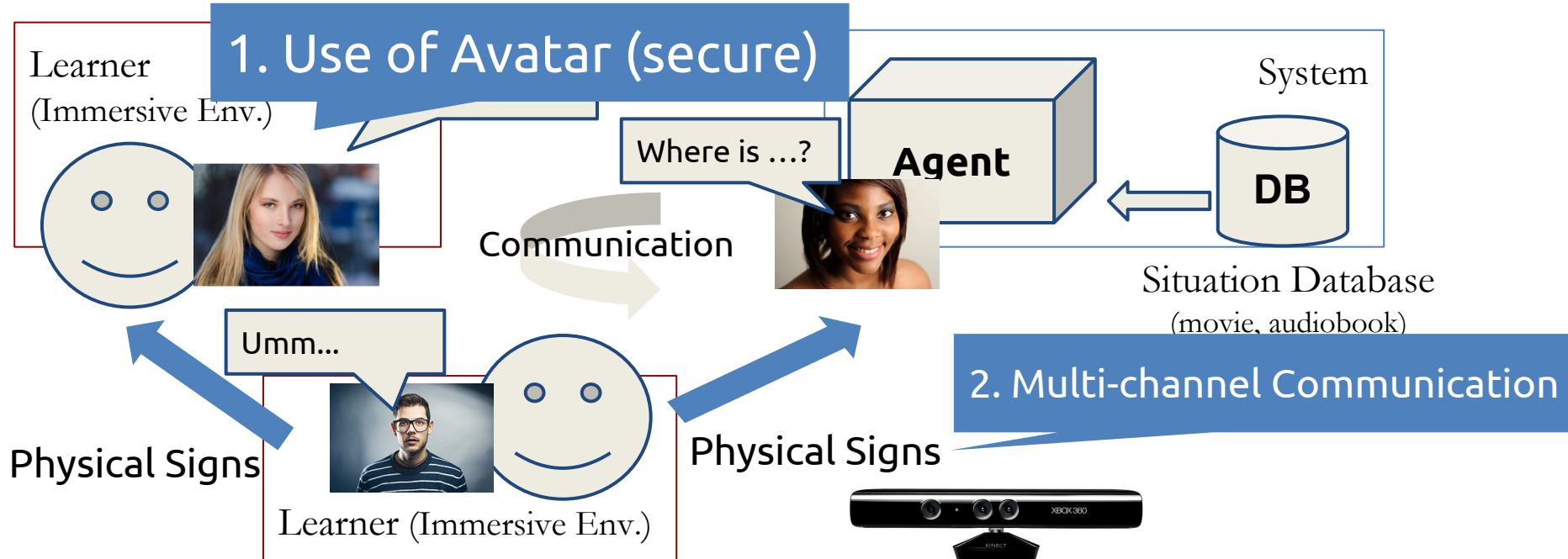


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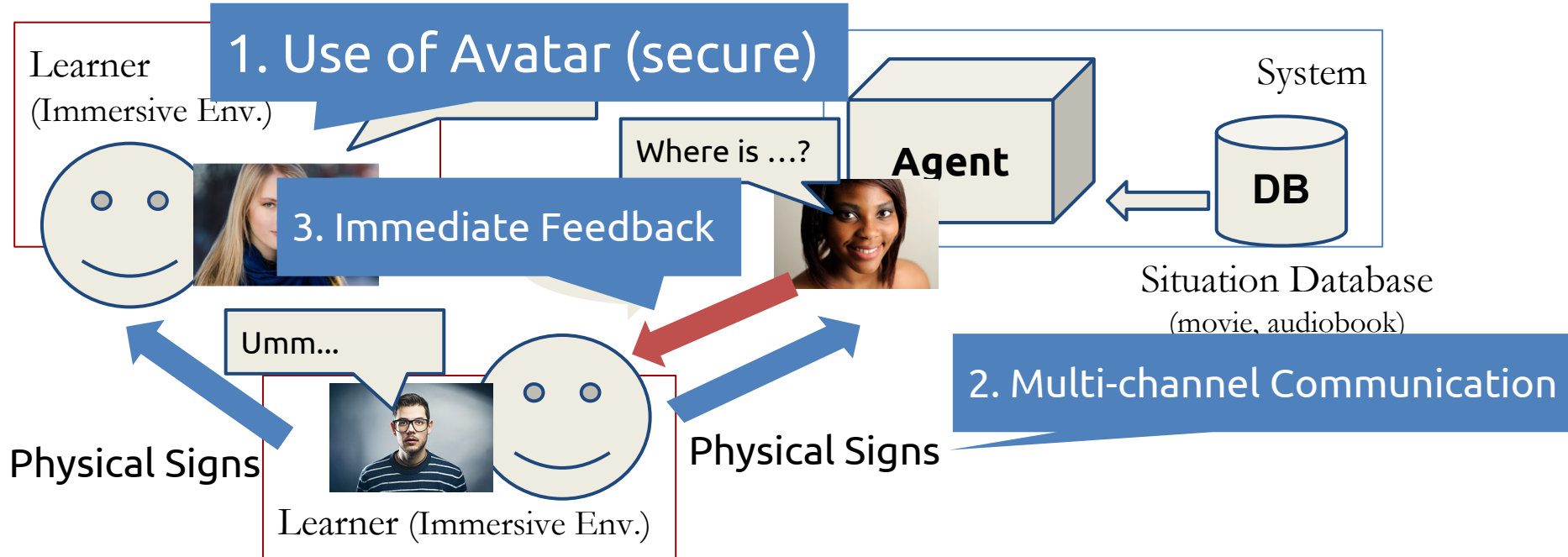
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Situation-Based Role Play



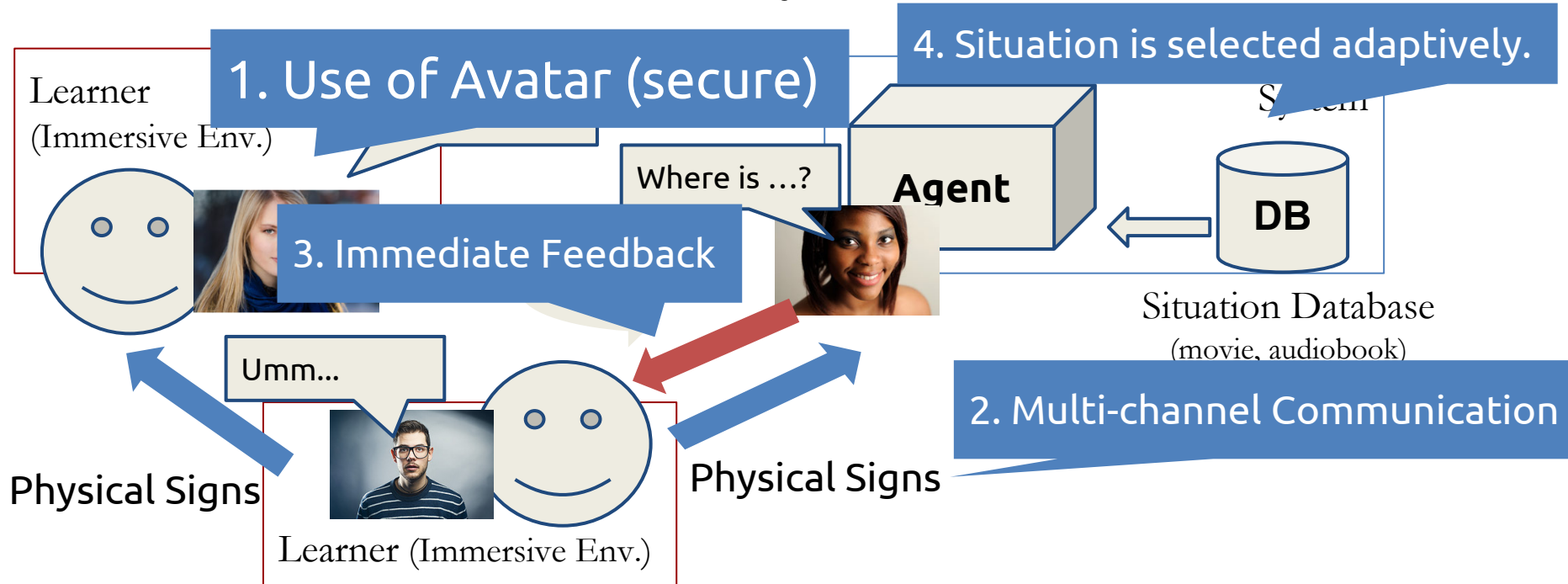
Solution Concept (Implementation)

Situation-Based Role Play



Solution Concept (Implementation)

Situation-Based Role Play



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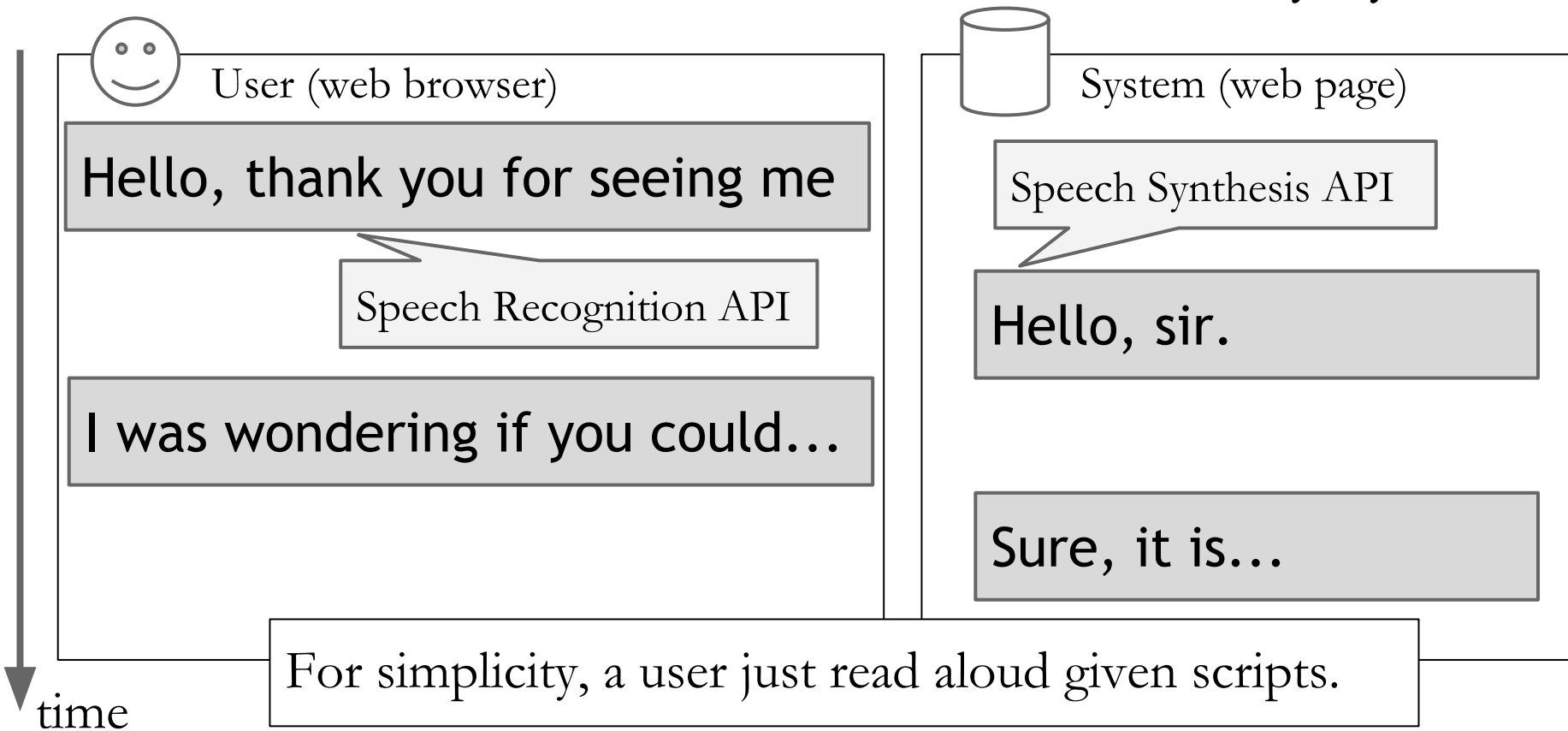
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Solution Design
(Before Midterm Presentation)

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Web-based Role Play System



Demo?

Experiment 1: Role Play

Objective:

To Assess our preliminary Role Play System

Hypothesis:

The system eases anxiety

→ then increase motivation for learning English

Participant:

46 participants on the Web (Crowdsourcing)

Experiment 1: Role Play

Stimuli:

Web pages where

1) participants watch English Video

2) participants read aloud scripts

and speech recognition API responses to their speech.

They can speak without caring about others.

3) participants answers a questionnaire

Experiment 1: Role Play

Procedure:

1 Watching English Video

2 Role Playing

(ONLY for Participants in Role Play condition)

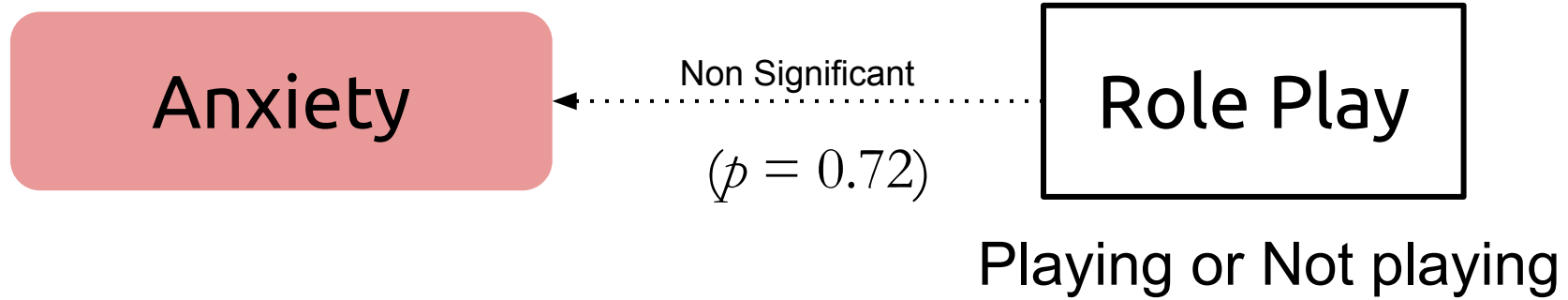
3 Answering to Questionnaire

1)Anxiety for English, 2)Perfectionism and

3)Interest & Motivation for learning English

Experiment 1: Role Play

Result: Anxiety and Role Play



Role Playing in this system didn't affect Anxiety.

Result: Overview

Experiment 1: Role Play

Low Anxiety Score
predicts High Interest & Motivation

High Perfectionism score predicts high Interest&Motivation??
opposite to our assumption...

Anxiety

Perfectionism

-0.301*
($p < 0.05$)

0.259†
($p < 0.10$)

0.107 *n.s.*
($p = 0.45$)

Role Play

Interest & Motivation
for learning English

It seems, Role Play doesn't affect
Interest & Motivation...

Small $p \sim$ High reliability

Experiment 1: Role Play

Conclusion 1:

- Role Playing did **NOT** affect Anxiety ($p = 0.72$)
- We demonstrated that **Anxiety affected Interest & Motivation**
- Unfortunately, our preliminary system **failed to increase Interest & Motivation** for learning English by making participant role play.

Experiment 1: Role Play

Conclusion 2:

- This study, however, showed the way of assessing a new English learning system and **confirmed the relation of Anxiety and Motivation.**
- It suggests **Role Playing which decreases Anxiety may increase Interest & Motivation.**



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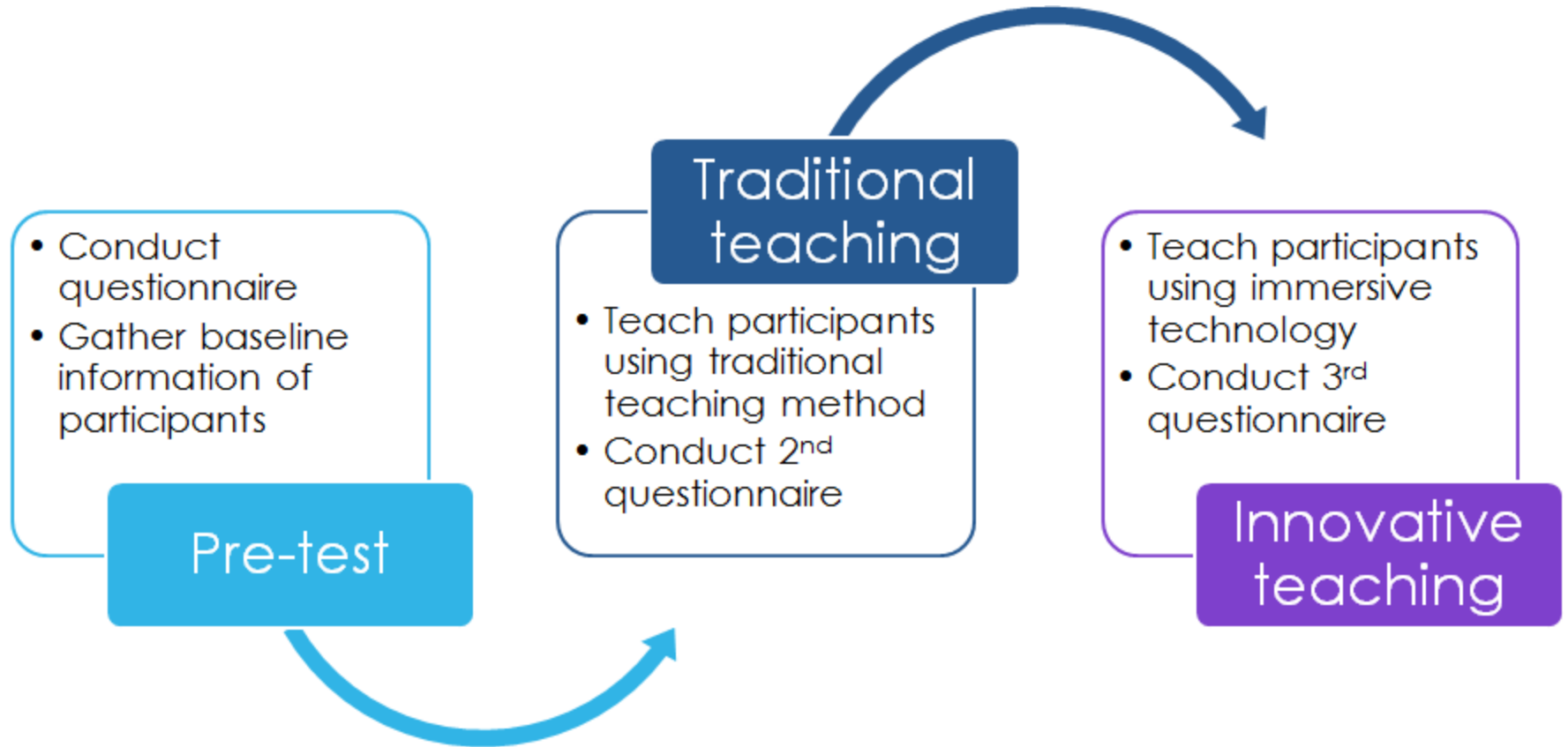
Evaluation

Experiment 2: Immersive Env. (Part 1)

Objective: To find out the effectiveness of the use of immersive technology in reducing anxiety when learning a second language.

Traditional English teaching vs. Using immersive technology

How was it done?



Hypotheses

1. Use of immersive technology will attenuate anxiety towards learning English.

2. Use of immersive technology will motivate students more compared to traditional teaching methods.

Questionnaires

Just for the first questionnaire:

Questions regarding the impression towards English teaching using technology, e.g. SNS, virtual world

English learning anxiety:

General anxiety towards English learning 'I worry whether I can keep up with class'

Anxiety towards what others think 'I worry whether others think my English is bad'

Anxiety towards speaking 'I get anxious when I give presentations in front of class'

Measured in 6 point-likert scale(1:disagree, 6:agree)

Questionnaires

Motivation/Interest in learning English language

1. Internal: feel pleasure/enjoy doing the activity, e.g. I enjoy finding out new things about the language.
2. External regulation: external reward or constraint, e.g. I learn English because of the exams.
3. Introjected regulation: take regulation put by others but not as own, e.g. I feel ashamed of myself when I can't speak English.
4. Identification: value other's goal/regulation as own, e.g. Learning English will help me grow as a person.

Measured in 6 point-likert scale(1:disagree, 6:agree)

Pre-test

Recruiting participants from You ∞ Me English (Osaka)

Participants:

Participant 1 (male, worker, age 40, learning English for skill up)

Participant 2 (female, university student, age 18, learning English for school)

Traditional Teaching

Lesson plan:

| | |
|----------------------------------|---|
| Teacher's name | Ayano Tsuda |
| Date | July 18th |
| Length of lesson | 30 min |
| Teaching points(language skills) | Speaking: Giving advice, interrupting conversation |
| Target language item | <i>By the way...</i> <i>Do you mind if I...</i> |
| Lesson aims | By the end of the lesson, learners will be better able to: <ul style="list-style-type: none">• Interrupt conversation in polite manner |

Results: Part 1

Image towards English teaching using technology

Use of SNS:

Looking forward to → 'Can communicate with others',

Kind of looking forward → 'If using them helps then it's good'

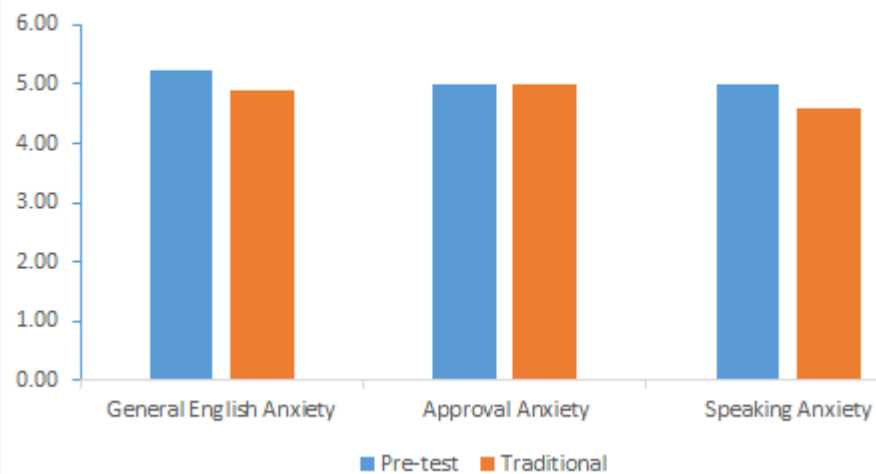
Use of virtual reality:

Worried → 'Not sure how it works'

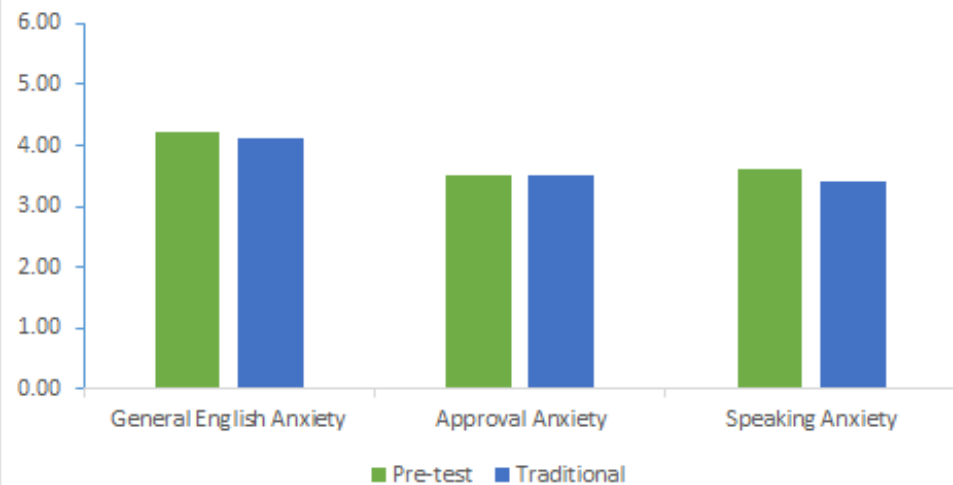
Kind of looking forward → 'If it really works, then would be good'

Results: Part 1

Anxiety: Participant 1

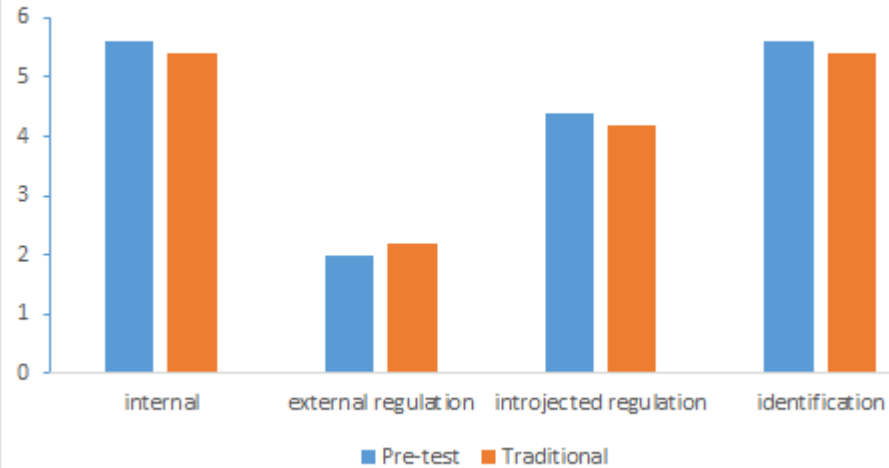


Anxiety: Participant 2

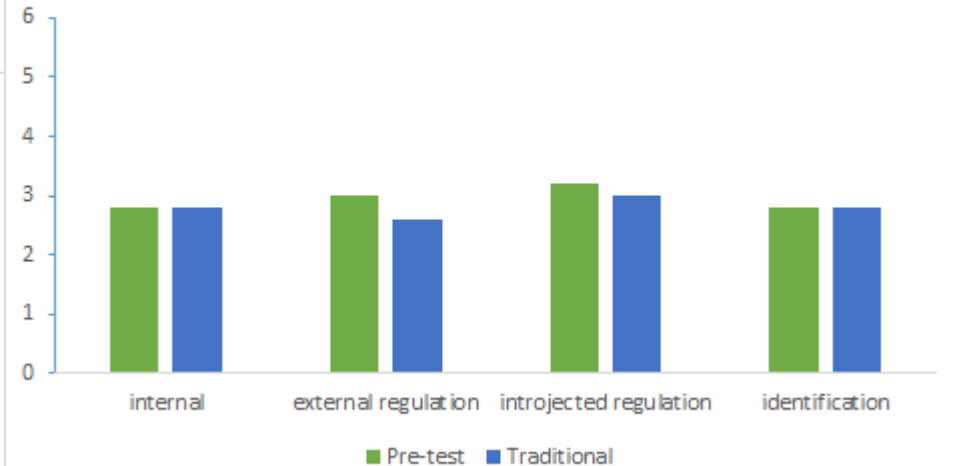


Results: Part 1

Motivation: Participant 1



Motivation: Participant 2



Discussion

- No statistical difference were found for pre-test and traditional teaching method.
- Participant 1 had higher anxiety level, but also higher internal motivation, e.g. studying because enjoy learning English.
- Approval anxiety didn't change for both Participant 1 and 2 for pre-test and traditional teaching→ care about others a key factor in causing anxiety for Japanese learners?

Experiment 2: Immersive Env. (Part 2)

Reproducing the classroom learning in a secure environment.

‘A secure environment can be obtained through relaxed learning environment which reduces anxiety and improve motivation and confidence.’
(Smith & Strong, 2009, pg. 2)

The setting

2 Participants (university students, male)

Interaction with each other through immersive environment

Gestures recognition

Alone in the environment (No pressure)





The content

‘You are walking in the countryside with your friend and you are discussing an outdoor activity to do in the afternoon. Your friend is proposing an activity. Interrupt him/her with one of the sentences below, and give your opinion about the matter. Which activity you will like to do (Basketball, Drinking, fishing, etc.) ? and why?’

Interruption sentences:

- By the way....
- Do you mind if I ...
- Excuse me ...’

Skills

Real time talking

Interruption

Stating one's opinion

Results: Part 2

Image towards English teaching using technology

Use of SNS:

Kind of looking forward→'Can't come up with an example of English teaching using SNS'

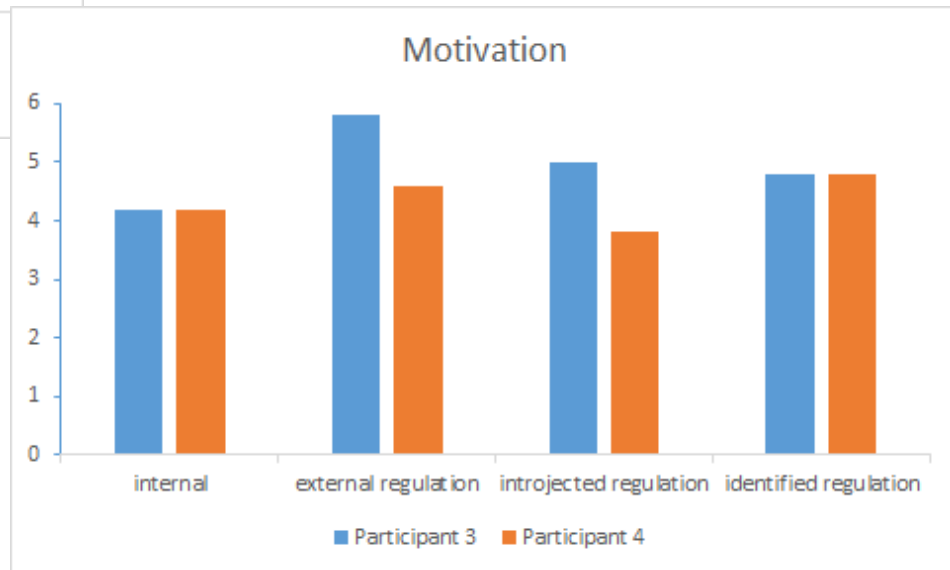
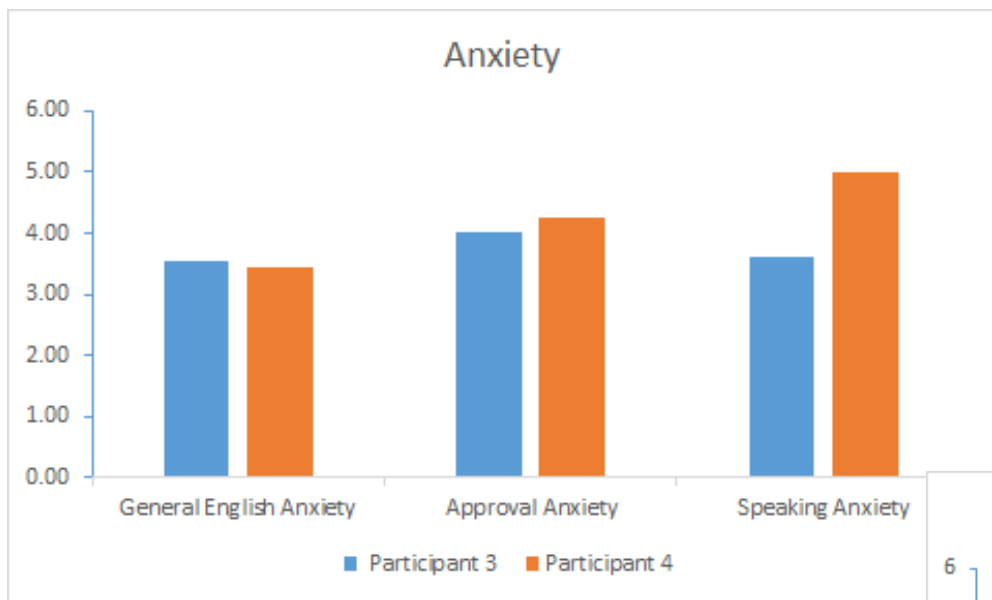
Kind of looking forward→'Using apps close to our lifestyle may lead people to be in touch with English more and increase English level'

Use of virtual reality:

Looking forward→'Reason why one does not speak English is because we live in a Japanese based daily life where English usage is not necessary. If the virtual reality works, one can connect with foreign countries and force oneself to speak English'

Kind of looking forward→'Can have a conversation with people one normally won't'

Results: Part 2

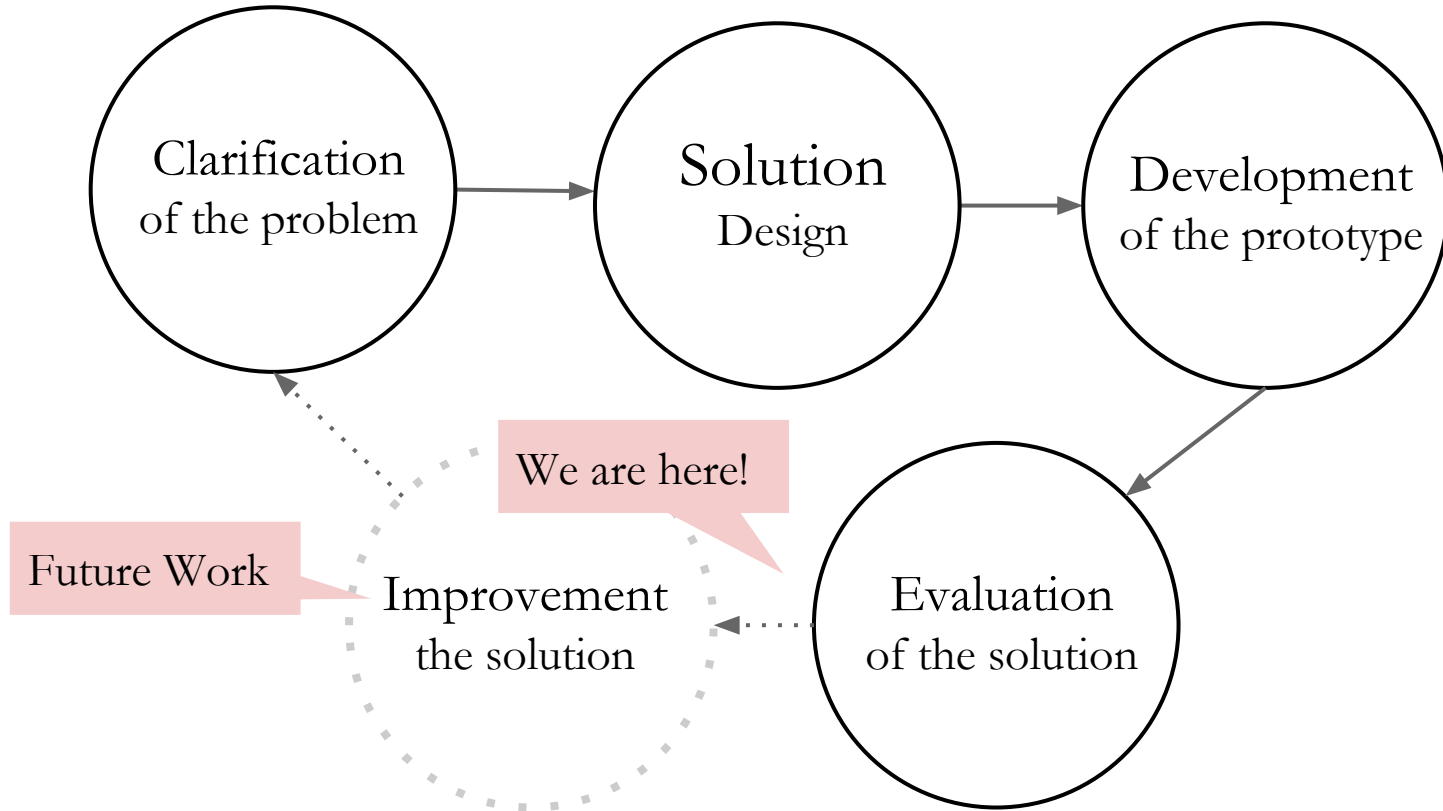


Discussion

Future Work:

- Conduct the research with the same participants for traditional teaching and using immersive technology.
- Compare the data for both conditions.
- Clarify the effect immersive technology has in lessening stress/anxiety of learning English language.

Conclusion



Conclusion

Goal: Improve English speaking skills for Japanese L2 learners

Target: Adults (University or later)

Skill: Real-time communication (casual situ.)

Solution Design:

Situation-Based + Immersive Env.

Implementation:

Role Play System

Evaluation: Prototyping + Experiments

Acknowledgements

- Our experiments were supported by the budget of the design school.
- Great Thanks for
 - Mr. Rossiter, Kanamaru-sensei
 - 49 crowdworkers that participated in the web-based experiment.
 - Instructors and students in You ∞ Me English (Osaka)
 - Kyoto Univ. students that participated in the immersive environment experiment.
 - Nitschke-sensei, Murakami-sensei, Divesh

Summary

Goal: Improve English speaking skills for Japanese L2 learners

Target: Adults (University or later)

Skill: Real-time communication (casual situ.)

Solution Design: Situation-Based + Immersive Env.

Implementation: Role Play System

Prototyping + Evaluation: We need more improvements.

Questions?