Our major issues are critical thinking development and CLIL, Content and Language Integrated Learning.
Critical Thinking: Main role of school education

The main role of a school environment is to enhance “critical thinking skills”
- studying a subject or problem with open-mindedness,
- determining the facts of a new situation or subject without prejudice,
- placing these facts and information in a pattern so that students can understand them and accept or reject the source value, and
- reach conclusions based upon experience, judgment, and beliefs. (Cubukcu, 2011)

There are a variety of definition of critical thinking, but they are very similar each other. Some scholars say that developing critical thinking is the role of school education. For example, Cubukcu says that
Who Are Critical Thinkers?

Seek for possible different understandings for given knowledge or explanation

Carefully and logically analyze information and knowledge with multiple points of view

(Suzuki, 2006)

And Sasaki says that critical thinkers
Seek for possible different understandings for given knowledge or explanation
Carefully and logically analyze information and knowledge with multiple points of view.

So critically thinkers are open-minded, havitually inquisitive, honest in facing personal biases, and diligent to seek inforamtion and more.
First of all, let me talk about Japanese students’ critical thinking ability. According to OECD’s PISA research showed that Japanese students’ mathematical literacy is the best among 36 OECD countries, this is good. And scientific literacy is the fifth, this is god too. However, students’ ability for comprehension and integration of information is not good enough and neither is their ability to connect information to their own experience and knowledge. These abilities are part of critical thinking skills.
Japan now focuses on English education & critical thinking skills

Japanese 12 graders: CEFR A1

Japanese Government announced they will focus on English Education (2014)

- Starting early (elementary school)
- Focusing on speaking skills,
  *developing critical thinking skills*
  in English

So, finally Japanese Government announced they will focus on English education and development of student critical thinking skills. English education is starting at earlier stage of students’ life. Actually, scholars point out that having healthy critical thinking ability is necessary for a democratic nation to maintain a healthy democracy. So, development of children’s critical thinking ability is good for their life and also the country they belong to.
Goals of This Study

To observe how Japanese college students appreciate being introduced to a new academic field in English

How their critical thinking skills can be developed by CLIL style learning

SO, our research question are two.
Participants

• 72 College students from 4 English reading classes in the entire 2016 school year (30 weeks)

- Freshmen and Sophomores
  Males and females
- Their proficiency level: CEFR A2-B1
Now is the time to look at CLIL style education. CLIL’s core idea is INTEGRATION. In CLIL, not only language learning and subject matters learning are integrated, but also, it involves development of “cognitive skills and development of “multiple perspectives.”

We, as English teachers, our main role is to teach the language, but languages work as a tool to communicate and also to learn about all kinds of contents, We learn languages to talk about some kind of content. So CLIL is sort of natural integrated with many sides of learning. And learning abut the contents gives chances to learners to develop their critical thinking skills. We hypothesized that CLIL is a good method for college students since the class should stimulate their age-appropriate mature academic curiosity toward subject matters. Most of English textbooks are superficial, not enough to encourage them to be curious and think critically.
Courses

Academic Subject and Materials

Academic subject: **Japanese sociology**

**Reading materials (Input)**

1. "**Good‐bye Galapagos**" by Paul Stapleton, Cengage Learning
2. "**Introduction to Japanese Sociology**" (Fourth Edition), by Yoshi Sugimoto, Cambridge University Press
3. **Student-chosen reading articles**

Purpose of selecting materials: To review Japanese society from global perspectives.

Our reading class used three kinds of reading materials. First, well-organized, intermediated level class textbook "Goodbye Galapagos". This textbook focuses on some characteristics of Japanese society, which are GALAPAGIZED in global standards, very interesting topics. Japanese mobile phones are only to entertain Japanese customers. Japanese people love the same fad items, everyday buy the same thing. Japanese universities and teachers are totally behind from the world standard..

Second one is a real sociology book for the readers in academia. We used the book to give academic background to Galapagized Japan.

Third, students search relevant reading articles and present and teach their class.
Reading Materials
Japan says it must look after its own before allowing in Syrian refugees

Prime minister Shinzo Abe rejects criticism of a policy that has seen only 11 people given asylum in the past year.

Justin McCurry in Tokyo
Wednesday 30 September 2015 05.59 BST

Japan must improve the living standards of its own people before it can consider accepting Syrian refugees, the prime minister, Shinzo Abe said, as he announced $1.6bn in new assistance for Syrians and Iraqis caught up in conflicts in the Middle East.

Abe’s consistent refusal to consider allowing even a modest number of refugees to relocate to Japan has prompted criticism of the country’s strict policy on asylum. Last year, it received a record 5,000 applications but accepted just 11 people.

Speaking at the UN general assembly in New York, Abe insisted Japan must first look after its own interests. "Japan’s rapidly declining population and aging population, and continuous domestic economic revitalization are important," he said.
Sociological Topics for Class Activities

1st semester topics

(1) Japanese ethnocentrism
(2) Uniformity in Japanese society
(3) Japanese inward-looking attitude
(4) Japanese spirit of mutual assistance

2nd Semester topics

(1) Aging society & immigrants
(2) Entrepreneurs in Japan
(3) Japanese pop culture & high quality products
Teachers’ Roles and Classroom Activities

(1) Pre-activity (vocabulary, language focus, pre-reading discussions)

(2) Reading (incl. group reading, jigsaw reading)

(3) Comprehension questions

(4) Class discussion

These are procedures: our classroom activity
Teachers’ Roles and Classroom Activities

(5) Student-led article teaching & discussion
(1)-(5) in 3-5 class time

(6) Writing reflective essays

Student research and presentation & student-led discussion (semester end)
<table>
<thead>
<tr>
<th>Types of CLIL</th>
<th>Purpose</th>
<th>Language teaching</th>
<th>Content teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Soft CLIL</strong></td>
<td>Language teaching</td>
<td>Content teaching</td>
</tr>
<tr>
<td></td>
<td><strong>Hard CLIL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td><strong>Light CLIL</strong></td>
<td>Once in a while</td>
<td>Regularly</td>
</tr>
<tr>
<td></td>
<td><strong>Heavy CLIL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion</td>
<td><strong>Partial CLIL</strong></td>
<td>Part of class</td>
<td>Whole class</td>
</tr>
<tr>
<td></td>
<td><strong>Total CLIL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language use</td>
<td><strong>Bilingual CLIL</strong></td>
<td>Japanese &amp; English</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td><strong>Monolingual CLIL</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Adapted from Watanabe, U., Ikeda, M., & Izumi, S. 2011)

This shows types of our CLIL class
Purpose, ours had a little more visible attention to explicit language knowledge, so it is SOFT CLIL.
Frequency, whole year was CLIL class, to it is HEAVY CLIL
Proportion, every class was CLIL so it is TOTAL CLIL.
Language use, BILINGUAL CLIL.
## Results (Post-course Questionnaire)

Q5) Have you become able to think about other issues from various viewpoints after exchanging opinions in class?

<table>
<thead>
<tr>
<th>Option</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, very much</td>
<td>10</td>
<td>18.5%</td>
</tr>
<tr>
<td>Yes, to some extent</td>
<td>43</td>
<td>79.6%</td>
</tr>
<tr>
<td>No, I have not</td>
<td>1</td>
<td>1.9%</td>
</tr>
<tr>
<td>N/A</td>
<td>1</td>
<td>1.9%</td>
</tr>
<tr>
<td><strong>SUM</strong></td>
<td>55</td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Results (Post-course Questionnaire)

Q6) Have you become able to think about various issues objectively after reading a variety of materials in class?

- Yes, very much: 7 students (12.7%)
- Yes, to some extent: 48 students (87.3%)
- No: 0 student (0%)
- SUM: 55 students (100%)
### Results (Post-course Questionnaire)

Q4) What do you think about learning sociology in an English course?

<table>
<thead>
<tr>
<th>Option</th>
<th>Number of Students</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, a good idea</td>
<td>31 students</td>
<td>56.4%</td>
</tr>
<tr>
<td>Good, but difficult</td>
<td>20 students</td>
<td>36.3%</td>
</tr>
<tr>
<td>Normal English class</td>
<td>4 students</td>
<td>7.3%</td>
</tr>
<tr>
<td>Is better</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUM</td>
<td>55 students</td>
<td>100%</td>
</tr>
</tbody>
</table>
Results (Post-course Questionnaire)

The course was difficult for me because there was no single answer to the issues.

The topics were very interesting, but the reading materials were challenging.
## Results (Pre-test vs. Students’ Essays Written in the 2^{nd} Semester)

<table>
<thead>
<tr>
<th>Source</th>
<th>Types of Data</th>
<th>Class 1</th>
<th>Class 2</th>
<th>Class 3</th>
<th>Class 4</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>Overall average test scores</td>
<td>65.8</td>
<td>59.3</td>
<td>68.6</td>
<td>82.9</td>
<td>69.2</td>
</tr>
<tr>
<td></td>
<td>Percentage of students who responded to the opinion question (wrote something)</td>
<td>21.7%</td>
<td>9.1%</td>
<td>82.4%</td>
<td>75%</td>
<td>47.1%</td>
</tr>
<tr>
<td>Essays (the 2^{nd} semester)</td>
<td>Percentage of students who wrote opinion essays</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Pre-test</td>
<td>Average opinion question scores for those who provided an answer</td>
<td>5.6</td>
<td>6.0</td>
<td>8.09</td>
<td>8.0</td>
<td>6.92</td>
</tr>
<tr>
<td>Essays (the 2^{nd} semester)</td>
<td>Average scores for students’ essays written in the 2^{nd} semester</td>
<td>7.0</td>
<td>8.43</td>
<td>8.58</td>
<td>8.81</td>
<td>8.2</td>
</tr>
</tbody>
</table>
Bloom’s Modified Taxonomy
(Anderson and Krathwool, et. al., 2001)

Create
Evaluate
Analyze
Apply
Understand
Remember (knowledge)
## Results
(Japanese Students’ Weak Points)

<table>
<thead>
<tr>
<th>Cognitive Process</th>
<th>Average score of students' essays (N = 178)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create</td>
<td>0.15</td>
</tr>
<tr>
<td>Evaluate</td>
<td>0.92</td>
</tr>
<tr>
<td>Analyze</td>
<td>0.94</td>
</tr>
<tr>
<td>Apply</td>
<td>0.20</td>
</tr>
<tr>
<td>Understand</td>
<td>0.93</td>
</tr>
<tr>
<td>Remember</td>
<td>0.94</td>
</tr>
</tbody>
</table>
Results
(Japanese Students’ Weak Points)
Implications
(Development of Students’ Critical Thinking Skills)

Learning Materials (Textbook)

Content: Textbooks which contain strong writer’s opinions rather than only facts are useful to develop students’ critical thinking skills.

Topic: Topics about their own country and society can be thought-provoking because students have already had background knowledge to help them think critically.
Implications
(Development of Students’ Critical Thinking Skills)

Learning Materials (Other Teaching Materials)

Teachers should provide students with multiple materials from different or even contrasting points of view.

Drawing a conclusion by fairly judging information from different points of view is essential to think critically. (Facione and Facione, 1994, 2009)
Implications
(Development of Students’ Critical Thinking Skills)

Activities (Development of Students’ Creative Application Skills)

Japanese students are **good at** applying what they believe to be true in other contexts to make sure that the rule is correct by finding a **single** answer.

Japanese students are **poor at** interpreting passage content by **understanding relationships** among various information in the passage as well as **connecting** the content of the passage to their **knowledge and experiences**. → Important skills in CLIL

Teachers should help students relate their experiences and knowledge to the class topics on a daily basis.
| Implications  
| (Development of Students’ Critical Thinking Skills) |
| Activities (Development of Students’ Skills to Logically Organize their Ideas) |

Teachers should help students carefully evaluate each component of their opinions, identify relationships among them, and sensibly organize them to justify their opinions.

For this purpose, learning about basic **English essay structures** such as logical organization and discourse markers can be effective. **Mind maps** can also be useful.
Implications
(Development of Students’ Critical Thinking Skills)

Logical thinking vs. Feelings

Teachers should teach students the difference between critically expressing their opinions and emotionally expressing their feelings.

Teachers should teach students not to use “I think” too frequently. (only for Japanese?)
Conclusion

(Development of Students’ Critical Thinking Skills)

Purpose of this study: How Japanese students’ critical thinking skills could be developed through CLIL-based classes.

In spite of students’ weak points (their immature skills in applying their learning contents to new contexts, creating new ideas and organizing their thoughts logically), most students positively responded to their new-style learning to encourage them to think critically, and showed slight improvement in forming and expressing their opinions.

These results may show that the project encouraged students to think critically.
Conclusion (CLIL)

This multifaceted project was possible because it was designed based on the CLIL framework and the blueprints of CLIL lessons (Ikeda et al, 2016) (see handouts).

Development of age-appropriate CLIL lessons to train students’ critical thinking skills is a valuable activity.
Thank you for your interest in our study!