

Applying Translanguaging Techniques in Japanese EFL Settings

Kevin Alan Bartlett, Kwansei Gakuin University, Japan

The Asian Conference on Language Learning 2018
Official Conference Proceedings

Abstract

This paper will explore the integration of translanguaging techniques in the university EFL classroom in Japan. A survey conducted of students regarding their learning preferences in the EFL classroom uncovered that most students preferred the opportunity to use and be taught in a style that allowed for their L1 (Japanese) to be present in the L2 (English) classroom. As a means to fulfill this preference in language learning, and to see what type of impact it would have on students' language acquisition and motivation, translanguaging techniques were used in two English classes (TLG) in comparison with two English medium classes (EMG) to see whether translanguaging had an effect on test results, presentation scores and student motivation both in and out of the classroom. This paper will provide primary data from Japanese university students who undertook classing in a translanguaging style that supports the implementation of translanguaging techniques in the language classroom. It will also outline the teaching approaches applied throughout this project, and the considerations that were taken into account to create a class that fostered translanguaging techniques in the EFL university classroom in Japan.

Keywords: translanguaging, L1 in L2 classrooms, classroom praxis, student motivation.

iafor

The International Academic Forum
www.iafor.org

Introduction

The use of a student's L1 in L2 classrooms has been viewed as undesirable within EFL university environments in Japan (Ford, 2009). The purpose of this study is to show that with appropriate consideration and planning, the incorporation of students' L1 in the classroom can improve students' L2 retention and motivation towards studying English as a foreign language. This study will outline the implementation of translanguaging techniques in Japanese university EFL classrooms and summarize the results of a study that showed that student levels of language retention, language usage, and motivation to engage with the L2 all improved as a result of the incorporation of translanguaging approaches. This paper will outline the theory of translanguaging and how it was applied in a second-year English reading classroom that was taught to Japanese science and technology majors. Through an analysis of students test scores, presentation scores and post course surveys, this paper will show that translanguaging and the use of students' L1 in the L2 classroom can benefit their EFL learning.

Literature review

Origins of the study

This study originated as a result of two separate studies that were conducted by this researcher in the university that this project was undertaken, to investigate Japanese university students' personality profiles and learning preferences.

The first study was conducted by Moreno and Bartlett (2016) to identify student personality types according to the Myers-Briggs Type Indicator® personality inventory (MBTI®). The study outlined what influences these results may have on classroom participation, motivation and purpose for studying English. The results of this survey showed that a plurality of 16% of students registered as Introversion + Intuition + Feeling + Judging (INFP), followed by Introversion + Intuition + Thinking + Perceiving (INTP) (11.4%), and Introversion + Sensing + Feeling + Judging (ISFJ), Introversion + Intuition + Thinking + Judging (INTJ), and Introversion + Sensing + Feeling + Perceiving (ISFP) (9.1% each). A further breakdown of these results showed that Introversion (70%) was notably more present than extraversion (30%); that there were strong preferences for Intuition (60%) over Sensing (40%) and for Perceiving (61%) over Judging (39%); and a slight preference for Feeling (52%) over Thinking (48%). With these results, it was concluded Moreno and Bartlett (2016), that in an introverted classroom, asking students to communicate in English was a somewhat daunting task and that approaches that played on the learners' strengths were essential to consider for teaching practice. Furthermore, these results reveal the effect personality types have on the level of output and participation in comparison with ESL settings in western countries, where classes are more predominantly focused on opinion exchange (Perks, 2016). These factors may further contribute to the falling TOEIC scores that are currently evident in Japan (Yokogawa, 2017), which measure a student's communicative competence through listening tasks that are heavily centered on day-to-day conversations and business interactions. (Moreno & Bartlett, 2016) Thus, the content of TOEIC listening questions puts Japanese students at a disadvantage because Japanese students don't have enough prior exposure to this kind of content.

A study of students' language learning preferences conducted by Bartlett (2017) investigated students' opinions about the incorporation of their L1 (Japanese) in the L2 (English) classroom. Results of this study showed a strong preference for classes to be taught bilingually rather than in the standard monolingual style that is prevalent in Japanese universities that employ native speaking lecturers to conduct classes (Ford, 2009). Within the environment in which the study took place, monolingual classrooms are the unofficial norm, and discussions about whether to incorporate students' L1 in the L2 classroom is a topic of debate, with supporters for both sides. These opinions are also heavily influenced by an instructor's ability in the local L1. This study found that students preferred to have the option of using Japanese with the teacher, that it allowed for them to feel more comfortable trying to communicate, and that it allowed for a decreased fear of making mistakes or oddly ending conversations by being able to code switch and continue the conversation with their teacher. Furthermore, students reported an increased level of motivation to study English as a result of L1 incorporation in the L2 classroom, as they felt that they were presented with more opportunities to enquire in their native language about points that they were confused about, and that they were able to better grasp the concepts being taught by hearing the explanation in Japanese by their instructor, who could use both languages as teaching tools. (Bartlett, 2017).

As a result of these findings, the researcher considered how to:

- Allow students to become familiar with communicating and expressing their own ideas in either language, which wasn't prevalent in their prior education.
- Help students feel comfortable enough to communicate in a foreign language and not fear making mistakes.
- Improve communicative competence in both their own language and the L2 in the foreign language classroom, as recommended in guidelines from the Ministry of Education, Culture, Science, Sports, and Technology (MEXT) (Monbukagakusho, 2014).
- Adapt approaches to teaching that would allow for the instructor to cater to students' strengths.

A translanguaging approach was thus deemed by this researcher as a viable tool to allow for the aforementioned points to be addressed at the classroom level.

The use of L1 in L2 classrooms

Whether a student's L1 should be incorporated in the L2 classroom has been a topic of debate for many years in the field of Second Language Acquisition (SLA). However, with the reappearance of literature of support for the inclusion of L1 in L2 classrooms, researchers are once again investigating whether the L1 can be utilized as a tool for L2 development. Results have shown that L1 use in L2 instruction provides more positive impact on a student and their language acquisition than was previously thought. Looking at the case in Japan, where student exposure to English mainly happens in EFL classrooms, and with little to no opportunities to use English in students' daily lives, one can understand the reluctance of teachers to reduce students' opportunities for immersion in the target language as outlined by Harbord (1992). Yet, findings from ethnographic studies have shown that the elimination of the use of L1

deprives students of a learning and comprehension tool that allows for interpersonal barriers to be lax, and allows for students to maintain interest in language enquiry, which is sometimes lost in monolingual classrooms due to language constraints (Macaro, 2001). Furthermore, the use of a learner's L1 in the classroom allows for not only language acquisition to occur, but also for notions specific to the language's social, cultural, historical and political concepts to be better comprehended by learners. This comprehension allows students to participate in the L2 with an appropriateness which they may need for future communicative contexts (Carroll, 2005). Lastly, according to Sharma (2006), in regard to administrative requirements, the use of L1 in L2 classrooms has been shown to benefit language analysis, error feedback, classroom management, comprehension checking and the presentation of grammar in the classroom, all positive points when considering the needs of students.

Translanguaging Literature

Translanguaging is a developing concept in which all of a learner's languages are accessible and interchangeable in the classroom to promote understanding of the topic that is being presented. Furthermore, in regard to language acquisition, translanguaging has been seen as a way to bridge the separation between languages that is sometimes felt by foreign language learners and allows the development of the L2 to occur simultaneously with the help of the supporting L1. The definition of translanguaging outlined by Garcia and Wei (2014), best describes this concept as:

A developing concept in which the deliberate and systematic use of two languages is encouraged for education and learning purposes. Translanguaging views all of the language in a speaker's linguistic repertoire as belonging to a single integrated system, whereby speakers select and use the most suitable elements of a language for communicative use in a given context. Second language learners are not considered to be acquiring a new language, but adding to the integrated linguistic system of which their first language is already a part. In second language learning, then, an important concept within a translanguaging approach is the idea that both learners' first and second languages are encouraged and utilized in the classroom for the purpose of developing the weaker target language. (p.19~20).

Translanguaging in practice has shown that in some classrooms it has been a naturally occurring phenomenon, with students using their L1 when undertaking group tasks or discussions when out of earshot from the teacher (Canagarajah, 2011). In cases of translanguaging as instructional practice, teachers who have used students' L1 and L2 concurrently in the classroom have allowed for variants in the way language is used as a means to allow for mutual influence from both languages to occur in the classroom. This use of both languages supports comprehension and learning (Creese & Blackledge, 2010). Most translanguaging literature investigates settings in which both languages are necessary: for example, studying English in the classroom and using English in the wider local environment, yet using Spanish at home or with friends and family. This study is investigating the less examined L2 foreign language classroom, where students formally study the language, yet do not have the opportunity or need to use the language outside of classroom contexts, and where "there does not seem to be a sanctioned place in the classroom in which this dynamic form of everyday bilingualism is normalized" (Palmer, Martínez, Mateus, & Henderson, 2014). Within

this project, students have formally studied English for a minimum of 6 years in junior and senior high school, and have an additional year of study during their first year at university. Thus, students have 7 years of formal English study that can be tapped into and built upon within the EFL classroom that incorporates translanguaging approaches. Through the incorporation of translanguaging techniques, it is believed that teachers can play an integral part in improving students' motivation to study English, and enhance their grasp of the target language (Lewis, Jones, & Baker, 2012)

Recommended teaching approaches

Within the translanguaging classroom, alternative teaching approaches have been recommended (Makalela, 2015). In line with the use of two languages in the classroom, a focus on multiplicity seems to be beneficial to translanguaging classrooms. Thus, multiple intelligences theory was used throughout this project. According to Gardner and Hatch (1989), each learner has seven independent forms of information processing. It is advised that teachers try to stimulate these intelligences for student development, comprehension, and learning. These intelligences are visual-spatial, bodily-kinesthetic, logical-mathematical, naturalist, musical-rhythmical, verbal-linguistic and interpersonal-intrapersonal. According to Csikszentmihalyi (1990), the stimulation of these intelligences is beneficial for:

- a more personalized education,
- more "flow" experiences for students,
- students who are "missed" by a traditional academic curriculum,
- project-based learning and/or an interdisciplinary curriculum, and
- more authentic modes of assessment.

Thus, within the translanguaging classroom, incorporating tasks that stimulate these intelligences along with the dual use of students' L1 and L2 should enhance not only students' communicative and linguistic competence, but also their comprehension of the topics covered in the classroom.

Methodology

Convenience sampling was used to recruit participants to take part in this study, and as a result, four classes that the researcher teaches at the university level were selected to take part in this study. The participants (n=107) were second year students in an English class focused on reading. This class was a compulsory subject for their second year at university. The subject content was largely focused on science and technology, in which students read a passage on a science or technology topic before answering short answer comprehension questions about the passage. Once this task was complete, students were presented with a problem that was outlined in the passage. In groups of four or five, students would have to discuss a way to solve this problem using their knowledge of science and technology from their major area of study. Students would then present their ideas to the class in English. During the last 10 minutes of each class, regardless of what participation group the participants belonged to, the instructor would summarize the key points that were covered in class and would remind students in Japanese of important tasks coming up in the following weeks, such as exams, vocabulary, and quizzes.

The mid-term and final examinations for these classes were entailed reading the passages that were covered in class, and then answering new questions about the article, different to the questions provided in class for comprehension and group discussion. Students would then need to write in two or three sentences how they would go about solving the problem that was introduced in the passage, or write their opinions about the solutions that were discussed within the passage, or provide diagrams outlining why the problem exists. For presentation assignments, students would read graded readers, and in groups of four, present the book's author, the author's biography, an introduction to the main characters of the book, a brief summary of the book, and then a discussion of the book's moral lessons for the reader. Students would then answer follow up questions from the instructor or fellow students about the book or their opinions of it.

Students were informed of the present study in both English and Japanese using a Lime survey to outline the project and seek consent during class time. All students who were approached to take part in the survey filled in the online consent forms along with verbally agreeing to take part in the study. Before the study began, students completed a brief survey about their learning preferences in the classroom. In the consent form, students were informed that two classes will be able to use more Japanese and that two classes would be required to use more English depending on the group they were placed in, but participants were not informed about what group they belonged to. Students were also provided with the option to withdraw from the study; however, no students indicated a desire to withdraw. They were also informed that they would remain anonymous, and that their class averages would be used in a publication related to the research. Students gave consent by completing the consent form.

Descriptions of Groups

Translanguaging Groups (TLGs): Two groups participated in classes taught by translanguaging techniques. Group 1 contained 27 participants and Group 2 contained 29 participants (N=56). This group was provided with more opportunities to communicate in both their L1 and L2 within the classroom with their instructor and classmates.

English Medium Groups (EMGs): Two groups participated in classes taught in an English medium, which is essentially the conventional way that classes are conducted within the university in which this study took place. Group 3 contained 23 participants, and had already been taught by the researcher in their previous year of study. This condition could show whether familiarity with the instructor had an impact on the study. Group 4 contained 28 participants (N=51). Although Groups 3 and 4 together are referred to as the English Medium Group (EMG), these students had opportunities to communicate in Japanese with their instructor and classmates, but on a much more limited level. If the explanation in English was deemed to be too difficult for students to comprehend based on the 'can do' list that was created based on students' past language study experience, then the student could inquire and hear explanations in Japanese from the teacher. The expected level of output that was expected from students was updated weekly based on the content that was studied the week prior.

Regardless of what group the students belonged to, they were all provided with the same printed handouts, textbooks, materials, tests and opportunities to talk with their teacher and fellow classmates. However, TLGs were presented with more leeway to use Japanese as a communication tool when doing group discussions, comprehension tasks, or making inquiries to the teacher. The EMGs were not provided with as many opportunities to use their L1 in the classroom or with their teacher, but they were provided with the same explanations as the TLGs in English so that no information was kept from them throughout this study.

In consultation with ethics specialists, the following two stipulations were made:

- That the researcher provides consistent explanations of materials and topics with all groups, but may choose to share this information in English or Japanese.
- As many varying levels of Japanese are present among the teaching staff in the English division, ethics issues about withholding information from students based on the language of interaction becomes a non-issue as some teachers can, and some teachers can't use Japanese as a teaching tool in the classroom, and English only explanations are considered the norm.

Thus, issues related to the language used in the class were not anticipated as being ethically inappropriate, provided that all classes were furnished with the same content, explanations, materials and opportunities to ask questions of their teacher.

Approaches

During classes with the TLGs, the instructor would use English as a means to explain the basic concepts that were to be outlined in the class, changing languages back to Japanese as new information was introduced. As each class progressed, the course-specific English level expected of students was raised based on the vocabulary, grammar, topic and themes covered in the previous class session. In group discussions, instructor-student dialogues, and in explanations of important points of consideration in the passage being studied, the TLGs had the opportunity to use both L1 (Japanese) and L2 (English) as media of inquiry. In the translanguaging classes, dual language usage was permitted, with the instructor and fellow students in the group facilitating the language learning process along with topic comprehension through the use of both languages. After class, students had the opportunity to choose to speak with the teacher in either English or Japanese, provided that they tried to use English if their inquiry contained the required vocabulary, grammar or content outlined in the "can do list". It was explained to students that they should use English when it had been covered in class, or if it was covered in their prior years of learning. The instructor was the one who would indicate to students whether they should change the language they used to inquire based on their level of attainment throughout the 14-week course. Thus, some variables were evident depending on students' levels, which fluctuated based on the individual being addressed. Furthermore, during group work times, it was observed that students would coax one another or point out when their classmate was not using English, even though it had been covered in class, or was a word, phrase, grammar pattern or utterance they should know, which further assisted with the increased output of L2 (English).

In the EMGs, the students were expected to use English more than 90% of the time during group work activities, with the instructor explaining a majority of concepts, grammar, comprehension tasks and administrative information in English. A quick summary of what was covered was provided to both groups in Japanese at the end of each class to check for comprehension and consolidation of what was covered during the class itself. At the end of the class or group work activity, students were provided with opportunities to inquire with the teachers in Japanese, though instructor output was mainly provided in English unless extraneous circumstances arose, and where the instructor felt that the English level required for the explanation was much higher than the level indicated by the “can do list”.

As a means of interaction and of stimulation of all students’ intelligences, varying approaches to teaching were incorporated during class time. Examples include:

- Using English language YouTube videos and TED talks that addressed the lesson topic (visual-spatial and musical-rhythmical intelligences)
- Writing for reflection (intrapersonal intelligences)
- Group discussions (verbal-linguistic, interpersonal and musical-rhythmic intelligences)
- Brainstorming scientific solutions to problems presented in class (naturalist intelligence)
- Gestures and acting while talking and during presentations (bodily-kinesthetic intelligence)
- Analysis of data and diagrams (logical-mathematical intelligence)
- Presentations and poster presentations (bodily-kinesthetic, visual-spatial and musical-rhythmical, interpersonal intelligences)

Through the inclusion of multiple intelligences theory, and incorporating this approach into EFL teaching, it is believed by Bas (2008) that all students in the classroom can have a holistic learning experience.

Results

Test scores

	Translanguaging Group 1 (27 Students)	Translanguaging Group 2 (29 students)	English Medium Group 3 (23 students)	English Medium Group 4 (28 students)
Mid-term score	84% (low 71% high 95%)	86% (Low 73% high 94%)	81% (low 68% high 91%)	79% (low 66% high 89%)
Final test score	89% (low 77% high 95%)	92% (low 81% high 97%)	80% (low 68% high 91%)	77% (low 66% high 90%)

Test results show that students in classes with a translinguaging approach scored higher on both mid-term and final exams, with the difference in score greater as time went on. The test papers of the TLG participants showed a higher rate of content retention, and a substantially higher completion rate for tasks that asked participants to share their personal opinions. When compared to the responses provided by the EMG, results showed a lower level of retention and of completion of questions that asked for their personal opinions. Furthermore, and surprising to the researcher, is that a higher level of retention for spelling, grammar use and data recall were evident within the TLGs.

Throughout the course of 14 weeks, there were 5% and 6% score increases in the two TLGs compared to 1% and 2% decrease in scores for the two EMGs, showing a 13% difference on a 100% scale.

Presentation observations

	Translinguaging Group 1	Translinguaging Group 2	English Medium Group 3	English Medium Group 4
Presentati on scores	92% (low 75% high 97%)	93% (low 82% high 98%)	85% (Low 71% high 92%)	84% (low 67% high 93%)

These results show that the TLG met more criteria for the assessment of presentations than did the EMG. Observations showed that the level of English used, content covered, and requirements met were higher among TLG participants. EMG groups were noticeably slower in speaking and were not able to go into as much depth with their explanations when compared to the presentations given by TLG participants. Furthermore, the level of output from the TLG showed that they had a higher rate of retention and recall of vocabulary and grammar that had been introduced throughout the 14-week course.

Motivation and post questionnaire results

	Translanguaging Group	English Medium Group
Course Satisfaction rating	4.7 out of 5.0	4.0 out of 5.0
Do you feel this course allowed you to learn effectively?	4.7 out of 5.0	3.9 out of 5.0
Do you feel that your English improved during this course?	4.8 out of 5.0	3.8 out of 5.0
Written feedback and comments	I could learn better than in my other classes.	I wanted to study more grammar.
	I was able to participate more during this class.	I would have liked the option of speaking Japanese when talking about science related topics with my classmates.
	I had more opportunities to learn from my classmates in this course compared to my other English subjects.	I would like to have some things explained in Japanese, especially when it gets difficult.
	This course made me enjoy studying English and as a result I want to take an English elective next year.	My other subject teachers did not let me use Japanese to inquire, but I could use some Japanese in this class, which allowed me to understand the important points better.

Results of post course surveys show that the TLG had a higher level of motivation and a stronger sense of learning taking place in class compared to the EMG. The EMG classes showed a slight drop in motivation, along with a decline in content retention and a lower score on questions that asked for their opinions. Students from the TLG recorded that they had more opportunities to interact with the teacher both in and outside of the classroom when compared to their other English classes and reported that content material became more comprehensible and meaningful as they were able to have more of a “feel” for the learning taking place.

Discussion

The results of this project show that the incorporation of translanguaging approaches in the EFL classroom, and allowing students to use the L1 in L2 classrooms, was beneficial to their foreign language acquisition and retention of content taught throughout the class. The TLGs showed a higher level of retention on test results and a wider variety of English language use during presentations, and reported a higher level of motivation to study English when compared to the EMG. Although the EMG showed a slight decline in motivation and a lower level of retention compared to the

TLG, there were students present who also stated that they enjoyed the course and felt that their learning had improved. Yet when looking at the data, it is clear to this researcher that the TLG had a higher satisfaction rate and a better retention of the language that was taught throughout the program. These results show that it would be beneficial to consider the incorporation of translanguaging approaches on a wider scale within the university classroom. This researcher is interested in continuing this line of research in the future. Furthermore, this researcher recommends the start of the use of translanguaging from an earlier age for students, especially when they are beginning to study English in either elementary school or junior high school. Through the continued use of translanguaging techniques, we could see an increase in English language proficiency and student motivation in the future in Japan.

Conclusion

Although monolingual classrooms are considered the norm in Japan according to Ford (2009), this study shows that allowing for bilingual usage in the classroom through the implementation of translanguaging could be beneficial for further consideration within Japanese EFL classrooms. This study showed not only a higher level of language retention, usage and output, but also an increase in student motivation within the classroom, a current issue faced by some instructors in Japan where the study of the language is compulsory rather than elective. Through the incorporation of translanguaging technique, the identified limitations of English usage by students, a low level of motivation and an unwillingness to participate can be counteracted.

Although further research is required on a much larger scale, with students following a much wider variety of major fields of study, these preliminary results show that translanguaging could be a method that allows for Japanese EFL proficiency levels to rise. Furthermore, through the introduction of translanguaging techniques, student motivation could be increased and a student's L1 can be utilized as a supportive and incorporated learning and teaching tool. It is this researcher's hope that this paper will allow for further discussion among faculty and colleagues who teach EFL in Japan, and will allow for a better understanding of learner preferences, which will hopefully be more thoroughly considered in the creation of curricula and materials.

References

- Bartlett, K. (2017). The use of L1 in L2 classrooms in Japan: A survey of University student preferences. *Kwansei Gakuin University Humanities Review*, 22(1), 71-80.
- Bas, G. (2008). Integrating Multiple Intelligences in EFL/ESL Classrooms. *Online Submission*.
- Canagarajah, S. (2011). Translanguaging in the classroom: Emerging issues for research and pedagogy. *Applied linguistics review*, 2, 1-28.
- Carroll, J. (2005). Strategies for becoming more explicit. In J. Carrol, & Ryan, J. (Ed.), *Teaching international students: improving learning for all* (pp. 26-34). London: Routledge.
- Creese, A., & Blackledge, A. (2010). Translanguaging in the Bilingual Classroom: A Pedagogy for Learning and Teaching? *The modern language journal*, 94(1), 103-115. doi:10.1111/j.1540-4781.2009.00986.x
- Csikszentmihalyi, M. (1990). The domain of creativity.
- Ford, K. (2009). Principles and practice of L1/L2 use in the Japanese university EFL classroom. *JALT Journal*, 31(1), 63-80.
- Garcia, O., & Wei, L. (2014). *Translanguaging: Language, bilingualism and education*. Basingstoke, UK: Palgrave Macmillan.
- Gardner, H., & Hatch, T. (1989). Educational implications of the theory of multiple intelligences. *Educational researcher*, 18(8), 4-10.
- Harbord, J. (1992). The use of mother tongue in the classroom. *ELT Journal*, 46, 350-355.
- Lewis, G., Jones, B., & Baker, C. (2012). Translanguaging: Origins and development from school to street and beyond. *Educational Research and Evaluation*, 18(7), 641-654.
- Macaro, E. (2001). Analyzing student teachers' code switching in foreign language classrooms. *Modern Language Journal*, 85, 531-548.
- Makalela, L. (2015). Moving out of linguistic boxes: The effects of translanguaging strategies for multilingual classrooms. *Language and education*, 29(3), 200-217.
- Monbukagakusho. (2014). *Report on the future improvement and enhancement of English Education*. MEXT Retrieved from <http://www.mext.go.jp/en/news/topics/detail/1372625.htm>.
- Moreno, A., & Bartlett, K. (2016). Personality profiles, learning styles and the Japanese student: an exploratory survey. *Kwansei Gakuin University Humanities Review*, 21(1), 73-80.

Palmer, D. K., Martínez, R. A., Mateus, S. G., & Henderson, K. (2014). Reframing the debate on language separation: Toward a vision for translanguaging pedagogies in the dual language classroom. *The modern language journal*, 98(3), 757-772.

Perks, B. (2016). *Questioning CLT's applicability in an EFL context: The case of Japan*. Paper presented at the Shoin ELTC Forum.

Sharma, K. (2006). Mother tongue use in English classrooms. *Journal of NELTA*(2), 80-87.

Yokogawa, A. (2017). Can Japan, with the Asia's lowest speaking score, change?

Retrieved from

https://www.meiji.ac.jp/cip/english/research/opinion/Ayako_Yokogawa.html