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研究課題名(和文) Assessing the influence of medium of instruction on students' willingness to communicate in English

研究課題名(英文) Assessing the influence of medium of instruction on students' willingness to communicate in English

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研究成果の概要(和文)：研究パートナーと私は、2020年と2021年の2回、パンデミックの最初の2年間の指導媒体に関するアンケート調査を行った。カーソンは両年とも定量分析を行った。また、教師のインタビューと授業観察も行いました。ウィリーと私は、インタビューと観察を行いました。また、書き起こしのチェックも行いました(ZOOMを使用)。さらに、私たちはデータの分析を行いました。また、プレゼンテーションも行い、論文も1本書きました。

研究成果の学術的意義や社会的意義

We wrote a paper in the JACET Chugoku/Shikoku Chapter Bulletin. We did eleven presentations to show the results of our study.

研究成果の概要(英文)：My research partners and I did two questionnaire surveys in 2020 and 2021 on the medium of instruction during the first two years of the pandemic. Carson did the quantitative analysis for both years. We also did teachers' interviews and classroom observations. Willey and I did the interviews and observations. We also checked the transcription (Using ZOOM). In addition, we analyzed the data. We also did presentations and wrote one paper.

研究分野：Second Language Acquisition

キーワード：Medium of instruction Teachers Remote teaching Communication Face to face learning

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## Kakenhi Report

### 1 . 研究開始当初の背景 (Background of the research)

Medium of instruction (MOI) is the language used by the teacher in the classroom. The use of students' first language (L1) has been a controversial topic. Scholars such as Krashen (1982) believe that students should be completely immersed in the second language (L2), whereas Cook (2001) recommends judicious use of the students' L1. However, others feel the bilingual approach may be highly beneficial to students (Cummins, 2008).

In the context of Japan, Japanese teachers of English (JTEs) and non-Japanese teachers of English (NJTEs) differ in their MOI. The JTEs tend to use Japanese for instruction and management, while the non-Japanese teachers use Japanese for affective purposes such as humor (Willey & Katz, 2018). Carson (2018) found that the JTEs tend to balance Japanese and English. Yet, students expect both groups to have some Japanese ability, especially the JTEs (Iwai et al., 2017).

### 2 . 研究の目的 (Purpose of research)

The purpose of our research was to examine how JTEs and NJTEs made use of the L1 and L2 when teaching online and their reasons. We believe that an examination is necessary to show the extent online instruction has affected teachers' instruction since it is linked to students' learning outcomes. We feel that this is important especially in the EFL contexts, in Asian region, where students often share the same first language with many of their teachers.

Three research questions guided this study:

1. What MOI do JTEs and NJTEs use when conducting classes on an asynchronous learning management system (LMS)?
2. For what functions were JTEs and NJTEs using Japanese and English on the LMS?
3. What MOI do teachers use when conducting classes on synchronous systems like ZOOM?

### 3 . 研究の方法 (Research methods)

Questionnaire survey: 2020

From July to August of 2020, there were fifty-seven teachers who filled in the survey. The participants were thirty females, twenty-seven males and out of those there were twenty-nine JTEs and twenty-eight NJTEs. The teachers consist of tenured, contract, or part-time from three Shikoku universities using Google form. There were twenty-nine items on a 5-point Likert scale.

Questionnaire survey: 2021 (July 12<sup>th</sup> to August 31<sup>st</sup>)

The participants were eighty-six males and eighty-seven females totaling to 173. However, the balance between the JTEs and NJTEs is questionable with sixty-two that are Japanese and 111 who are non-Japanese. The biggest age group is 50 to 59 and most had ten to nineteen years of experience. There forty-eight part-time teachers, forty-five who were contracted, and eighty that were tenured. There were six demographic questions, five LMS items, nine synchronous systems, eight face-to-face (F2F) items, and one open-ended item. The results are shown below in Carson's data analysis report below.

Data analysis report:

After obtaining permission from the Ethics committees from Ehime University, Kagawa University, and Matsuyama University, the following surveys were conducted to acquire data about the attitudes of participants towards the Medium of Instruction used in Learning Management Systems (LMS) and synchronous systems (Zoom) while teaching English during the 2020 pandemic. All participants were informed as to the nature of the research and precautions to maintain anonymity of the participants, and then they were asked to sign informed consent forms.

#### **Pilot Survey: English Instructors' Medium of Instruction (MOI) During the Pandemic**

- Online survey administered online via Google Form
- Conducted July 3, 2020 – September 7, 2020.

### **Initial Raw Data Set** (Aug 22 – September 10): Excel → SPSS v. 21

Sixty-four participants responded.

- Early analysis in v1 SPSS of the raw scores (62 participants) was started by August 22 and the final participants were added (64 participant) by September 10 to enable abstract drafts to be prepared for the JALT2021 International Conference and JACET CS Regional Conference. The data reported at this early stage were frequencies and means of the main variables x JTEs and NJTEs.

Cleaning and preparing the 2020 Data Set in SPSS v.21 (September 10 – September 17)

- The first group who tested the Google Form (7 participants) were omitted from the final data file. Data from the remaining participants (57) was added to v2 SPSS and the following procedures were undertaken to clean the data and prepare it for statistical analyses. Initial values were cross-checked with the original Excel file downloaded from the Google Form and a few values were corrected (typos).
- (9/17) Coding of nominal grouping variables (ex. age) and label preparation for all nominal and scale variables. Checked minimum and maximum values for all variables. Frequencies for each variable (univariate analyses) were graphed to check for labelling errors, outliers, and in the case of Likert scale variables, outliers. Ran Explore procedure, including chi square (cross tab) analyses to check for sufficient power. A crosstabs analysis indicated that grouping variables should be recoded into a smaller number of levels. Recoded Q2, Q3, Q5, Q6, Q7, Q8, Q9, Q14, Q15, Q16 to improve power of analyses. At this stage, I shared progress to confirmed that data had been entered appropriately and made one correction for Participant 9.
- Tests of normality showed definite trends for answers by JTEs versus NJTEs, so I decided at this point to compare the two groups using non-parametric t-tests but to also run t-tests – if the basic results (significant or nonsignificant results) were the same, I could report the normal t-tests.

Data Analysis for presentations and papers

#### 1. JACET CS Oct 17, 2020

- a. RQ1 (demographics): Made figures comparing JTE vs NJTE for age, education, years teaching, using Point Biserial nonparametric and Somer's d tests of association, similar to Pearson's correlation.
- b. Point-biserial correlations is a special case of Pearson's correlation, which is used when both variables are on a continuous scale" (i.e., Likert). "It is used to determine the strength of a linear relationship between one continuous variable (Likert scale) and one nominal variable (ex. JTE or NJTE) with 2 categories."
- c. "Somers' delta (or Somers' d, for short), is a nonparametric measure of the strength and direction of association that exists between an ordinal dependent variable (ex. age) and an ordinal independent variable (ex. Likert) – (ordinal for both variables, since the order is important) (Somers, 1962).
- d. RQ2 (JTEs vs NJTEs and MOI used for teaching functions in LMS): Point biserial correlations figures compared JTEs and NJTEs MOI use for each teaching function.
  - i. Gender\*:
    1. Men used more Japanese for instruction, feedback, and helping students than women.
    2. Women used more English for helping students than men.
  - ii. Own language\*:
    1. JTEs used more Japanese than NESTs.
    2. NESTs used more English than JTEs for instruction, feedback, developing rapport, and helping students.
  - iii. Age\*:
    1. 60+ year old used Japanese for rapport more than the other two groups
  - iv. Education\*:
    1. MA holders used English for feedback.
    2. PhD holders did not use English for feedback.

- e. RQ3 (JTEs vs NJTEs and MOI used for teaching functions in Zoom): Chi Square and Somers d to check strength of Chi Square associations with the above groups. However, some groups were too small, so I changed to Mann-Whitney (t-test) to check for significant differences. The statistics took too long to explain so the results were plotted comparing means. These figures were used in the PP.
- a. “The Mann-Whitney U test (also called the Wilcoxon-Mann-Whitney test) is a rank-based nonparametric test that can be used to determine if there are differences between two groups on a continuous or ordinal dependent variable.”  
(nonparametric variation on independent samples t-tests)
    - i. JTEs\*: Increased speaking to students in English
    - ii. NESTs\*: Increased speaking to students in Japanese
    - iii. NESTs\*: Increased speaking to students using a balance of Japanese and English

Free-response item of 2020 and 2021 surveys:

In the one-response item in the 2020 and 2021 surveys, participants could freely give comments and opinions about MOI in online English learning (all used English). For 2020, there were thirty-seven comments (19 JTEs and 18 NJTEs); the word average was 67.7. For 2021 survey, 94 teachers wrote their comments (34 JTEs and 60 NJTEs); there was a 54.2-word average. Thematic coding of comments was in Excel (Saldana, 2009). JTEs and NJTEs were done separately and compared.

#### 4 . 研究成果 (Research Results)

The main survey findings of 2020:

1. Both JTEs and NJTEs increased their use of Japanese on LMS technical difficulties.
2. Teachers tended to use their own L1 for all teaching functions.
3. Teachers were able to increase their use of their own L2 on ZOOM.

The main survey findings of 2021:

The results below - \* means the association (or difference, later) was statistically significant between groups or variables.

1. More men increased\* their use of Japanese than women.
2. More non-Japanese teachers increased\* their use of Japanese than Japanese teachers.
3. More part-time teachers' use of Japanese did not change\* compared to full-time teachers.
4. Teachers with less experience disagreed that their use of Japanese decreased\* compared to more experienced teachers.

Results of thematic codes

We found the differences between the JTEs and NJTEs, for example, JTEs used Japanese for efficiency, whereas the NJTEs use the students' L1 for important information. JTEs tend to use Japanese to aid students, however, NJTEs use writing functions in English. In addition, they used student “helpers,” such as their Japanese spouses who would help being the middle person dealing with communicating to the students in Japanese or dealing with paperwork. Because of this, the lack of Japanese was a huge concern to the NJTEs. Finally, they tended to use only English in their classes.

Second qualitative analysis results:

In English language teaching, “subtle complexities...give rise to tension and ambiguities in EFT teachers' professional lives” (Sayer, 2012). This is often manifested as tensions between two opposing forces, e.g., one's L1 identity vs. L2 identity; and one's values vs. values of the institution. From the responses and coding scheme, we re-examined to assess tensions expressed in data in terms of MOI, and the strategies teachers use to cope with these tensions. For example, both the JTEs and NJTEs have the desire to use English, yet there were constraints posed by remote learning. Both groups used writing functions on ZOOM and leaving instructions on LMS. Also, both the JTEs and NJTEs had the desire for students to use English, but because of students' willingness and ability in English, teachers

had to use teaching strategies by encouraging students to use English and acting as a role model. For the NJTEs, they had the desire to use Japanese, but their language skills were limited. To “relieve the tension,” they used “helpers,” such as translation tools, writing functions, and their spouses. The last tension was the desire for both JTEs and NJTEs to be role models, however, there were some uncertainties about the role during the remote learning. By exploring new options/functions, gaining online experience, and joining teacher groups helped alleviate this uncertainty.

#### Class observations:

We did the class observations from May to July in 2021. There were five participants (four females, one male; two JTEs, and 3 NJTEs). The teachers were either tenured, contract, or part-time from three Shikoku universities. They were chosen because they responded to the surveys and interviews. This was done on ZOOM in their 90-minute class time. We found that all the teachers had a different approach in terms of MOI. One JTE (female) only used Japanese throughout the whole class time. Another female JTE used Japanese for basic grammar, helped with technical problems, and explained the homework. One female NJTEs used Japanese when giving page numbers, gave some instructions, and apologized. Another female NJTEs used Japanese when it is relevant in the lesson or a cultural aspect. The last teacher, NJTEs (male), used simple Japanese to encourage students to talk.

#### Conclusion:

We found there were no major differences in MOI use on ZOOM and in face-to-face classes, though teachers used slightly more Japanese in face to face. JTEs tend to use Japanese and English and NJTEs tend to use mainly English, though both groups found coping strategies (e.g., chat, “helpers,” translation apps, etc. However, it appeared that teachers have adapted their MOI to remote learning through experience, and gained new options (e.g., writing functions).

For students, they need some Japanese assistance such as translation apps. Moreover, if there is any technical assistance such as their computer is not working properly then instruction written in Japanese should be used and put into an asynchronous system. Teachers also noticed that their students did not communicate much in a synchronous system, therefore apps like ZOOM should be used for emergency use only. We found that face to face is a practical way of enhancing communication.

5. 主な発表論文等

〔雑誌論文〕 計1件（うち査読付論文 1件／うち国際共著 0件／うちオープンアクセス 0件）

1. 著者名 Julia Kawamoto, Ian Willey, and Eleanor Carson	4. 巻 20
2. 論文標題 A survey of English teachers' medium of instruction in remote learning	5. 発行年 2023年
3. 雑誌名 大学英語教育学会中国・四国支部研究紀要	6. 最初と最後の頁 1-16
掲載論文のDOI（デジタルオブジェクト識別子） なし	査読の有無 有
オープンアクセス オープンアクセスではない、又はオープンアクセスが困難	国際共著 -

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2. 発表標題 What Interviews and Class Observations Reveal About Teachers' Medium of Instruction in Remote Learning
3. 学会等名 The JACET 60th Commemorative International Convention（国際学会）
4. 発表年 2021年

1. 発表者名 Julia Kawamoto, Eleanor Carson, and Ian Willey
2. 発表標題 What We Know about Teachers' Medium of Instruction in Remote Learning
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1. 発表者名 Julia Kawamoto, Ian Willey, and Eleanor Carson
2. 発表標題 Does remote learning affect English Instructors' Medium of Instruction?
3. 学会等名 The 56th RELC International Conference（国際学会）
4. 発表年 2022年

1. 発表者名 Julia Kawamoto, Eleanor Carson, and Ian Willey
2. 発表標題 How remote learning impacts medium of instruction
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1. 発表者名 Julia Kawamoto, Eleanor Carson, and Ian Willey
2. 発表標題 遠隔学習における L1 と L2 の役割
3. 学会等名 令和 2 年度 JACET 中国・四国支部 秋季 研究大会
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1. 発表者名 How distance learning impacts English teachers' medium of instruction
2. 発表標題 Eleanor Carson, Julia Kawamoto, and Ian Willey
3. 学会等名 All Shikoku JALT Conference
4. 発表年 2021年

1. 発表者名 Classroom Language Use in 2021: A Return to a Pre-Pandemic Norms?
2. 発表標題 Ian Willey, Julia Kawamoto, and Eleanor Carson
3. 学会等名 61st JACET International Conference (online) (国際学会)
4. 発表年 2022年

1. 発表者名 Julia Kawamoto, Eleanor Carson, and Ian Willey
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3. 学会等名 Hiroshima JALT (招待講演)
4. 発表年 2022年

1. 発表者名 Eleanor Carson, Julia Kawamoto, and Ian Willey
2. 発表標題 English Teachers' Language Use in Online and Face-to-face Formats
3. 学会等名 全国語学教育学会第48回年次国際大会教材展示会 (国際学会)
4. 発表年 2022年

1. 発表者名 Julia Kawamoto, Ian Willey, and Eleanor Carson
2. 発表標題 Medium of Instruction in Online and Face-to-Face Classes in 2021
3. 学会等名 57th RELC International Conference (Singapore; hybrid) (国際学会)
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〔図書〕 計0件

〔産業財産権〕

〔その他〕

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6. 研究組織

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7. 科研費を使用して開催した国際研究集会

〔国際研究集会〕 計0件

8. 本研究に関連して実施した国際共同研究の実施状況

共同研究相手国	相手方研究機関
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