Students' Perspectives on iBooks, Workbooks, and Technology at OJU/OJC

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大阪女学院大学・大阪女学院短期大学生の
iBook・ワークブック・テクノロジーに対する見解

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Abstract

This paper reports on data collected as part of a larger project on technology use at Osaka Jogakuin University/Osaka Jogakuin College (OJU/OJC). A 48-item survey was distributed in July 2022 to first- through fourth-year students (N = 181). The survey included questions about technology use, iPad use, and use of the faculty-developed digital textbooks and workbooks. Results indicate overall satisfaction with the content-based textbooks. OJC students expressed overall satisfaction with the associated workbooks. OJU students expressed support for having a workbook. Results of this survey should help inform discussions regarding future revisions to the first-year courses and provide an understanding of the students' views of the first-year course materials.

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　本研究は大阪女学院大学・大阪女学院短期大学（OJU/OJC）のテクノロジーの活用に関する、大規模な調査である。2022 年 7 月に、1 年生から 4 年生までの学生（181 名）に、48 項目のアンケートを配布した。調査内容には、テクノロジー、iPad、デジタル教科書やワークブックの活用が含まれていた。結果として、内容重視型の教材に概ね満足していることが分かった。短期大学生は関連したワークブックに肯定的であり、大学生はワークブックの使用を望む意向を示した。このことから、1 年生のコースに対する将来的な改訂が示唆され、今後の教材への学習者の見解に対する考察が可能となった。

Students' Perspectives on iBooks, Workbooks, and Technology at OJU/OJC

Technology has permeated our lives. Many people rely on devices to accomplish a variety of everyday tasks. For foreign language (FL) educators, technology means that learners have unprecedented access to materials and resources. Furthermore, online platforms allow a more social form of learning as students, their peers, and teachers use them to communicate and collaborate (e.g., Gabarre & Gabarre, 2010; Godwin-Jones, 2005; Palloff & Pratt, 2007). To operationalize *tech literacy*, we adapted Gilster's (1997) conception: "the ability to understand and use information in multiple formats from a wide range of sources when it is presented via computers" (p. 1).

In higher education, personal computers, tablet computers, and smartphones are unavoidable. These digital devices allow easy access to information, encourage research, and help provide immediate feedback. In short, there has been an observable shift to digital learning environments with the adoption of learning management systems (LMS) and the accompanying increase in assignments provided and submitted digitally.

Internet-connected devices provide two major benefits to FL classrooms. The first is access to internet resources. XReading (2022), for example, provides students access to a large digital library of graded readers, enabling them to read books and check comprehension on computers, tablets, or smartphones. Similarly, participants and researchers have access to online databases to locate articles, journals, and reference materials. Previously, this could only be done in libraries by manually searching for information. In short, digital devices make resources more accessible.

In fact, several studies have shown that the portability of tablet computers such as iPads benefits education. iPads are typically smaller and lighter than laptops while retaining many of their functions. Alyahya and Gall (2012) reported that all participants carried their iPads with them everywhere, making it easier to complete assignments, connect to school, and study. Other studies have found that participants prefer tablet computers over laptops as they are lighter, start up faster, and connect more quickly to Wi-Fi (Gabarre et al., 2014).

In addition, internet-connected devices allow students to learn via a variety of media and tools (Lan et al., 2007; Manuguerra & Petocz, 2011). Moreover, the ability to access audio-visual materials, dictionaries, online references, digital flashcards, and quizzes increased learners' engagement and autonomy (Alvarez et al., 2011; Domakani et al., 2012; Garner, 2011). Furthermore, they allowed participants to engage with instructors and

peers and connect with the world beyond the classroom (Banister, 2010; Chia, 2007).

Despite the benefits of internet-connected devices in FL classrooms, several drawbacks have been identified. First, all technology requires knowledge of how to use it effectively. Alyahya and Gall's (2012) participants, though they appreciated the portability of the iPad for school work, also reported being unfamiliar with the devices' capabilities. Similarly, Gabarre et al. (2014)'s participants reported problems with the iPad interface and felt they had to constantly learn new applications and features. Sadly, this can lead to underutilization. For example, while it might seem natural to assume that increased access to books would lead to more reading, Merga and Roni (2017)'s findings suggested otherwise. They found that (a) computers and mobile phones were underutilized for recreational reading, (b) reading frequency declined when children had access to mobile phones, and (c) reading in general decreased when children had access to digital devices. While digital devices provide access to reading materials, they also grant access to distractions.

Another drawback of digital devices such as iPads relates to retention and comprehension of information. In a study investigating participants' use of handwritten or typed notes, Vincent (2016) reported that participants preferred taking handwritten notes because these led to greater retention of data than if it was typed. Similarly, Støle et al. (2020) found that children had lower comprehension test scores on digital tests than paper tests, with approximately one-third of the participants performing better on the paper test. These studies suggest the use of paper texts when reading helps understanding and remembering. Some studies have been undertaken to compare the two modes of reading. A neuroscientific study utilized five measurement instruments (fixed eye tracking, mobile eye tracking, electroencephalograph, galvanic skin response, facial expression analysis) to compare reading and exercise completion for digital and print textbooks (Onieva López et al., 2021). This study showed that participants using paper textbooks achieved a higher level of acceptance and attention compared to those using digital textbooks. Furthermore, those using digital textbooks reported higher levels of stress and rejection, while participants using paper textbooks reported higher levels of enjoyment. Finally, while paperless classrooms are attractive, participants in one study who used digital devices for three years were less supportive of their use for reading and writing than those using paper textbooks (Meishar-Tal & Shonfeld, 2019). This indicates that digital devices might not be the most useful for all FL learners.

Moreover, it has been argued that the iPad cannot replace computers because they were "never meant to do that" (Scholz, 2012). Rather, iPads provide "a very good experience for reading scientific papers and will make it easier to keep an organized lab notebook" (Phan, 2016). The shared conclusion is that iPads should be used in conjunction

with computers. Furthermore, while generally cheaper than laptops, participants considered iPads inadequate for college (Teng, 2015) citing the absence of a physical keyboard or removable media and the inability to print via USB. In addition, they indicated iPad screens are small for writing essays, have slower text editing, and have software limitations which make data analysis difficult. In short, an iPad in its default configuration is insufficient as its limitations might prevent college-age students from reaching their full work potential (Bolton, 2021). While iPad functionality can be improved through accessorizing, this makes the cost similar to that of a laptop.

OJU/OJC iBooks: A Brief Overview

In 2012, Osaka Jogakuin University/Osaka Jogakuin College (OJU/OJC) adopted the iPad platform. iPad 2 models were distributed to first-year course teachers. In May, iPad 3 models were distributed to students. In the English curriculum, the iPads replaced iPods used in the phonetics courses. However, traditional textbooks were used in spring Integrated Studies (IS) classes in the 2-year program and Integrated Reading (IR) and Integrated Discussion (ID) classes in the 4-year program. (Collectively, the IR and ID classes are referred to as IRD). Each of the two IS classes covers one text for the entire term, with one teacher. The IRD classes share texts between the IR and ID classes during the term. In spring, the content text covered by all classes focus on identity and peace, in addition to the introductory materials. In fall term, the content of the texts focuses on human rights and the environment.

The first OJU/OJC iBook, *Human Rights: A Reader,* was created during summer (Swenson, 2012), distributed to students through the Moodle LMS in September 2012, and used in the IR classes. This text was used as the template for the faculty to create the next digital textbook, *Sustainable Futures: An environmental reader* (Swenson et al., 2012), for use in fall IR classes. (For a discussion of the iBook development, see Swenson et al., 2014.) For subsequent years, the members of the faculty on the Materials Development Committee began a cycle of revisions and changes to the texts. Then, the digital textbooks for reading, discussion, and writing, used in IS and IRD courses, were pre-loaded onto new students' iPads each spring.

In 2018, a broader revision of the texts was undertaken to trim the materials to what could be covered in the time available and unify the organization. In addition, the committee members decided to combine the reading and discussion texts to make it easier to see the connections between the content covered in IR and ID. All chapters in these iBooks follow the same organization pattern, with *Introduction to Discussion and Reading* (Cornwell & Swenson, 2020c) serving to introduce students to the overall

organization of the books. The revisions were completed in January 2020 and the new editions of all content textbooks were prepared, readied, and loaded onto iPads. Each of the trimmed down content textbooks, titled *Identity and Values, Peace and Values, Human Rights Today,* and *Sustainable Futures,* contain four chapters and include materials for reading and discussion. As such, they are appropriate for both IS or IRD courses. *Writing in English: A Guide* (Swenson, 2020) was also revised to update it to APA7 (American Psychological Association, 2020).

Workbooks for each of the content books were also developed and readied for use in the OJC IS classes in the 2020 academic year. Paper-based materials distributed to students provided the place for writing answers and composing text that were cumbersome to manage with the digital materials. The four workbooks share content with the iBooks reading sections, but contain glossaries with Japanese translations of less common vocabulary and phrases not included on the vocabulary lists in the iBooks. The workbooks also provide additional activities such as identifying and summarizing readings, as well as space to write answers to comprehension and discussion questions. Finally, workbooks were introduced first in the IS classes as each teacher was responsible for only one book a term, allowing for the teachers to more easily adapt lessons based on students' use of the materials.

Use of the new editions began during the early stages of the COVID-19 pandemic, with classes meeting online during the spring term. (For a discussion of the pandemic's impact on education, see, Li et al., 2021.) Faculty had to adapt rapidly to the demands of teaching through various meeting platforms. Therefore, this must be considered when interpreting results of this study. Fall term 2020, most OJU/OJC classes were in person, unless case numbers required a return to online education, but held following the social distancing procedures suggested by the Japanese government. Classes in spring term 2022 were held in person.

The review of the field pointed to several gaps in the literature. First, there is no clear consensus on the value of digital texts versus paper-texts, nor is there consensus on the type of devices most suitable for students at the tertiary level of education. Furthermore, we did not locate any studies that looked at the use of digital texts with supporting paper-based materials. Moreover, OJU and OJC students' views of the materials, both digital and paper-based, has not been examined since the digital materials were revised into their current forms in 2018. Finally, no research has been done regarding OJC students' opinions of the workbooks, which were introduced to students in this program in 2020. This lack of information led to the research questions below.

Research Questions:

Several research questions drove this project. Three are related to the first-year materials. These were:

1) What do participants think about the digital textbooks? Do they think any improvements are required?
2) What do participants think about the workbooks?
3) How do participants feel about sharing one textbook between two teachers/classes?
   We also wanted to determine views about use of iPads, and other digital devices, in their studies. The questions related to iPad use were:
4) What do participants think about using an iPad for language study?
5) How do participants use their iPads?
6) How could the iPads be more useful for English study?
   General use of technology was also investigated in the survey, but this data is not reported here.

Methods

Survey Development

Survey development was done by the three working groups involved in the project. Group 1 developed questions related to the workbooks and iBooks use. Group 2 developed questions related to iPad use. Group 3 prepared items related to overall use of technology. Some survey items were directed only at first-year participants and some only to participants in the college or university programs.

We used a four-point response scale for Likert-style survey items asking for opinions about aspects of the content books, workbooks, or iPads: Strongly agree, agree, disagree, strongly disagree. Those items asking for frequency of use of digital technology also employed a four-point scale: Never, Sometimes, Frequently, All the time. Questions asking about the students' ability to do various tasks on digital devices were provided with a four-point Likert scale with "1" indicating "Yes, I can" and "4" indicating "No, I cannot." Questions about the frequency of device use for various academic activities such as "do homework" or "write papers" had four answer choices: Never, Once or twice a week, Three or four times a week, Almost everyday. Several open-ended questions were also created, each asking students to write one or two words in response. One of these questions was directed only at the OJC students who had used workbooks and one at OJU students that had shared ebooks in their IR and ID classes. The other five sought opinions about the iBooks, the Moodle LMS and Google Classroom, and the use of iPads and how faculty could improve students' use of iPads for education.

All survey items were written in English and translated into Japanese. Next, a Google Form was prepared that included all the items. This resulted in a branching survey with 19 sections to send participants to the appropriate section based on their year in school and program of study. Because of the branching nature of the survey, participants answered only 85 to 91 of the 150 questions. The first section included the informed consent form and agreement to participate. (The survey is available upon request from the researchers in English and Japanese.) The survey was approved by the university research oversight committee. The data from the participants was anonymized by the principal investigator to ensure that individuals could not be identified from their responses.

A link to the survey was distributed through the Moodle LMS to 633 OJU/OJC students, with participation restricted to one response. Participants were offered token remuneration: either an Amazon gift card or a book card valued at ¥1,000.[1] The survey was available for 10 days, from July 16 until July 25, 2022.

Results & Discussion

Participants

In total, 183 participants responded to the survey. Two participants declined to participate. The data from the remaining 181 participants (27.84% of OJU/OJC students) were analyzed. These participants included 57 first-year students, 44 second-year students, 41 third-year students, and 39 fourth-year students. By program, 42 participants took IS courses during their first year and 133 took IRD courses. Six participants, who indicated that they had transferred into OJU/OJC, did not complete either first-year program.

The language ability of the participants varied widely (see Table 1). Two participants did not report a TOEIC score. Reported scores were collapsed into nine bands: scores of 295 or less and scores in each 100-point band range. Table 1 shows the reported TOEIC scores for participants' year in school. Most participants (n = 80) had TOEIC scores from 200 to 495, 61 participants' TOEIC scores ranged from 500 to 695, and the remainder (n = 35) had TOEIC scores ranging from 700 to 965.

**Table 1. Reported TOEIC Scores by Year in School (*n* = 179)**

TOEIC range	1st year	2nd year	3rd year	4th year	Total in range
< 295	21	6	2	0	29
300 +	12	8	3	0	23
400 +	10	8	5	5	28
500 +	4	7	10	10	31
600 +	3	8	7	15	33
700 +	2	5	7	5	19
800 +	1	1	4	4	10
900 +	2	1	3	0	6
Total by year	55	44	41	39	

Participants reported on their home language in an open-ended question. Most (*n* = 138) reported Japanese as their home language. The remaining participants indicated use of 15 other languages. The most common languages reported were English (*n* = 11), Vietnamese (*n* = 10) and Tagalog (*n* = 8). Other home languages reported included Chinese, Korean, and Spanish.

Views of the iBooks
Opinions Regarding Textbooks

To understand how participants felt about the OJU/OJC textbooks used in first-year courses, they were asked to respond to several statements about the iBooks. First-year participants hadn't yet used the two fall semester textbooks, so only responses from second to fourth-year participants are included for those questions. Figure 1 shows that most participants either strongly agree or agree that they enjoyed using all the textbooks. To determine how the textbooks could be improved, participants were asked to provide short suggestions. These responses were translated into English (when necessary), coded, and categorized by themes. The coding was done independently by two researchers (one coding original responses and the other coding English translations) who compared and reconciled differences. The original version of the response (Japanese or English) was used as the authoritative version for reconciling the coding. Responses could receive multiple codes if it touched on more than one theme. Responses unrelated to the question were not included.

Figure 1. Enjoyment of Five iBooks
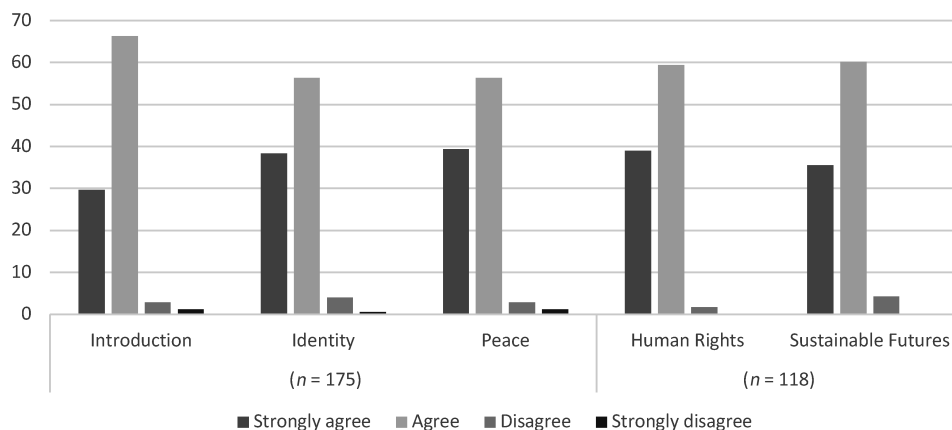
One-third of participants (n = 41, 34.29%) had no suggestions. However, of the 140 comments received, 21 (15.00%) related to content improvement, including improving the quality of questions, adding activities and questions, providing more details, and having Japanese translations for difficult vocabulary. The next most common issue concerned technical problems (12.86%). Eighteen comments mentioned having to update and download the textbook, being unable to write notes on the iBook pages, requiring an internet connection to access certain content, and having trouble with button size on the screen. A related problem, coded in 15 comments, was difficulty in reading the text due to small font sizes and screen quality (10.71%). In addition, 13 comments suggested making the content less difficult (9.29%) by simplifying the questions, shortening the readings, or selecting easier vocabulary. Seven comments requested more images to accompany the texts to aid understanding (5.00%). Six participants expressed frustration with navigating the iBooks (4.29%), including easy access to bookmarks and directly jumping to a page. Additional audio for shadowing and control over the audio playback speed for dictation were also suggested (4.29%). Finally, four comments related to limiting the content to what could be directly covered in class (2.86%), though two comments indicated the content was too easy (1.43%).

Figure 2 shows which word participants selected to describe the textbooks. Multiple selections were possible. The most common description selected was "interesting," followed by "challenging," "informative," "easy," "confusing," and "boring." This suggests some participants find the textbooks confusing. About twice as many participants reported the books to be "challenging" than "easy," which can be positive if the challenge is not overwhelming or demotivating. These results also suggest there might be a need to revise the survey so that it includes a question about the perceived difficulty of the

materials to the learner. Alternatively, interviews with participants might allow the researchers to probe their responses to the materials and obtain their perspective on the 18 different types of activities in each chapter of the textbooks.

Figure 2. Words Selected to Describe Each of the Five iBooks (*n* = 175)
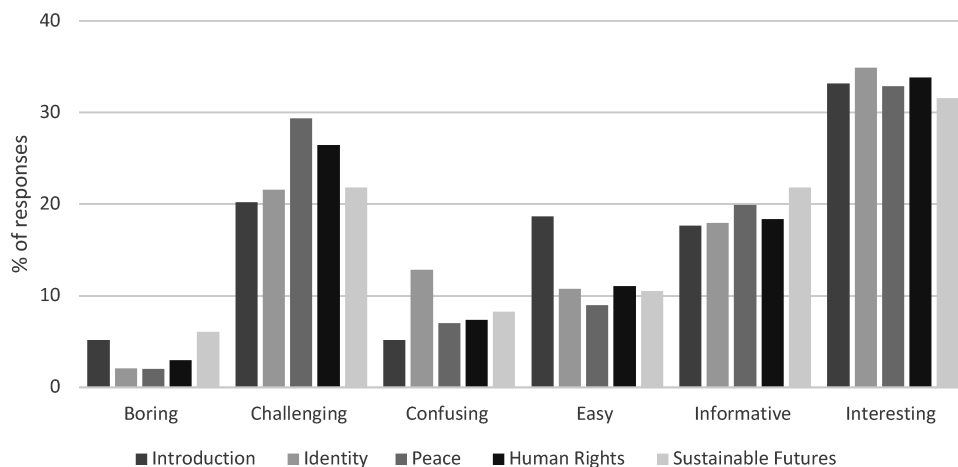
Next, we asked IS participants about the workbooks, which were only provided to IS classes in the 2021 and 2022 academic years. Figure 3 shows that IS participants agree or strongly agree that the workbooks helped them to understand the content of the iBooks. Note that the results for *Human Rights* and *Sustainable Futures* do not include responses from current (2022 entry) first-year IS participants as they had not used the fall term iBooks or workbooks.
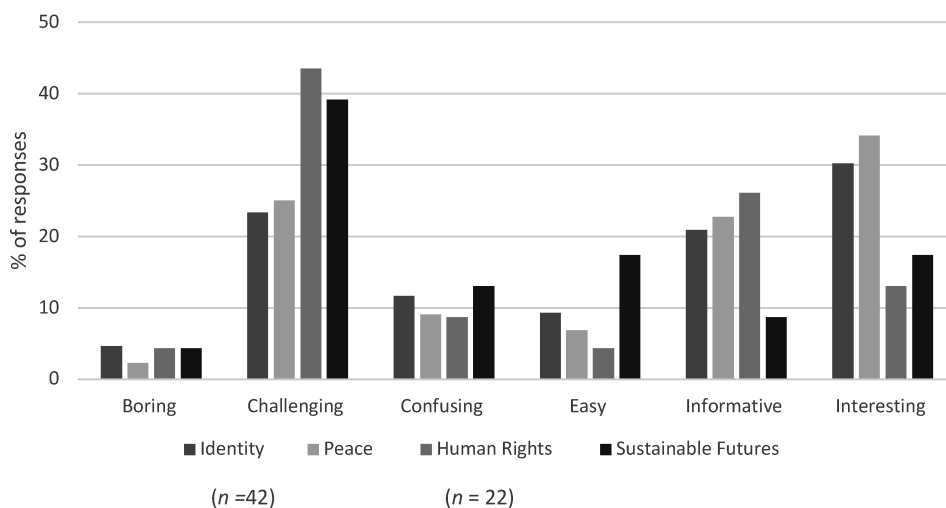
Figure 3. Workbook Helped Understanding of iBook's Content
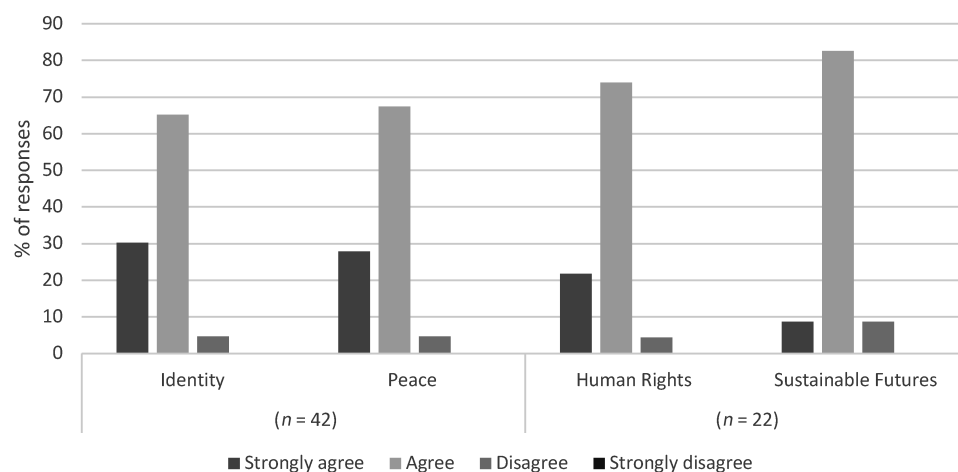
Note. First-year students in the two-year program (*n* = 20) were not asked about the fall term workbooks. Only second-year students (*n* = 22) responded to these questions.

Figure 4 shows the words selected by participants to describe the workbooks. The first-semester books (*Identity & Values* and *Peace & Values*) were more likely to be considered interesting and the second-semester books more likely to be considered challenging. This was followed by informative, confusing, easy, and boring, mirroring results for the iBooks. Although not directly asked, in participants' responses to other questions about the iBooks, some also provided workbook-related suggestions. These focused on the quality of the paper (it is difficult to erase writing), the limited space available for some answers, and requests to add iBook page numbers to corresponding workbook pages.

Figure 4. Words Selected to Describe Workbooks

Note. First-year students in the two-year program (*n* = 20) were not asked about the fall term workbooks. Only second-year students (*n* = 22) responded to these questions.

University participants, who did not have a workbook in IRD, were asked if they wanted to have one (see Figure 5). Participants largely strongly agreed or agreed with this. Also, university participants were asked about the use of one iBook in two classes, the IRD model. As sharing a textbook between two teachers only occurs in first-year IRD classes, the researchers felt it was important to investigate how participants feel about this arrangement. As shown in Figure 6, there are relatively consistent responses from participants across all four years, with most participants indicating that they liked sharing the same textbook between two classes.

Figure 5. Workbook Support Agreement Among University Participants (*n* = 133)
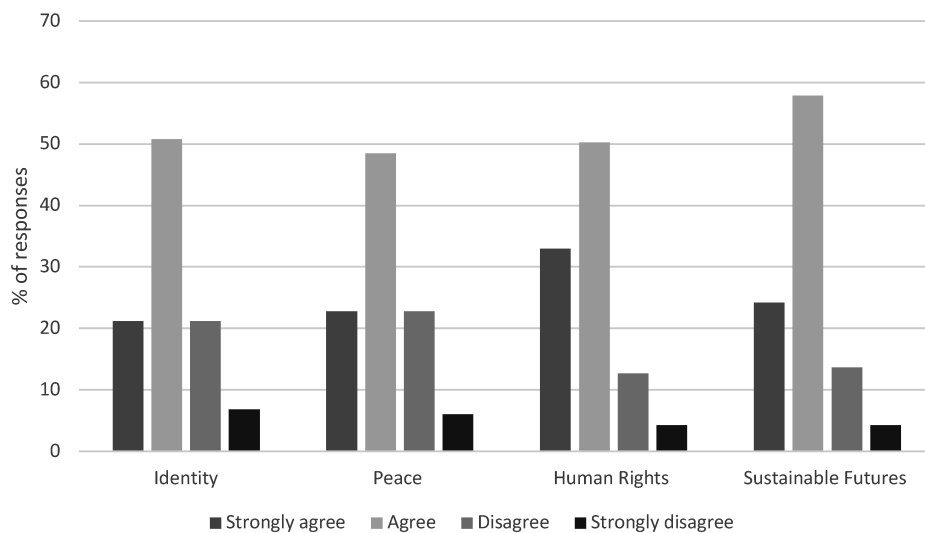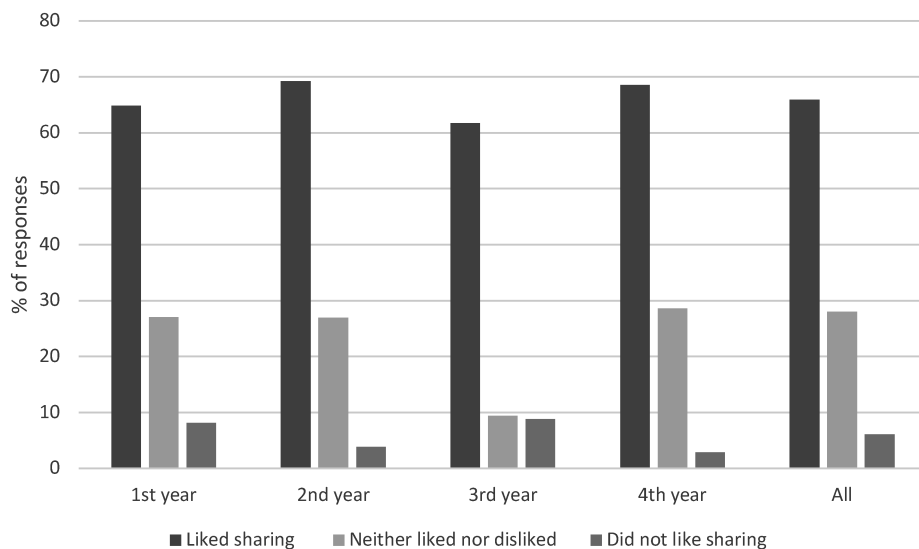

Figure 6. Views of Sharing iBooks in IR and ID Classes From University Participants (*n* = 133)

To further investigate participants' opinions about sharing a textbook between two classes, participants were asked to provide reasons for their preference. The responses were coded into categories. The most common positive comment (*n* = 120) was about deepening understanding from seeing the content in both the reading and discussion (*n* = 44, 36.67%). Participants found that seeing the same content in both classes made it easier to understand (*n* = 12, 18.33%). Of course, IS participants see the same amount of content, so this is not necessarily an advantage of sharing a textbook. Participants

also mentioned that it was convenient ($n = 16$, 13.33%), as they had fewer textbooks, or useful ($n = 10$, 8.33%). Only six participants (5.00%) mentioned that they enjoyed seeing the content from two different teachers' perspectives and only one (0.83%) cited flexibility. Participants who selected that they were neutral about sharing or did not like it ($n = 35$, 29.16%) were also asked to explain why. The main reason provided was that participants found it confusing ($n = 13$, 37.14%). This was followed by navigation issues as participants had problems keeping track of which page they were using in the two classes ($n = 7$, 20.00%). Participants also noted that teachers moved through the textbook at different rates ($n = 4$, 11.43%), repeated content covered by the other teacher ($n = 3$, 8.57%), and skipped sections ($n = 1$, 2.86%). One found the texts too easy (2.86%) and four had no comments (11.43%)

In summary, most participants have no issues with sharing a textbook between two teachers and two different classes, though some reported confusion, difficulty finding where in the book they were supposed to be, and teachers covering the textbook content at different speeds, potentially skipping or repeating content as a result. These results suggest that use of digital textbooks was generally well received by the participants whether they had access to a paper-based workbook or not.

Learning English Using an iPad

This section of the survey explored two areas. First, we wished to establish the degree to which students are using iPads, smartphones, and computers for educational purposes. Students were asked to indicate how many times per week they used an iPad, phone, and computer devices for the following purposes: Reading, writing, speaking, vocabulary, homework, search, spreadsheets, slides, video, social networking service (SNS) consumption (e.g. viewing), and SNS participation (e.g. posting). Response options included *Never*, *1-2 times a week*, *3-4 times a week*, and *daily*. Table 2 shows the frequency of device use by purpose for participants each week. Second, we explored student perceptions of the advantages and disadvantages of iPad use for education, as well as their suggestions for how institutional support for iPad use could be further enhanced.

Table 2. Frequency of iPad Use by Purpose, Per Week (*n* = 175)

Purpose	Never *n* (%)	1-2 times *n* (%)	3-4 times *n* (%)	Daily *n* (%)
Reading	31 (17.71%)	40 (22.86%)	43 (24.57%)	61 (34.86%)
Writing	29 (16.57%)	52 (29.71%)	35 (20.00%)	59 (33.71%)
Speaking	81 (46.29%)	41 (23.43%)	23 (13.14%)	30 (17.14%)
Vocabulary	42 (24.00%)	49 (28.00%)	32 (18.29%)	52 (29.71%)
Homework	13 (7.43%)	21 (12.00%)	32 (18.29%)	109 (62.29%)
Search	16 (9.14%)	19 (10.86%)	47 (26.86%)	93 (53.14%)
Spreadsheets	42 (24.00%)	52 (29.71%)	18 (10.29%)	33 (18.86%)
Slides	18 (10.29%)	78 (44.57%)	38 (21.71%)	41 (23.43%)
Video	99 (56.57%)	44 (25.14%)	12 (6.86%)	20 (11.43%)
SNS - consume	77 (44.00%)	33 (18.86%)	18 (10.29%)	47 (26.86%)
SNS - post	124 (70.86%)	20 (11.43%)	8 (4.57%)	23 (13.14%)

Note. SNS = Social networking service.

As shown in Table 2, iPad use was most prevalent for completing homework assignments and searching for information online with nearly 80% of students indicating they were using their iPad for these functions either daily or 3-4 times per week. Regarding specific English skill development and iPad use, 46.3% of students indicated they never use their iPad to practice speaking. Responses regarding reading, writing, and vocabulary study using iPad indicated a relatively even spread among never, 1-2 times weekly, 3-4 times weekly, and daily. Student responses also indicate the video capabilities of the iPad go mostly unused when learning English, with 56.6% of student responding they never use the iPad for this purpose. SNS consumption and posting were also not reported as being primary uses of iPads. Table 4 also provides data concerning the use of smartphones and computers for these same purposes, however detailed discussion of these devices for the purpose of studying English is beyond the scope of this paper.

Comments on iPads for English Study

Table 3 shows the responses regarding advantages of using an iPad for English study. Results indicate 35% (*n* = 61) of the participants highly valued easy access to the information. Of those 61 students, 17 (28%) said that an iPad allows multitasking. For example, the iPad's split-screen display allows learning (such as writing essays) while looking up information or English words. Moreover, about a quarter of the participants mentioned that an iPad has a bigger screen than a smartphone while weighing less than a laptop computer, which makes it easy to carry. Other respondents include the advantage of the university's iPad 1-to-1 program that allows students to help each other when

struggling to use an iPad. Students also shared opinions about mirroring the screen using the Apple TV, a function that easily allows students to share their screens, communicate their ideas, and share their opinions visually, which highlights the university's English classes' use of technology.

Table 3. Advantages of iPads for English Study (Multiple Responses Possible) (Coded = 191)

Advantage codes	n (%)	n (%)	Selected comments
Access to information	61 (31.94%)	44 (23.04%)	*If there is something I don't understand, I can look it up right away.* (Participant 1148)
		17 (8.90%)	*Split-screen display allows learning English while looking up information or English words.* (Participant 1024)
Visibility	44 (23.04%)		*The screen is larger than that of a cell phone, so it is convenient when I am doing reading assignments on the train.* (Participant 1149)
Easy to carry	43 (22.51%)		I*t contains lots of information, but not bulky like a paper textbook. Easy to carry.* (Participant 1005)
Easy to operate	23 (12.04%)		*Easy to type, easy to make slides.* (Participant 1062)
Other	20 (10.47%)		*We all use iPads so we can help each other when we have problems.* (*1 to 1 device*) (Participant 1165)
			We can easily share our views with visual support materials through mirroring the screen using the Apple TV in the classroom. (Participant 1114)

Regarding the disadvantages of iPads for English study, the following points were mentioned: it has less functionality than that of a computer, it is difficult to operate, and it requires Wi-Fi (see Table 4). The largest numbers of respondents said "nothing bad in particular." Of these, the largest number were first-year students, and the number decreased as they progressed through the grades, suggesting that the first-year students may not know the capabilities of iPads, or that first-year students who took the newly introduced compulsory digital network foundation course were highly satisfied with the course and they learned how to best use their iPads.

Table 4. Disadvantages of iPads for English Study (Multiple Responses Possible)
(Coded = 168)

Disadvantage codes	*n*（%）	Selected comments
Limited functionalities	31（18.45%）	*There are some operations in Word, etc., that cannot be done on the iPad.*（Participant 1069）
Difficult to operate	24（14.29%）	*Until I learn how to use an iPad for learning, I cannot study English.*（Participant 1043）
Wi-Fi needed	19（11.31%）	*I cannot study English using an iPad without Wi-Fi.*（Participant 1082）
Prevent from memorizing words	14（ 8.33%）	*It is difficult to memorize spelling with an iPad. The word you are trying to spell will automatically appear.*（Participant 1177）
Charging necessary	7（ 4.17%）	*The battery does not last long because I have to keep using it everyday.*（Participant 1137）
Difficult to carry	7（ 4.17%）	*Inconvenient to carry.*（Participant 1101）
Bad for eyes	6（ 3.57%）	*I cannot use an iPad for long periods of time because of eye fatigue.*（Participant 1056）
Easily distracted	3（ 1.79%）	*I tend to look at different information.*（Participant 1089）
Nothing bad in particular/ Happy as it is	52（30.95%）	*I feel that learning English with an iPad is quite convenient, so in my opinion, there are not many challenges about this.*（Participant 1014）
I do not know	5（ 2.98%）	

Suggestions for Improving iPad Use

When asked what faculty and staff could do to improve the students' experience of using iPads for English study, 33% of the participants said faculty and staff should provide more support (see Table 5). More than 30% of the participants said that they would like assignments that can be done using iPads or that take advantage of the iPad's features. Students would also like Wi-Fi on every part of the campus, support for purchasing the iPads, more choices in device capacity, Apple TV in all classrooms, charging stations, and distribution of keyboards with the iPads upon matriculation. Other responses included the importance of paper-based materials, such as textbooks, which students can physically highlight or use to write notes. Additionally, 21% said they were satisfied with their iPad experience at the school. Of these, the largest number were first-year students, and the number decreased as they progressed through the grades.

Table 5. Steps Suggested for Faculty, Staff to Support Participants' iPad Use
         (Coded = 184)

Support codes	*n* (%)	Selected comments
Support the usage	57 (30.98%)	*Teachers should also have some knowledge of iPads.*〈*To the extent that they can deal with what to do if data from materials is lost or if screen sharing does not work with Zoom would be enough.*〉(Participant 1174)
Assign tasks that requires special features of iPads	53 (28.80%)	*I believe that more diverse learning methods using iPads should be taught.*（Participant 1069）*Teach a class that will require iPads's special features. Assign a task that can be easily completed with iPads.*（Participant 1179）
Wi-Fi on campus	6 (3.26%)	*Regarding the point mentioned above about not being able to use Wi-Fi. There are places in Jogakuin where Wi-Fi does not work. Especially since I often use the cafeteria, I think it is quite painful that the cafeteria does not have Wi-Fi access. I think it would be better if we could all connect to Wi-Fi anywhere on the campus. I would appreciate it if you could improve the situation.*（Participant 1120）
Support purchase	6 (3.26%)	*Support the purchase of new iPad models as well as give more options for the storage size of the device.*（Participant 1014）
Other	15 (8.15%)	*Paper-based classes should also be valued.*（Participant 1056）
Nothing bad in particular/Happy as it is	35 (19.02%)	*There were no operational instructions, etc., needed, as we received sincere support during the orientation and in class.*（Participant 1076）
I don't know	12 (6.52%)	

Conclusions

Two conclusions can be drawn regarding the first-year course materials using the results reported here. First, participants enjoyed using the digital textbooks. Second, university participants would like to have paper-based workbooks to supplement the digital materials. This suggests that the workbooks currently provided to the IS students

should also be made available to those in the IRD courses. However, no conclusions can be drawn about the suitability of the IS model (separate texts for each IS class) or the IRD model (shared texts between two classes) from these results. While it is tempting to claim a preference for shared classes based on comments from the participants who followed the IRD model, the lack of questions about sharing textbooks between classes directed at the IS group precludes this. In depth interviews with participants from this study who indicated they were willing to discuss their responses should provide insights into this issue. These are planned for after the completion of the fall 2022 semester. In summary, the results suggest that the digital textbooks developed by the faculty are meeting the needs of most of the participants, though workbooks would add to the students' understanding of the materials.

Furthermore, it is also clear from the responses that faculty and staff need to be better equipped to address problems students might be having with iPads during their studies. In addition, the responses indicate that participants are aware of the limitations of an iPad, as expressed in the request for keyboards and broader Wi-Fi access on campus.

Interviews with participants in this survey might also reveal students' attitudes regarding the difficulty of the language and the activity types for the 18 sections in each chapter of the digital textbooks. Similarly, this might also reveal how participants used the printed workbooks. This would illuminate the areas of perceived difficulty with the materials and help teachers better address these problems during their classes.

Finally, as the data is only part of that collected for a much larger study, further comparison of the responses with the participants' perceived technological literacy and tech use might reveal more subtle differences among the responses. This data will surely add to our understanding of the use of iPads and technology. However, space limitations precluded discussion in this paper.

Note

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Appendix
English Text of Survey Items Reported

The survey was provided in English and Japanese. Numbers refer first to the section and then to the consecutively numbered items. Only the items reported appear here. The survey is available upon request.

Section 3 of Survey (All)

3.3   Please provide your most recent TOEIC or TOEIC-IP score.

3.4   What language do you use at home?

3.5   What is your year in school?

Section 4: Asked of First-Year Students Only

4.6   I am currently studying in . . . *(program)*

Section 5: Asked of First-Year College Students Only

5.7   Please indicate your opinion: "I enjoyed using the iBooks."

5.8   What words describe your view of each of the iBooks?

5.9   Using the workbook helped me to understand the content for each of the iBooks.

5.10   How much of each workbook did you use in your IS classes?

5.11   How often did you use the workbook?

5.12   What word best describes your view of each of the workbooks?

Section 6: Asked of First-Year University Students Only

6.13   Please indicate your opinion: "I enjoyed using the iBooks."

6.14   What words describe your view of each of the iBooks? *(multiple selections possible)*

6.15   How many chapters have you completed so far in each IR/ID class?

6.16   What do you think about covering part of each iBook in reading (IR) and part in discussion (ID)?

Section 7: Asked of Second- to Fourth-Year Students Only

7.17   Which classes did you take in the first year?

Section 8: Asked of Second-Year College Students Only

8.18   Please indicate your opinion: "I enjoyed using the iBooks."

8.19   What words describe your view of each of the iBooks?

8.20   Using the workbook helped me to understand the content for each of the iBooks.

8.21   How much of each workbook did you use in your IS classes?

8.22   How often did you use the workbook?

8.23   What word best describes your view of each of the workbooks?

Section 9: Asked of Second to Fourth-Year University Students Only

9.24   Please indicate your opinion: "I enjoyed using the iBooks."

9.25	What words describe your view of each of the iBooks?
9.26	How many chapters have you completed so far in each IR/ID class?
9.27	What do you think about covering part of each iBook in reading (IR) and part in discussion (ID)?

Section 10: Responded "Liked Sharing" (Only University)

| 10.28 | In one or two words, why did you like sharing the iBooks with 2 classes (IR & ID). |

Section 11: Responded "Neither" or "Did Not Like" Sharing (Only University)

| 11.29 | In one or two words, why did you like sharing the iBooks with 2 classes (IR & ID). |

Section 12: Improve iBooks (All)

| 12.30 | What is one thing that would improve the OJ first-year iBooks? |

Section 13: Technology Use (All)

13.31	Before you were a student at OJ, how much did you use these devices for schoolwork?
13.32	Currently, how much do you use each of the following devices for schoolwork?
13.33	On my iPad, I can:

Upload an assignment (to Moodle or Google Classroom)

Copy documents & rename

Edit documents or spreadsheet files

Create a shared document

Share my screen in an online meeting

Edit videos for class assignments

Organize files into folders (for a class or group)

Host a meeting (Zoom, Google Meet)

| 13.36 | What do you wish you had known how to do with your iPad when you were a first-year student? (Please give us detail.) |

Section 17: Current iPad Usage in Classes (All)

17.42	In a typical week, how many times do you use your iPad to do the following in English?
17.45	What are the strong points of using an iPad to study English?
17.46	In what ways do you feel studying English with an iPad is challenging?
17.47	What could Osaka Jogakuin faculty and staff do to make using the iPad for studying English a better experience?