AKITA INTERNATIONAL UNIVERSITY GLOBAL REVIEW

Volume X
2018

AIU
Global Review

Volume 10
2018

Editorial Board

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Call for Manuscripts

Manuscripts for Volume 11 (2019) of the *AIU Global Review* must be sent to AIU Press (aiupress@aiu.ac.jp) as an attachment to an email by September 27, 2019. Manuscripts undergo blind peer review by at least two qualified scholars.

Manuscripts MUST conform to the following guidelines:

1. All articles must be the result of original academic research bringing new elements to scholarship and of up to 10,000 words (or up to 1,000 words for a book review), including footnotes and bibliography. Please note that the journal also welcomes articles on pedagogy, empirical or theoretical in nature, with a clear potential for contributing to the relevant academic field either by their innovative approaches or by their theoretical elaboration going beyond a narration of personal experiences

2. Manuscripts are to be submitted in Microsoft Word format, **single-spaced**, Times New Roman font, size 11 for texts and size 10 for footnotes. **Margins 25.4 mm** from each of four sides**, with custom page size 159.8 mm wide and 236 mm high.**

3. Include a concise abstract at the beginning of the manuscript, with three to five key words.

4. Capitalize each major word in the manuscript's title (size 14 font), section heading and illustration titles.

5. **Embolden** and **number** section headings.

6. *Italicize* all foreign words (including Japanese words) and titles of books.

7. **No paragraph indentation** but a single space between paragraphs. **No automatic spacing** before and after paragraphs.

8. All sources must be properly cited according to the proper discipline-relevant style, but all major English-language citation systems are accepted (e.g., Chicago, APA, and MLA).

9. All charts, maps or other illustrations can be provided in colors or black-and-white format.

10. Attach a one-paragraph biography when submitting your manuscript.

11. Before submitting your manuscript by September 27, send to the e-mail address below a notice of intent by July 12, with the title and brief description of your article.

12. All correspondence should be sent to aiupress@aiu.ac.jp.

From Woe to Go: Using Commercial Textbooks More
Effectively for Vocabulary Acquisition and Retention

Cherie BROWN
Rachael RUEGG

Abstract: It is commonly accepted that words should be
learnt according to their frequency of appearance in the
language. Furthermore, it has been found that the depth of
cognitive processing required in the process of learning a
word has a significant effect on the probability of retention.
Previous studies demonstrate that commercial ESL reading
textbooks and integrated-skills course books often present
inadequate target vocabulary and often incorporate
vocabulary activities which require little cognitive
processing. These findings suggest that many reading
textbooks and integrated-skills course books may not be
effective tools for learners to acquire and retain appropriate
vocabulary. This paper will describe modifications which
can be made to commercially published materials and
supplementary activities which can be added in order to
increase the amount of vocabulary acquired and retained
by learners.

Introduction and Background

It is commonly accepted that words should be learnt according
to their frequency of appearance in the language, with the most
frequent being learnt first and the least frequent being the last
priority. As early as 1953, West (1953) created and shared the
General Service vocabulary lists, which contain the 2,000 most
frequently occurring words in the English language. These lists
helped teachers and learners to decide which vocabulary is a
priority to learn. It has been demonstrated that these 2,000 words
make up 78.1% to 90.3% of texts, depending on the text type
(Nation, 2001). After learning the 2,000 most frequent words, if

one has a learning purpose which is academic in nature he or she would be recommended to learn the Academic Word List (AWL) next (Coxhead, 2000). The AWL in addition to the General Service List would increase the percentage of text coverage to 84.2% to 92.2%, depending on the type of text (Nation, 2001).

Furthermore, it has been found that the depth of cognitive processing required in the process of learning a word has a significant effect on the probability of retention. This "Task Involvement Load Hypothesis" was first proposed by Laufer and Hulstijn (2001). It has since been corroborated through empirical evidence in a number of studies, including a supporting study by Hulstijn and Laufer (2001) themselves, in which students from two different language backgrounds were separated into groups who participated in three different kinds of activities: Reading comprehension with marginal glossary, reading comprehension with gap-fill, and writing a composition using the target words. Students who wrote a composition using the target words, requiring a greater amount of cognitive processing of the words, acquired and retained the target words to a significantly larger extent than those in the two reading groups.

Likewise, Kim (2011) offered comprehensive corroboration of the Task Involvement Load Hypothesis through two studies, one of which compared tasks requiring different levels of task involvement, while the other involved tasks requiring the same level of task involvement between learners at different proficiency levels. Her findings support the Task Involvement Load Hypothesis and demonstrate that it holds true for different proficiency levels.

Similarly, other studies have compared productive tasks with receptive tasks and without exception they have found that productive tasks (which require a higher level of cognitive involvement with the target words) are more effective for vocabulary learning than receptive tasks (which require a lower level of cognitive involvement). Most notably, a meta-analysis by Huang, Eslami, and Willson (2012) systematically analysed

empirical evidence from 12 studies on the Task Involvement Load Hypothesis and found that the more output was involved in the research treatment, the more vocabulary was learnt. Indeed, Ellis and He (1999) found that not only did output increase learning, but that output was a *necessary* step in the learning process.

The three important factors constituting the involvement load of a task, according to Laufer and Hulstijn (2001), are "Need," "Search," and "Evaluation." Keating (2008) and Eckerth and Tavakoli (2012) focused their study on the third factor, "Evaluation" and found that when learners were required to carry out more evaluation of words, they learnt significantly more words than when no evaluation was required. They conclude that "Evaluation" in particular is an important factor for vocabulary learning.

What vocabulary should be learnt, in what order, and how vocabulary should be learnt is well-known in the field of language education. However, commercial textbook publishers do not necessarily apply this knowledge when producing textbooks. This has been demonstrated in several previous studies.

Ruegg and Brown (2014) demonstrated that commercial ESL reading textbooks and integrated-skills course books often focused on vocabulary that may be unsuitable for the level of students for which the books are purportedly intended. They analysed the target vocabulary content of 20 commercially published L2 reading skills textbooks and 20 integrated skills language textbooks, intended for students at the intermediate level or above, and found that on average 17.17% of the target vocabulary was from the most frequent 1,000 words, and up to a maximum of 60%, which is clearly inappropriate for learners at the intermediate level or higher.

Another previous study (Ruegg & Brown, manuscript submitted for publication) demonstrated that commercial ESL reading

textbooks and integrated-skills textbooks often include vocabulary learning tasks which do not require a high level of task-induced involvement and therefore may be less than effective for vocabulary learning. They analysed the vocabulary learning tasks in 20 L2 reading textbooks and 20 integrated-skills language textbooks in terms of the Task Involvement Loading of each activity and the total task-induced involvement with each target vocabulary item. They scored the activities on a scale of 0 to 4, whereby 0 represented no task involvement load whatsoever and 4 represented medium need, high search and high evaluation, and found that the average task involvement load of each activity was just 1.8, while the minimum task involvement load of any individual activity was 0 and the maximum task involvement load of any individual activity was just 3, out of a possible 4. Moreover, when investigating the task-induced involvement with each vocabulary item after completing all the vocabulary-related activities (assuming all vocabulary-related activities are completed) they found that the average was 2.77, while the minimum task-induced involvement with an individual target vocabulary item was 0 and the maximum was 11.5. Only one activity out of every nine involved production beyond the single word level and only one activity out of the 53 analysed, involved *written* production beyond the single word level.

These previous research findings suggest that many reading textbooks and integrated-skills course books may not be the effective tools for learners to acquire and retain appropriate vocabulary that users hope them to be. It seems that teachers and learners cannot always rely on textbooks to provide appropriate vocabulary for learners needs, nor to provide sufficient opportunities for interaction with the vocabulary to allow for learning to take place. In order for learning to take place, learners require vocabulary which is at the right level (the level up to which they have progressed, but which they have not yet mastered) and vocabulary activities which will involve interaction with the words, and specifically production of the words in appropriate ways and in appropriate contexts. A process by which teachers and learners can adapt and supplement the

target vocabulary and the vocabulary related activities in commercially produced textbooks in order to increase their potential for vocabulary learning will be explained in the rest of this paper.

Practical Applications

In light of the research cited above and the need to provide both vocabulary content and vocabulary learning opportunities that were appropriate, one of the present authors created the following eight-step teaching/learning process for use within her teaching context (an "English for Academic Purposes" [EAP] reading skills course at a Japanese university), with the view to offering this as a model for other teachers to explore and adapt when working in similar circumstances, where the use of specific textbooks is required. This was considered important, since in many teaching situations, replacing prescribed resources is impracticable or even impossible. The process outlined below may be adapted by classroom teachers who are required to use set textbooks, to fit their own classroom contexts, provided the basic principles explained at each stage are kept in mind.

Step One: Pre-Testing

Teachers should pre-test their learners in order to ascertain current vocabulary knowledge. Before beginning any course of study, or implementing any sort of pedagogical intervention, it is important to know what the students already know, and to identify what it is they still need to learn (Johns, 1991). Since it has been demonstrated that a strong knowledge of high frequency vocabulary is of critical importance to language learners (Nation, 2001) the pre-test should provide teachers with information about the extent of each learner's vocabulary knowledge. In the authors' case, and in the absence of a range of rigorous vocabulary measurement tools from which to select a pre-testing mechanism, Nation and Beglar's "Vocabulary Size Test" (Nation & Beglar, 2007) served well to indicate the extent of learners' present knowledge.

The data from the "Vocabulary Size Test" provided a starting point from which to begin to design an appropriate learning programme for the students. The students in this class were, in most cases, still operating within the second 1000 high frequency word list of West's General Service Word Lists (West, 1953). In other words, they had achieved mastery of the first 1000 words, but not yet mastery of the second 1000 words, 80% being identified as the necessary standard which indicates readiness to proceed to the next vocabulary level (Nation, 2001). After the pre-test, feedback should be given to the learners, indicating their present (approximate) English vocabulary level.

Step Two: Selecting and Analysing Reading Texts

Particular reading texts were selected from the existing reading textbook, for the learners to study during the course, and the vocabulary content was analysed using "Lextutor" (Cobb, n.d; Heatley, Nation, & Coxhead, 2002), an online vocabulary profiling tool. Through this process, it was determined which words, present within the reading text, are also found on the word list that the teacher has identified as the appropriate level for the students. High frequency word lists vary, as do teachers' preferences, but several useful sources of lists might include: West's General Service List (West, 1953), Coxhead's Academic Word List (Coxhead, 2000), or more recent word lists such as Brezina and Gasblasova's New General Service List (Brezina & Gablasova, 2015). If access to a text analysis tool is not possible, texts may be analysed manually, though this is considerably more time-consuming.

While it may be laborious to type up reading texts then paste them into an online text analysis tool such as "Lextutor," this process may be hastened by scanning the text and then reformatting it so that it can be manipulated using transformational software. In any case, where a teacher is likely to teach the same course, using the same textbook, the task, once

done, will be of use again in the future and will eventually enable speedier lesson preparation. Once the text analysis has been completed, and the teacher has identified which words from the text are also found on the word list appropriate to the level of the learners, they can then begin to create materials for use in class.

Step Three: Preparing Students and Creating Word Lists

Step Three involves two concurrent processes, preparing and motivating students to learn the words the teacher has identified as being appropriate to learn (which are likely to be different from those identified as important in the textbook), and creating the wordlists for the course. Preparing and motivating learners to focus on the words the teacher has selected is important, since learners may well question why a teacher is not using the vocabulary suggested by the textbook. Similarly, if a teacher deviates from the activities supplied in a textbook, learners may need reassurance that the teacher is making wise decisions. The fact that a learner is presented with a textbook, and subsequently does not use the material as it is presented, may be perplexing to them. Therefore, learners need to be provided with a strong rationale that will explain both *what* the teacher is aiming to achieve, and *why* they need to take a different route from that laid out in their apparently "authoritative" commercial publication.

Providing learners with a strong rationale, which includes some of the information contained in this paper, should go some way towards ensuring they are willing to trust a teacher who is doing something "different." It will also expose learners to opportunities for metacognitive classroom discourse, thus enabling them to better understand the relative usefulness of the vocabulary they are expected to learn, and provide them with some incentive to explore the effectiveness of their present learning strategies. Armed with this knowledge, it is hoped that they will also become more aware of how they can take greater control of their own learning processes, since the information will enable them to self-select vocabulary they need to know more independently.

Providing brief, but useful and informative input prior to implementing a new vocabulary learning approach will thus offer learners a sound theoretical basis that can help persuade them to begin building their knowledge in a way that will be more effective. This input could cover some of the following points:

1. There are some words that are of *higher learning priority* than others (i.e., the most common words in the target language). An explanation of the importance of knowing *high frequency* vocabulary (Nation & Waring, 1997).
2. Learners aiming for tertiary study in English need to know the high frequency *academic words* in order to succeed at university level (Coxhead, 2000). The AWL is divided into sublists, which are also arranged according to frequency. Therefore, learners who are starting out in their learning of the AWL, should focus on learning the words that appear in the early sublists, before those that appear in the later ones.
3. The need to know subject-discipline specific vocabulary *is less important* than knowing the high-frequency academic words which appear in the AWL.
4. By putting this information to use, learners are able to become more successful *independent vocabulary learners*, since they will be able to identify *which* words they *need to know* at varying stages of their learning.
5. Information about *where to access high frequency word lists*, for self-study purposes, including (online) practice activities should be provided.
6. Along with knowledge about which words to learn and why, learners would also benefit from knowing, early in their course of study, some basic information about what to do and what NOT to do when learning *new* words. For example…
   a. They should avoid learning new words that are similar in form or meaning simultaneously (Nation, 2001, p. 92).
   b. They should avoid learning new words simultaneously with their synonyms and antonyms if

c. They should review words frequently and practice "spaced repetition" strategies when reviewing words (Nation, 2001, pp. 76-77).

d. "Deep processing" is more likely to result in long-term retention (Hulstijn & Laufer, 2001), than use of more superficial methods, such as a quick reference to a glossary or completing matching and gap-fill activities.

Learners equipped with this kind of information will be more willing to accept ways of learning target vocabulary that are different from those often presented in textbooks. They will also more readily participate in activities that require more effort and deeper cognitive processing.

The classroom teacher also needs to begin creating wordlists that will accompany each of the (previously analysed) reading texts to be used. Using the words identified as suitable for the learners from the selected reading texts, the teacher should construct a wordlist for each text. In the case of the author's class (who were at the 2,000 word level), approximately twenty words were provided at the second 1000 word level, which all learners in the class were expected to learn, with extra AWL words for the more capable learners. Students would be tested on the first twenty words but were free to extend themselves by moving on to the extra words. An example of a typical word list, based on an analysed reading text from a commercial textbook is provided in Table 1.

Table 1: Example Wordlist

Note to Students: It is important to learn the K2 words first, before you learn other unknown words in the reading text, as these words occur most often in everyday English. After that, if you know all of the words on the K2 list, you should learn the words from the AWL list. Other words in the reading text that you don't know may help you to understand the reading text, but it is not important for you to learn those words right now.

K2 words*	… perform
ceremony	permanent
collect	rain
copy	sand
crush	shelter
during	sick
evil	slowly
exactly	sweep
grind	terrible
healing / health	tourists
medicine	treat
original …	weave

AWL words* (Words from sublists one and two)
Learn these words ONLY if you ALREADY know ALL of the words above!
area
assistance
create
environment
final
process
required

*K2 words = words from the second 1000 high frequency General Service List. AWL words = words from the high frequency Academic Word List.

Table 1 is an example wordlist which was created for use with the text entitled Navajo Sand Paintings in lesson one of the textbook *Concepts and Comments* (Ackert and Lee, 2005, 4).

Step Four: Modifying Reading Texts and Introducing Word Lists and Readings

After constructing the wordlist to accompany the reading text, the next stage is to modify the reading text itself. This involves making a digital copy of the reading text either by scanning it and using transformation software to convert it from a scanned image into text that can be manipulated, or by typing the text into a word document manually. Once the text has been reproduced in digital format, the teacher then highlights the target vocabulary (from

the wordlist relating to that text) by **bolding** each target item the *first* time it appears in the reading. (While it is tempting to highlight every occurrence of a target word, this may result in too many words being highlighted in one reading text, making the text visually cluttered. Likewise, a cluttered text makes it difficult for learners to find a target word quickly, when they need to locate it later.)

Alternatively, instead of modifying the text itself, a teacher can provide the wordlist, and, in class, ask students to highlight those words manually with a highlighter pen in their own copies of the textbook. Again, learners should be asked to highlight the target words only the FIRST time that they appear in the text. A teacher can use an overhead transparency as a model, or learners can work on the task themselves, or in pairs. The task could also be presented in the form of a race, depending on the teacher's preference. Doing the task in class enables the learners and the teacher to check that the words have been identified correctly.

Bolding or highlighting target words within a reading text is also deemed to be useful for purposes of "noticing" (Ellis, 1991; Schmidt, 1990). Vocabulary acquisition research also indicates that identifying and modifying target words clearly in reading texts (by means of bolding or italicizing, for example) results in higher rates of retention (Anderson, 1995; Baddeley, 1997). A segment of a modified reading text is provided in Table 2 as an example. Compare this with the target vocabulary identified by the authors of the textbook (also bolded on first mention) in Table 3.

Table 2 is an example (partial) text, which has been modified in order to increase learner attention to the target words. The target vocabulary is identified by bolding each item the *first* time it is used. This example is also drawn from lesson one in the textbook Concepts and Comments (Ackert and Lee, 2005, 4). In this example, only target words from the second 1000 GSL are highlighted, though there are also numerous examples of words from the AWL.

Table 2: Example Modified Reading Text (partial text only)

Reading Text: Concepts and Comments. Theme: "Navajo Sand Painting"

Note to Students – Important vocabulary is highlighted in **bold** type the first time it is mentioned in the reading text. As you read the text, try to notice the bolded words every time you see them. Remember to also look for other forms of the same word (e.g. manage / manager / management). Doing this will help you to learn these words more easily, and you will also see how they are used in context.
_____

"More than 500 years ago, the ancestors of the Navajo people left the cold northern region that is now part of western Canada and Alaska and migrated south to what is now the southwestern part of the United States. The area in which the Navajo finally settled is mainly desert. It is a harsh environment that gets little **rain**. The animals and plants that live there have had to adapt in order to survive in the unforgiving climate and landscape.

When the Navajo arrived in the area, they too had to adapt to the harsh desert conditions in order to survive. They had to learn to make use of the natural resources in their environment to provide for their **shelter**, food, and other necessities. Over time, the Navajo became famous for the things they were able to create from the natural resources at hand. One of the most famous Navajo creations is called **sand** painting.

Most people think of a painting as a work of art. For the Navajo, however, sand painting is not artwork. Rather, sand painting is an important part of a religious **ceremony**. The making of a sand painting is part of a **healing** ceremony that is supposed to restore the **health** and well-being of a **sick** person."

Target words (from the second 1000 GSL): rain, shelter, sand, ceremony, healing / health, sick.

Table 3: Example Original Reading Text (partial text only)

More than 500 years ago, the **ancestors** of the Navajo people left the cold northern region that is now part of western Canada and Alaska and migrated south to what is now the southwestern part of the United States. The area in which the Navajo finally settled is **mainly** desert. It is a **harsh** environment that gets little rain. The animals and plants that live there

> have had to **adapt** in order to survive in the **unforgiving** climate and **landscape**.
>
> When the Navajo arrived in the area, they too had to adapt to the harsh desert conditions in order to survive. They had to learn to make use of the natural resources in their environment to provide for their shelter, food, and other necessities. Over time, the Navajo became famous for the things they were able to create from the natural resources at hand. One of the most famous Navajo creations is called sand painting.
>
> Most people think of a painting as a work of art. For the Navajo, however, sand painting is not artwork. Rather, sand painting is an important part of a religious ceremony. The making of a sand painting is part of a **healing** ceremony that is supposed to **restore** the health and **well-being** of a sick person.

Table 3 shows the original reading text from lesson one of the *textbook Concepts and Comments* (Ackert & Lee, 2005, p. 4). In the above example of the text, the target words identified by the authors of the textbook, "ancestors," "harsh," "unforgiving," and "landscape" are *low frequency* ("off-list") words, meaning they were of low priority to learners. On the other hand, "mainly" and "well-being" appear on the first 1000 GSL word list, meaning that these items were already probably known by the majority of the class in this case, so these, also, did not need to be studied. In fact only *one* word from this section of the reading text, 'healing', being from the second 1000 word list, was appropriate to the learners in question.

The modified text should then be presented to the learners (though they do not yet have to read it), along with the wordlist that has been drawn from the text, with the explanation that the list words have come from the reading text they are about to read. At this stage, the learners should focus on the wordlist first, giving brief attention to the *form* of each item only (Nation, 2001), such as spelling, the part of speech of the word, and pronunciation (including the correct stress).

Learners can first check the list, and identify any words they already know, then work in pairs or small groups, and explain to

each other which words they need to learn, and/or ask questions of each other about those words they feel less familiar with. The teacher can also take time during this process to answer any questions or point out any particular features of individual words that learners need to consider (e.g., spelling variations, unusual plural forms).

Soon after the lesson in which learners meet the wordlist they are to study, they should be asked to complete the reading text for homework, to see the words they are aiming to learn in context, and they should begin learning the *meanings* of the words on the list. At the same time, they should be encouraged to begin keeping vocabulary records for the new words they are learning, that will enable them to record all aspects of word knowledge related to those words. As they learn the target words, they should be instructed to focus on the meaning of each word *as it is used in the reading text.*

If learners are unfamiliar with the meaning (and use) of a word, focusing on the meaning, as it is found in the text, also provides learners with an accurate model of the word in use, in a context that they know they will have to understand. In contrast, a "freestanding" example sentence in a dictionary, in which meaning is divorced from that of the context of the reading, may be found alongside a wide range of sentences exemplifying meanings that learners are not yet equipped to select from, thus creating a more challenging task – that of selecting an example sentence demonstrating *appropriate* meaning (i.e., the same meaning as that found in the reading text). In relation to the previously mentioned three steps of "deep processing," drawn from the "Task-involvement Load Hypothesis," once meaning has been well-established for the first time, dictionary use - where locating an appropriate choice from a range of meanings requires "evaluation" – provides a step up in the learning process, in that learners, at some stage, have to make appropriate choices of words for the contexts of use they create (in their own original language production, in speaking or writing activities, for example.)

Only if they already know a target word's meaning (as it is used in the text,) should learners be encouraged to learn other meanings of the word. In fact, this is a useful extension activity for the more capable learners in a class who may already be familiar with some of the words on the assigned list. To be fair, however, assessment items should reflect the meaning of the target word as it is used in the assigned reading text.

Teachers can decide on the pace at which words are to be covered, depending on their circumstances. In the case of the class described here, reading lessons took place twice a week, and learners were introduced to one reading text a week. This required them to learn around 20 to 25 new words per week. Quizzes took place approximately every two to three weeks, which tested two word lists at the same time. In learning terms, this equated to around four to five new words per week day, with "weekend" time for review, which was deemed to be a realistic and manageable quantity in the context of the learners' entire EAP programme, since the reading course was only one of several courses that they were required to take simultaneously.

Step Five: Speaking Production Task

In a lesson subsequent to the introduction of the target word list, *after* the learners have read the assigned reading text and completed comprehension check activities, and once enough time has elapsed for learners to have learnt most of the vocabulary, the next stage is to provide a semi-controlled speaking activity designed to give learners an opportunity to use the target vocabulary in freer production. ("Semi"-controlled, here, means that the content of the speaking task had to be directly related to the reading text, while the ideas were paraphrased into the learners' own words.).

Learners were provided with a speaking production task worksheet like the example in Figure 1, which had earlier been

created by the teacher for this purpose. Learners were given an opportunity to read the target words on the worksheet. Then they were asked to work with a partner, whose name they wrote at the top of the worksheet. Each person took turns to recount the content of the reading text in their own words, within a set time frame. In this case, the teacher used a stopwatch, and allowed each person a maximum of five minutes speaking time each. The goal was for each learner to use as many of the target words as possible, while recounting the information in the reading. They were not allowed to read directly from the textbook, though they were able to quickly check content if they forgot any of the information. Each time a speaker used a target word, their partner put a tally mark in the middle column, and, if they felt confident enough to do so, put a check mark in the 'correct' column, if they believed the word had been used correctly. Alternative parts of speech for a listed word were acceptable provided the word was deemed to be used appropriately. The goal was for each learner to achieve a high tally in each column. They were not asked to compete against each other, but to retain the sheets for comparison with their own performance in future similar speaking production tasks. After each partner had completed the reading text recount, they exchanged worksheets and discussed how they had done. There was also an opportunity for questions.

Speaking Production Activity: **'Concepts and Comments':** "Navajo Sand Paintings"

Your Partner's Name: _____

Word	Number of times it was used?	Correct?
EXAMPLE #1 - Manage	✓ ✓ ✓ ✓ = 4	✓
EXAMPLE # 2 - Specific	✓ ✓ = 2	**X** (pronunciation)
ceremony		
assistance		
required		
collect		
extend		
terrible		

healing		
create		
exactly		
original		
evil		
adapt		
perform		
reverse		
environment		
permanent		
respect		
weave		
process		
area		
Totals		

Figure 1: Example speaking production task – pair worksheet.

The goals of the speaking production activity were to activate use of target vocabulary, to review reading text content, and to provide opportunity for speaking fluency skills development. Learners kept their sheets and were able to compare the number of words they successfully used each time they did the task. Though this was a reading and not a speaking class, over time, they became faster at recounting the reading texts and their tally scores improved.

Interestingly, the first time the learners were presented with this task, several commented on how difficult it was to "use the words" by themselves (i.e., in original sentences). This provided an opportunity to reiterate the need for "deep processing" along with the information about the usefulness of original production activities for long-term retention, which had been explained previously in Step Three.

Having previously been armed with this information, those learners who had commented on the challenging nature of the task, then threw themselves even more energetically into future production tasks, and in the end, eventually asked for completely free speaking production tasks, unrelated to the reading chapter

content but similar in theme, so that they could practice using the target vocabulary in completely uncontrolled ways.

Step Six: Review

One possible extension activity is to ask learners to repeat the activity on their own (for homework) and to record themselves as they do this. They could then transcribe those parts of the recording in which they used the target vocabulary and submit the transcripts for the teacher to check for accuracy. This could then be used for assessment purposes, but either way, has the added advantage of providing learners with a further opportunity for meaningful content and vocabulary review.

In any case, opportunities for review need to be built into the vocabulary learning process, either in or outside class. When choosing review activities, teachers and learners should keep in mind the principles previously outlined in Step Three. As previously mentioned, supplementary resources, such as online activities, might also be suggested, with links provided for learners to access these for themselves.

Step Seven: Writing Production Tasks

Sometime after the speaking production task has been completed, and in a separate lesson, learners should also be given the opportunity to use the target vocabulary in a writing production task. This, of course, also provides opportunity for review. One way to do this, and one which extends the learners' opportunities for less controlled practice, is to assign a topic related to the theme, but that does not require them to simply regurgitate the content of the reading text. The topic, therefore, should correspond to the reading text in some way, but should not be so complex as to be outside the learners' personal experience. The task could be completed on a template provided by the teacher (or in a notebook) that can be collected by the teacher for grading purposes. While the writing task should be timed (depending on

the level of ability of the learners, this might range anywhere from three to eight minutes), it may be useful to help learners generate ideas before they begin to write.

The pre-writing, "thinking" task in Figure 2 (in the form of a short, planning activity), provides an example of how learners can prepare themselves to write. Writing tasks in a prescribed textbook may be of use for this activity, provided the teacher is convinced that the task as described in the textbook will generate enough opportunities for learners to demonstrate they know how to use the target vocabulary.

Figure 2 shows an example writing task to consolidate vocabulary learnt through reading. The task in Figure 2 was adapted from one in lesson one of the *textbook Concepts and Comments* (Ackert & Lee, 2005, p. 12). In this task students are first asked to brainstorm ideas and vocabulary, and then to write. Once the writing task has been completed, pairs of students should exchange their writing task sheets. Each student should count the number of times target words (in any form) were used and write the total number at the bottom of the page, remembering that a target word may be used more than once, so each occurrence counts as one. Partners should also comment on whether or not they believe the words were used accurately and appropriately. Each learner should be ready to justify their opinions about this. Task sheets should be returned to their writer, then the pairs should spend a few moments discussing their work with each other. This is a good time for questions, during which the teacher should be on hand to clarify any areas of doubt. Finally, the task sheets can be collected by the teacher for checking and grading. Over time, learners may find it motivating to keep a progress graph indicating the number of words they were able to use within the set time limit. As their vocabulary knowledge and writing fluency skills improve, they may begin to see an improvement in their scores.

Instructions to Students: Write about a painting or photograph that you have seen. What did it show? Why is it memorable to you?

Before you begin, you have **three minutes** to think of some ideas that will help you to write. Make BRIEF notes on the chart first. (Write one or two words in each box, not full sentences) **DO NOT** start to write about the topic until your teacher tells you to begin.

What the painting/ photo shows	Words (e.g. adjectives) describing what I thought of it

When your teacher tells you to begin, write about the topic. Remember, your goal is to **use as many of the words on your vocabulary list as possible**. You may use each word more than once, and you may use any form of a word. **Write as much as you can,** and **keep writing until your teacher tells you to stop**.

_____
_____
_____
_____
_____
_____

(N.B. The example does not provide enough space, extra lines should be provided.)

Figure 2. Example of writing task.

Step Eight: Post-Testing and Feedback

At the end of the vocabulary learning process, a post-test needs to be conducted. The post-test should be compatible with the pre-test, but not exactly the same. In this case, an alternative version of the 'Vocabulary Size Test' was used. The data from the two tests can then be used to give learners and the teacher an indication of approximate changes (if any) to vocabulary level and size.

At the same time, it is also useful, for the sake of future teaching, to gather qualitative feedback from learners, indicating aspects

of the vocabulary learning process they found helpful (or unhelpful), and how they would like to change it. The suggestion for a free speaking production task, mentioned earlier, was made by previous students when this kind of qualitative feedback was gathered.

Qualitative feedback gathered to date indicates that learners' believe their ability to identify and prioritise important vocabulary improved, as did their ability to use high frequency vocabulary in original speaking and writing contexts. The model provided here serves as an example of how insights from recent theoretical studies into vocabulary acquisition can improve classroom practice, in order to create better opportunities for learning to occur with minimal loss of valuable teaching/learning time and energy.

Conclusions

Students in different contexts, at different proficiency levels and with different learning goals have different vocabulary needs. Teachers should adapt the eight-step process described above according to the needs of their own learners and their specific circumstances. While there is always room for flexibility in how teachers implement the ideas described here, it is important that they remain aware of, and utilize, the basic principles underpinning them, since these spring from well-grounded research findings. The most important basic principles to keep in mind are that more frequent vocabulary should be learnt before less frequent vocabulary and that a high level of cognitive involvement is required for learning to take place.

In contexts in which teachers have control over what materials are used in the classroom, the process explained in this paper may not be necessary, the teacher could instead put the principle to use in the creation of their own materials or to supplement authentic texts. In contexts in which the teacher can choose which textbook to assign, step two could be used to analyse the commercially available textbooks and select the most appropriate

one. However, in our experience even the best textbooks require some adaptation and/or supplementation in order to optimize their effectiveness for vocabulary learning and retention. Until publishers start to consistently apply research-based knowledge of what vocabulary should be learnt, in what order and how vocabulary should be learnt in a systematic way, at least some of the steps explained above will be effective in almost all contexts to increase opportunities for vocabulary learning and retention.

References

Ackert, P., & Lee, L. (2005). *Concepts and comments: Reading and vocabulary development 4.* Boston, MA: Heinle Cengage Learning.

Anderson, J. (1995). *Cognitive psychology and its implications*. New York: Freeman.

Baddeley, A. (1997). *Human memory: Theory and practice*. Hove, U.K.: Psychology Press.

Brezina, V., & Gablasova, D. (2015). Is there a core general vocabulary? Introducing the New General Service List. *Applied Linguistics, 36*(1), 1-22.

Cobb, T. (n.d.). *Web Vocabprofile*, an adaptation of Heatley, Nation and Coxhead's (2002) *Range.* Retrieved from www.lextutor.ca/vp/

Coxhead, A. (2000). A new academic word list. *TESOL Quarterly, 34*(2), 213-238.

Eckerth, J., & Tavakoli, P. (2012). The effects of word exposure frequency and elaboration of word processing on incidental L2 vocabulary acquisition through reading. *Language Teaching Research, 16*(2), 227-252.

Ellis, R., & He, X. (1999). The roles of modified input and output in the incidental acquisition of word meanings. *Studies in Second Language Acquisition, 21,* 285-301.

Ellis, R. (1991). The interaction hypothesis: a critical evaluation. In E. Sadtono (Ed.), *Language acquisition and the second/foreign language classroom: RELC anthology*

series 28 (pp. 179-211).* Singapore: Regional English Language Centre.

Folse, K. (2006). The effect of type of written exercise on L2 vocabulary retention. *TESOL Quarterly, 40*(2), 273-293.

Heatley, A., Nation, I.S.P., & Coxhead, A. (2002). Range and frequency programs. Retrieved from http://www.victoria.ac.nz/lals/staff/paul-nation.aspx#vocab-programmes

Huang, S., Eslami, Z., & Willson, V. (2012). The effects of the task involvement load on L2 incidental vocabulary learning: A meta-analytic study. *The Modern Language Journal, 96*(4), 544-557.

Hulstijn, J., & Laufer, B. (2001). Some empirical evidence for the involvement load hypothesis in vocabulary acquisition. *Language Learning, 51*(3), 539-558.

Johns, A. (1991). English for specific purposes: Its history and contribution. In M. Celce-Murcia (Ed.), *Teaching English as a second or foreign language (pp. 67-77).* Boston, MA: Heinle and Heinle.

Keating, G. (2008). Task effectiveness and word learning in a second language: The involvement load hypothesis on trial. *Language Teaching Research, 12*(3)*, 365-386.

Kim, Y. (2011). The role of task-induced involvement and learner proficiency in L2 vocabulary acquisition. *Language Learning, 61*(1), 100-140.

Laufer, B., & Hulstijn, J. (2001). Incidental vocabulary acquisition in a second language: The construct of task-induced involvement. *Applied Linguistics, 22*(1), 1-26.

Laufer, B. (1992). How much lexis is necessary for reading comprehension? In H. Bejoint and P. Arnaud (Eds.), *Vocabulary and applied linguistics* (pp. 126-132). London: Macmillan.

Laufer, B. (1996). The lexical threshold of second language reading comprehension: What it is and how it relates to L1 reading ability. In K. Sajavaara & C. Fairweather (Eds.), *Approaches to second language acquisition* (pp. 55-62). Jyvaskyla, Finland: University of Jyvaskyla.

Nation, I. S. P., & Waring, R. (1997). Vocabulary size, text coverage and word lists. In N. Schmitt & M. McCarthy (Eds.), *Vocabulary: Description, acquisition and pedagogy* (pp. 6-19). Cambridge: Cambridge University Press.

Nation, I. S. P., & Beglar, D. (2007). A vocabulary size test. *The Language Teacher, 31*(7), 9-13.

Nation, P. (2001). *Learning vocabulary in another language.* Cambridge: Cambridge University Press.

Qian, D. (2002). Investigating the relationship between vocabulary knowledge and academic reading performance: An assessment perspective. *Language Learning, 52*(3), 513-536.

Ruegg, R., & Brown, C. (manuscript submitted for publication). "Digging Deep": Using the task involvement load hypothesis to analyse textbooks for vocabulary learning potential.

Ruegg, R., & Brown, C. (2014). Analysing the effectiveness of textbooks for vocabulary retention. *Vocabulary Learning and Instruction, 3*(1), 11-18.

Schmidt, R. (1990). The role of consciousness in second language learning. *Applied Linguistics, 11*(2), 29-58.

Staer, L. (2009). Vocabulary knowledge and advanced listening comprehension in English as a foreign language. *Studies in Second Language Acquisition, 31,* 577-607.

West, M. (1953). *A general service list of English words.* London: Longman, Green, and Co.

Mobility of Visual Culture in Global History: Akita Ranga Painting School from the 18th century Japan

ABE Kuniko

Abstract: This paper aims to propose a global art history narrative of the short-lived Akita Ranga school, the first Western-influenced painting school formed in 18th century Japan. The *Ranga* (Dutch-style painting) is considered a by-product of *Rangaku* (Dutch learning), then flourishing through the mediation of the Dutch *Vereenigde Oostindische Compagnie* (VOC), that facilitated a global diffusion of natural sciences, accompanied by a rich array of travelling images. By resituating each artwork of the school into a broader context of global history, with relevant image sources in time and space, from 16th century anatomy images in allegorical poses, perspective images related to the Chambord castle's double spiral staircase designed by Leonardo da Vinci, in France, to the mythological motifs for the Marble Gallery of the Frederiksborg Castle, Denmark, to herbal images of Shinobazu pond, Japan, the paper attempts to show the international dimensions of Akita Ranga and examining how Akita Ranga's history of travelling images comes full circle with their eventual return to 19th century Europe.

Introduction

The *Akita Ranga* (秋田蘭画) school, the first important Western-influenced painting school in Japan, was formed in the late 18th century by samurai painters originating in the Akita domain. Literally meaning "Dutch-style painting" in Japanese, *Ranga* (蘭画) can be considered a sophisticated by-product of *Rangaku* (蘭学) Dutch learning, or studies of Western sciences by means of the Dutch language), which flourished during the eighteenth

century, through the mediation of the *Vereenigde Oostindische Compagnie*: VOC (Dutch East India Company). Thus the Akita Ranga school is a product of the "Age of Exploration," which not only coincides with the development of the natural sciences, but also facilitated a global diffusion of knowledge, accompanied by a rich array of travelling images.

Over the past decade the study of the Akita Ranga school by Western academics has intensified, since Hiroko Johnson published her pioneering research work in 2005: *Western Influences on Japanese Art: The Akita Ranga Art School and Foreign Books*[1]. As for Japanese historians of art, they have been constantly interested in the study of the Akita Ranga school since the 1970s, culminating in the extensive comparative analytical study of the Akita Ranga school by Riko Imahashi: *The Akita Ranga School and the Cultural Context in Edo Japan* (2009). Generally, in Japan, the study of Akita Ranga has been relatively limited to its place within Japanese or Asian art history. However, from recent years, several initiatives by European academic research groups have been interested in the mobility of material culture and visual culture in a global context and have initiated dynamic research projects. Significant results have been published including Yoriko Kobayashi-Sato's excellent article introducing Akita Ranga school through her penetrating analysis of the Netherlandish mediation between West and East with primary sources: "Japan's Encounters with the West through the VOC" (2014) [2].

The present paper [3], a result of the writer's two-year iconographical investigation into Akita Ranga artworks, is

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[1] Hiroko Johnson, *Western Influences on Japanese Art: The Akita Ranga Art School and Foreign Books*, Amsterdam: Hotei Publishing, 2005.

[2] Yoriko Kobayashi-Sato, "Japan's Encounters with the West through the VOC", in Thomas Dacosta Kaufmann and Michael North (eds.), *Mediating Netherlandish Art and Material Culture in Asia* (2014), Amsterdam University Press.

[3] This paper is a reworked version of the author's article "The International Dimensions of Akita Ranga and Travelling Images" published in the *Journal of the Institute for Asian Studies and Regional Collaboration,* Akita

founded on the perspective of visual culture in a context of world art history. The research (2016-2017) building on my predecessors' studies of the Akita Ranga school, has been assuming a broader cultural horizon and seeking to connect the school's artworks to several relevant sites in time and space, from the Shinobazu Pond in Ueno, Tokyo, Japan, to the Chambord castle's double spiral staircases designed by Leonardo da Vinci, in Loire, France, Frederiksborg Castle in Hillerød, near Copenhagen, Denmark, and the Flemish engraving: *Good Samaritan* by Jan Brueghel the Elder, among others. This paper[4] aims to propose a new narrative for the highly sophisticated images of Akita Ranga through the following steps: an analysis of the products of Akita Ranga and their corresponding Western image sources, an interpretation of Akita Ranga's Western art theories, a demonstration of the school's inventive composition as the consequence of its interaction with European models, and, finally, a look at how Akita Ranga's history of travelling images comes full circle with its eventual return to Europe.

Japan Meets the West

The relationship between Japan and the West started in the mid sixteenth century during the great age of exploration. Christian missionaries, represented by Francis Xavier, reached Japan in 1549. Since then for almost a century Japan was introduced to various examples, both physical and abstract, of European culture and civilization. Japan's first encounter with West through Portuguese merchants is depicted in Japanese screen paintings which are the first Western-influenced works in terms of subject matter, though not for pictorial techniques. These works are called *Nanban* (南蛮 southern barbarians) paintings and were executed by painters of the reigning official Kanō

International University, VII, 2018, including new elements from her recent research in Denmark in 2018.

[4] In this paper, historical Japanese persons' names are given in the Japanese order: family name first and given name next.

school (狩野派), who were masters of traditional Japanese technique in a decorative style.

This period is followed by the Edo era (1600-1867), a period of centralized feudal rule under the Tokugawa *bakufu* (幕府 feudal military government). Early in the Edo era the third Tokugawa Shogun forbade the Japanese from going abroad and banned all foreigners from Japan. Christianity was banned by the *bakufu* in 1642, and Portuguese traders were replaced by the Dutch, who did not engage in missionary work. After 1642, consequently, Japan was officially closed except for Dejima in Nagasaki, which was the location of the Dutch factory and the only contact point, under government strict control, with the Dutch and Chinese, who had exclusive trade rights with Japan until 1858.

Despite this isolationism, in the 1720s there was a relaxation of the ban on the import of non-Christian books. This measure spurred the development of *Rangaku* among Japanese elites, and also *Ranga* paintings influenced by western manners. These scholars and painters went to Dejima in Nagasaki in order to obtain Western books and knowledge. The "Dutch Learning" mania affected various aspects of society, including Japanese painting methods and subject matter. How did this background affect Akita Ranga school? Who were the principal artists of Akita Ranga? How were these artists able to appropriate the western pictorial manner and be inspired by western image sources?

Akita Ranga's Genesis

Akita was a remote domain, in the North of the main Japanese island, far from cultural centres. This geographical situation is intriguing. Why could artists originating from this disadvantaged region in the feudal Edo period be involved in this early appropriation of Western techniques and style, rather than, say, artists from Edo, the prosperous capital and stimulating cultural

centre, or Nagasaki, the only contact point with Westerners and novel things at that time?

There were economic-political circumstances which favoured Akita to catch up with these cultural novelties, including possessing the most advanced technology of the Edo period. At that time the Dutch purchased the copper from Japan. Among several domains involved in copper production, Akita was considered the main mining region in Japan. The Dutch sought to regularly secure enough copper for their needs through annual negotiations with the Tokugawa *bakufu*, while the latter informed the Dutch factory in Nagasaki that there was a decline in production. As the Nagasaki diary reported in 1764, the lord of the Akita domain, under pressure from the Tokugawa government, had to "surrender his lands to the Shogun for a few days to prove that the Akita mines could not deliver more copper"[5]. Like the leaders of other copper-producing domains, he was already familiar with negotiations over the Dutch demands. This would explain how the mental world of the Akita domain might have been affected by the culture of Holland[6]. The lord of the Akita domain was in fact the patron of the Akita Ranga school and himself an excellent painter active under his artist name of Satake Shozan (佐竹曙山 1748-1785)[7].

In order to improve the prospects of copper production from the domain's mines, the lord Satake Shozan summoned the scholar Hiraga Gennai (平賀源内 1728-1780) from Edo to the Akita domain in 1773. Hiraga Gennai was an influential natural history scholar, geologist, physicist, engineer, and also the prominent expert in Japan on Western pictorial techniques. It

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[5] Cited by Y. Kobayashi-Sato, *op.cit.*, 2014, in p.275 and p. 288.

[6] Another *Rangaku* and *Ranga* enthusiast, Shimazu Shigehide (島津重豪 1745-1833), lord of the Satsuma domain, possessed also important copper mines. The two lords were acquainted with each other.

[7] Satake Shozan is his artist name. His real name, as the lord of the Akita Domain is Satake Yoshiatsu (佐竹義敦). In this article, his artiste name is used.

was on this occasion that Gennai met Odano Naotake (小田野直武 1750-1780), in Kakunodate, Naotake's hometown, and taught him, it is said, the principles of Western-style painting techniques like *chiaroscuro*. Naotake would become the most important painter of Akita Ranga. Their encounter proved to be a pivotal point in the genesis of the Akita Ranga school. Without this encounter, it is likely that the Akita Ranga school would never have been born.

Such were the historical, political, and economic circumstances of the genesis of Akita Ranga. The Akita Ranga school flowered through these artists' strong pioneering spirit, intellectual curiosity and artistic talent and refinement. Before turning to concrete examples of how Akita Ranga was exercised in practice, it will be necessary to mention something about the visual culture in Japan before the development of Akita Ranga that made under stimuli from the West.

Visual Wonders in 18th Century Japan

During 18th century Japan the introduction of western optical instruments like glass, lenses and mirrors via Holland, had a significant impact on Japanese notions of sight[8]. In this context, capturing reality or depicting authentically was sought in pictorial art.

It is believed that one of the basic elements of the Akita Ranga style is the new realistic Chinese style introduced by Shen Nanpin (沈南蘋 1682-after 1586), a Chinese painter who came to Nagasaki in 1731 to teach Japanese painters. The most distinctive feature of this style is its use of auspicious motifs – mostly plants, flowers and birds which are depicted realistically. Diffused all over Japan by the Japanese followers of Shen Nanpin, such as Sō Shiseki (宋紫石 1715-1786), the Nanpin style became very

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[8] See Timon Screech, *The Lens Within the Heart. The Western Scientific Gaze and Popular Imagery in Later Edo Japan*, Honolulu: University of Hawai'i Press, 2002.

popular. It was especially appreciated by the intelligentsia among *Rangaku* scholars and the cultivated elites who might have eventually found in the Nanpin style a contact point with a realistic manner of Western painting. Sō Shiseki, the above mentioned Japanese painter, who lived in Edo, probably transmitted this style to Odano Naotake who had a social contact with him in Edo through Hiraga Gennai. Then how was Western art itself introduced to the Akita Ranga painters? It was in fact through Western books, not by instructors.

Western books imported by the Dutch to Japan from the 1720s to the 1760s attracted the keen interest of many Japanese intellectuals and artists. These Western books contained illustrations and copper prints, which definitely influenced the Japanese appropriation of Western art. In fact, a few oil paintings were imported as gifts by the VOC[9] to the Tokugawa *shogunate*. But oil painting presented practical problems for Japanese painters. Learning oil painting techniques is not an easy task for beginners. In addition, oil paintings were larger in size, rare, precious, and expensive, and thus not affordable for most Japanese of the time, while copper prints were handy and more accessible. Japanese painters naturally became interested in Western prints rather than oil paintings. Illustrations of imported western books and independent albums of engravings were copied by Japanese painters who tried to understand the Western manner through them. The previously mentioned Naotake, Akita Ranga's leading painter, probably started his career as a painter by copying Western copperplate prints.

There is another artistic element to be evoked here. It is a historically brand new genre for painting and printing in eighteenth-century Japan. At that time, several Japanese artists

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[9] See Y. Kobayashi-Sato, *op.cit.*, 2014. Western paintings were given as gifts to Japanese high dignitaries during the 18th century. Especially two Dutch bird and flower paintings donated to a Buddhist temple, the *Gohyakurakan* Temple (五百羅漢寺), were appreciated for their realistic effect; these paintings inspired painters of Shen Nanpin school in Japan.

displayed a strong interest in Western artistic techniques, particularly one point linear perspective, much earlier than the painters of the Akita Ranga School. These images are called *uki-e* (浮絵 perspective pictures)[10]. These perspective pictures, such as interior scenes of *kabuki* theaters, were drawn and printed by Japanese artists from the time of their introduction in the late 1730s. The interior of theaters was especially favored as a motif as it was much easier to accurately apply one-point perspective to architecture images. Developing from *uki-e*, *megane-e* (眼鏡絵 lens pictures) were invented. The paintings or printed images of *megane-e* are designed to be viewed through an apparatus made up of a convex lens and mirror[11]. These apparatuses introduced via Holland to Japan were used to more accurately create an illusion of depth as caused by Western techniques of perspective and *chiaroscuro*. The first perspective image, a scene of Kyoto, was produced around 1760[12]. Afterward, several prints were created directly adapting European prints and diffused rapidly, as printmaking was already part of Japanese popular culture.

Thus, the painters of the Akita Ranga school were captivated by the Western manner seen in these perspective images and soon accommodated themselves to the Western manner of displaying perspective. Recent studies of some of the *megane-e* paintings reveal that Naotake produced himself several *megane-e* landscapes of famous sites in Japan, and some of them, including other paintings, went to Europe[13]. They reappeared in the

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[10] See Matthi Forrer, "From Optical Prints to *Ukie* to *Ukiyoe*. The Adoption and Adaptation of Western Linear Perspective in Japan", in T. D. Kaufmann and M. North, *Meditating Netherlandish Art and Material Culture in Asia*, Amsterdam University Press, 2014, pp.245-266.

[11] Two kinds of apparatus were introduced via Holland to Japan: zograscopes (fitted with a large lens and a mirror) and peep boxes (fitted with a much smaller lens) See M. Forrer, *op.cit*. p. 260.

[12] For the development of these Japanese *megane-e* images, Maruyama ōkyo (円山応挙 1733-95), painter active in Kyoto, played an important role.

[13] About Naotake and his perspective paintings, see R. Imahashi, *The Akita Ranga School and The Cultural Context in Edo Japan*, Tokyo: International

European art market during the twentieth century and some returned to Japan. Other than these *megane-e* paintings, *Mitsumata*, one of the derived landscape examples of perspective images by Naotake, was owned by Louis Gonse (1846-1921), a French art historian who specialized in Japanese art, was chief editor of the *Gazette des Beaux-Arts*, and, in addition, was a principal player in the Japonisme movement in France. This artwork was supposedly passed to an art gallery in Berlin and brought back to Japan in the 1930s.

Naotake and *New Anatomy Book*

In this context, let us turn now to Naotake, the protégé of Shozan, lord of the Akita domain. Naotake was born in Kakunodate, a town in the Akita domain, while Shozan was born in Edo and lived there until the age of 18. As the lord of the Akita domain Shozan alternated living for a year in Akita and in Edo. Thus, Shozan was able to get acquainted with the highly intellectual circle of *Rangaku* scholars in Edo who regularly acquiring novelties. Shozan supposedly intended to introduce Gennai to Naotake, knowing that Dutch learning scholars such as Sugita Genpaku（杉田玄白 1733-1817）[14] were to work on the translation and publication of the *Kaitai Shinsho* (解体新書 *New Anatomy Book*) and the commission of its illustrations would go to Naotake. It is true that Gennai knew Sugita Genpaku, who sought a likely artist to produce accurate illustrations for a new anatomy book. At the end of 1773 Shozan ordered Naotake to depart from Kakunodate to Edo in order to further study Western pictorial techniques with Gennai. Soon after, Naotake provided

House of Japan, Inc., 2016, pp.116-129. Several perspective images (landscapes) produced by Odano Naotake were found in European art markets during the first decades of the 20th century. Some of them went back to Japan, where they are now owned by private collections and public institutions.

[14] Sugita Genpaku, convinced that the western drawings of human organs were much more accurate than the Chinese ones, formed a team of Japanese experts to translate the Dutch anatomy book, Adam Kulmus' *Ontleedkundige Tafelen*, into Japanese.

the illustrations for a prestigious new scientific publication, *Kaitai Shinsho*. Published in 1774, this anatomy book, the first in Japan, was a translation in Japanese of the Dutch version of a German anatomy book by Johann Adam Kulmus.

This was certainly Naotake's first opportunity to seriously study Western-style realism since he had been trained mostly in the traditional Kanō school, as had other samurai painters at the time. Naotake referred to available Western prints in making his illustrations for the *New Anatomy Book*. Some are from Gerard de Lairesse (1640/41-1711)'s illustrations[15], with their accurate details with *chiaroscuro*. One of the most interesting elements of the *New Anatomy Book* is its title page with the nude figures of Adam and Eve (Figure 1). In designing this title page, it is said that Naotake was largely inspired by the frontispiece of a Flemish edition of the anatomy book: *Anatomie* by Juan Valverde de Hamusco[16], first published in 1568 in Antwerp. Today it is considered that the frontispiece of the edition of 1583 (Figures 2 and 3), not the edition of 1568, would be more probably Naotake's image source, given that a copy of this edition was owned by an official physician of the Akita domain living in Edo[17]. This 1583 Flemish edition, published in Antwerp, contains two authors names inscribed on the frontispiece: A. Vesalii (Andreas Vesalius) and Valuardae (Juan Valverde de Hamusco). The presence of the name Andreas Vesalius[18] as a co-author supports a hypothesis that the famous anatomy studies and illustrations of Vesalius's *Humani Corporis Fabrica* might

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[15] For example, Naotake illustrates *Dissection of Arm* which is a copy after a copperplate engraving by Gerard de Lairesse illustrating Govard Bidloo, *Ondleding des menschelyken lichaams* (1690).

[16] Juan Valverde de Hamusco (c.1525- ?) is a Spanish anatomist, famous for his work: *Historia de la composicion del cuerpo humano*, first published in Rome, 1556.

[17] This copy of the 1583 edition is now housed in the Akita Senshu Museum of Art.

[18] Andreas Vesalius (1514-1564) is a Flemish anatomist, considered as the founder of modern human anatomy, famous for his influential book *Humani Corporis Fabrica*, published after 1543.

be explicitly included in this 1583 edition. The two anatomists' works might have inspired Naotake for details, and we suppose that from this 1583 Flemish edition's frontispiece, Naotake learned how to render *chiaroscuro* for nude figures, probably for the first illustration of a nude in Japan.

Today several copperplate prints which Naotake possessed are studied for their relationship to Naotake's artworks. But it was not only single sheets copperplate prints that he owned. Upon his arrival at Edo, Naotake, taking the responsibility to illustrate the Japanese version of *New Anatomy Book*, learned Western pictorial techniques from Western prints as mentioned previously. At that time, in Japan, *Rangaku* scholars like Hiraga Gennai, and *daimyō*s (大名 feudal lords) like Satake Shozan, interested in *Rangaku* were even more enthusiast about collecting Western books, which they circulated among themselves. Gennai owned eight expensive imported books, the majority being Dutch versions, which included Jan Jonston's fauna (*Naeukeurige beschryving van de Natuur der Viervoetige Diere, Vissen en Bloedloze Water-Dieren, Vogelen, Kronkel-Dieren, Slagen en Draken,* Amsterdam 1660), Noël-Antoine Pluche's *Spectacle of Nature* (*Schouwtoneel der natuur, of Samenspraaken over de bysonderheden der natuurlyke histori,* 14 vols.) and also Emmanuel Sweerts's Botanical illustration book (*Florilegium, tractatus de variis florigbus et aliis Indicis plantis ad vivum delineatum,* Amsterdam 1631). Richly illustrated, some in colour, these western books that Gennai possessed were supposedly available to Naotake as pictorial image sources during his six-year stay in Edo. Naotake himself acquired several copper prints, even a print of a scene of *Lisbon after the Earthquake*. While studying these Western pictorial sources, however, he never literally followed Western models. Nevertheless, his paintings plainly show the clear influence of copper engravings with their fine delicate hatched lines. The Western pictorial techniques Naotake acquired must have then been transmitted to his superior, Satake Shozan. It seems that Shozan learned these new Western-style painting techniques directly from Naotake.

Shozan's Western Art Theories

Satake Shozan, lord of the Akita domain, was a skilled painter who created remarkable paintings. However, the most significant exploit of Satake Shozan is his accomplishment of writing three essays in 1778 compiled in his *Three Sketchbooks*. These are Japan's first art theories based on Western Art: *Gahō Kōryō* (画法綱領 Summary of the Laws of Painting), *Gato Rikai* (画図理解 Understanding Painting) and *Tansei bu* (丹青部 Colours)[19]. These theories are probably formulated through Naotake's experiments which reflected Hiraga Gennai's teaching. In *Gato Rikai*, Shozan quotes explicitly Hiraga Gennai: "Kyukei (Hiraga Gennai) says that the human body is set within a circle, having the navel as its axis. When a baby is in the stomach, it breathes in the same way as fruit breathes through the stems. Human eyes are also spherical in shape. Therefore, everything we see is based on the divisions of the circle. This is the beginning of the theory of painting"[20]. Shozan made a page of « An Ideal Proportion of a Woman », a copy after a copper plate engraving illustrating Gerard de Lairesse'a *Het groot shilderboek* (Amsterdam 1707) (Figure 18).

Shozan attempted to formulate the rules of the Western linear perspective. For making his theory easily understandable he included schematic drawings for *Gato Rikai*, showing the essential points of Western illusionism. For the most part, Shozan might have firstly referred to Chinese books that were translations of Western ideas by Italian Jesuits[21], who were active as missionaries in China during the Ming Dynasty and Qing Dynasty. Thus in China, until the 18th century, western

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[19] These three theoretical texts of Shozan are compiled in his Sketch Books (3 volumes), now owned by the Akita Senshu Museum of Art. The whole text in Japanese was translated in English in H. Johnson, *Western Influences on Japanese Art*, 2005, Appendix: pp.157-164.

[20] According to H. Johnson (2004), *op.cit.*, p.115.

[21] See M. Forrer, *op.cit.*, pp.245-266.

techniques were already introduced: Matteo Ricci (1552-1610), an Italian Jesuit, around 1600, and after his death, Castiglione (1688-1766), also an Italian Jesuit, known as an architect and a painter, introduced Western pictorial techniques including one point linear perspective; Nian Xiyao 年希堯 edited in 1729 *Shixue* 視学 (Study of Perspective), a translation of Andrea Pozzo's work on perspective: *Perspectiva Pictorum et architectorum*, published in Rome, in 1673-1700. Although they were supposed to be banned in Japan because of their association with the Jesuits, many intellectuals of the time were familiar with them. However, since Satake Shozan makes no reference to Pozzo's work translated in Chinese, first edition of 1729 (without illustrations) and its revised edition of 1735 (with some plates and graphs), he might have rather depended on direct Western sources. For example Shozan's drawing of Octagon in perspective (in his Sketch Books) looks like the drawing of "Foreshortening of a geometrical pattern" from Piero della Francesca's *De Prospectiva pingendi*[22].

With his drawings Shozan shows[23] a horizon line, the heaven (sky), and the earth to illustrate a horizon line according the principles of Western vanishing point perspective, explaining how vantage points in such perspective can vary. And another page shows the principle of the range of 1/8 view, followed by a page about the perspective principle of a circle, and then showing how to make an octagon and a perspective drawing of an octagon. The origin of the latter might go back to the fifteenth-century perspective drawings of Leon Baptista Alberti and Piero della Francesca[24] during the Early Renaissance period. The next page depicts the use of a compass to make divisions in

[22] See Inaga Shigemi, "Reinterpretation of the Western Linear Perspective", in W.F. Vande Walle and Kazuhiko Kasaya (ed.), *Dodonaeus in Japan. Translation and the Scientific Mind in the Tokugawa Period*, Leuven University Press, 2001, pp.149-165
[23] See H. Johnson, "Sketchbook B", in *Western Influences on Japanese Art*, 2005, pp.115-119.
[24] See Martin Kemp, *The Science of Art: Optical themes in western art from Brunelleschi to Seurat*, Yale University Press, 1990, pp.21-35.

a circle and how to make latitudinal and longitudinal lines. After this is found a curious drawing of a double spiral staircase.

Double Spiral Staircase Drawing

It is greatly intriguing that Shozan drew such a double spiral staircase (perspective & plan; Figure 4), of which the original drawing was made by the Italian architect and theorist Jacopo da Vignola in his *Due regole della prospettiva practtica* (*Two Rules of Practical Perspective*) (Figure 5), posthumously published with notes of Egnatio Danti in 1583. During the seventeenth and eighteenth centuries, Vignola's theory book was widely translated and diffused all over Europe. A copy of the double spiral staircase drawing closely resembling Shozan's drawing is found in the English book *Practical Perspective, or Perspective made easie* (1670), published by Joseph Moxon, an English geographer and printer specialising in mathematical books and maps. Moxon writes in his book that the most famous example of the double spiral staircase's execution is the one in Chambord castle, originally designed by Leonardo da Vinci. According to Bunji Kobayashi (1975)[25], this Moxon's *Double spiral staircase* in plan and elevation might be a possible source for Shozan, since Moxon copied from Vignola / Danti's *Due regole della prospettiva practtica.* This interpretation is still today the standard norm. However, it seems more plausible to suppose that Shozan's design might have been taken directly from Vignola in a Dutch edition, not an English edition like Moxon's, as other scholars point it out[26]. For example, a more convincing drawing is found in the following Dutch edition: Shozan's drawing is identical with the copy of the double spiral staircase of Vignola (plan and elevation) found in Hendrik Hondius's *Grondige onderrichtinge in de Optica of te Perspectieve Konste*

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[25] See Bunji Kobayashi, "Shozan no Niju Rasen Kaidan-zu ni tsuite (About the drawing of a Double Spiral Staircase by Shozan)", *Bijutsu-shi*, Tokyo, 1973, pp.105-111.

[26] See T. Screech, *op.cit.*, p.222 and note 38: p.282; Yasuhiko Isozaki, *Edo jidai no Ranga to Ransho* (Ranga paintings and Dutch books in Edo ear), vol. 1, 2004, p.262.

(Instruction in Optics and Perspective Arts) published in 1622 in Amsterdam[27], even in details of the numbering of each step. Furthermore Hondius's book contains a drawing of perspective of an Octagon which is quite similar to Shozan's perspective drawing incorporated in his Western Art Theories in his *Three Sketchbooks* previously mentioned.

Why then did Shozan want to include this drawing in his theoretical texts? It is a question whether this drawing was really needed to explain how to show perspective (like the intention of Piero della Francesca, who drew many curly hairs as studies of perspective) in his theoretical essay, or whether this drawing was used as a plan presumably for constructing a double spiral staircase inside of the tower he made in his new residence in Edo[28].

We know that Shozan was exposed to a variety of imported European natural science books and he copied several pages. For example Shozan copied the illustrated page of "The Second Part of the Northern Celestial Hemisphere" from the Dutch version of Noël-Antoine Pluche's *Spectacle of Nature* (*Schouwtoneel der Natuur…*originally published in French: *Spectacle de la nature*). He copied even the inscriptions and caption in French and Dutch "Le Pole Septentrional / Tropique / Le Cercle Equinoctial / Seconde Partie De l'Hemisphere Celeste Septentrional / Tweede Deel Van Den Halven Noorder-Hemel-Kloot" (Figure 19), although it is uncertain whether Shozan understood Dutch or other European languages. This Shozan's copy drawing, today missing, contains his draft for his new Dutch seal which reads "Siozan Sinyet" (which might mean Siozan Signet) with a decorative lettering of "s" of medieval type. Thus his wide use of drawings from European books makes it possible to speculate on his image sources.

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[27] A copy of the Hendrik Hondius' book (1622) is conserved in the British Museum.

[28] See T. Screech, *op.cit.,* p.222. He speculates about Shozan's attempt "to replicate Vignola's triumph in his Edo mansion".

Inspiring Western Copper Prints

Shozan executed a tiny but beautiful landscape painting in 1778-1779 (Figure 6). This painting is based on a copperplate print after the original painting *The Good Samaritan* by Jan Brueghel the Elder (1568-1625)[29]. Even if this image is a biblical scene, this copperplate print was owned by Naotake who did not understand its religious connotation; furthermore, the lower part for inscription of the title: *Good Samaritan* is cut off in the version he possessed (Figure 7). It is notable that the Brueghel's original European scenery is simplified and transformed into a natural Japanese landscape with a lowered horizon in Shozan's painting. Shozan rendered the space with Western style one-point linear perspective, with shading modelled after the hatching techniques used in copperplate engraving as found in Naotake's paintings as well.

In this Shozan's landscape painting, we find a large seal imprint with leaves and a phrase in incorrect Dutch: Segutter vol Beminnen (tentatively translated as "sea-god full of love"). Inspired by Western prints, Shozan had made several other Dutch seals like this one. This seal's design probably has a connection with the copper prints from *Het bouckje van Zeegoden en Godinnen geinveteert door Hendrik d'Caiser* (*New booklet of Sea-Gods and Goddesses made by Hendrik d'Caiser*, c.1620). This series of copper prints (Figure 10) of fantastic creatures - sea gods and goddesses, including centaur-tritons, of Greek mythology, was shared by Naotake and Shozan.

The author of the original drawings of the prints is Hendrick de Keyser (1565-1621), a Dutch architect, who gave the original drawings to King Christian IV of Denmark to serve as models for the decoration of the front marble gallery of Frederiksborg castle outside Copenhagen, today's the Museum of National

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[29] British Museum houses *The Good Samaritan*, an engraving by Sadeler after Jan Brueghel the Elder.

History of Denmark [30]. Today's castle (Figure 8) is a reconstruction of 1863 after a devastating fire of 1859 which destroyed almost all of it. Thus all statues and reliefs of the marble gallery were reconstructed (Figure 9 and 12). The castle became the Museum of National History of Denmark. Some original sculptural works of the Marble Gallery survived from the fire have been stored in the museum (Figures 11 and 13). The first identification of these models was done by Elizabeth Neurdenburg through her research work when she discovered the series of copper prints of Frederik de Keyser in Amsterdam in 1943[31].

This series of prints of sea-gods and goddesses executed by C. Dankerts has 12 sheets with numbers. No. 1: Title page with a male and female couple of mermaid like Centaur-Tritons. No. 2 (on the copper print it is erroneously numbered as 4): Diana. No.3: Neptune. No.4: Ceres. No.5: Galatea. No.6: Proserpina. No.7: Mars (Figure 10). No. 8: Venus. No.9: male Centaur-Triton with a lyre, No. 10: female Centaur-Triton Nereid with a shell horn, No. 11: male Centaur-Triton, No. 12: female Centaur-Triton with a trident. It is supposed that a complete set (from number 1 to number 12) had reached Japan before being shared by Naotake and Shozan. Today, three prints of them (numbers 1, 2, 5) are missing. We know that six prints of them (numbers 7, 8, 9, 10, 11, and 12) were owned by Shozan (now in the Akita Senshu Museum of Art, Japan) and three other prints (numbers 3, 4, and 6) by Naotake (now in a private collection, Japan).

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[30] The author's investigation at the Nationalhistoriske Museum/ Frederiksborg Slot in Hillerød, Denmark, was carried out in August 2018, with the generous help of Mr. Thomas Lyngby, the museum's inspector/curator, and Ms. Christina Lysbjerg Mogensen, post-doc research fellow, specialized in the reliefs of the Marble Gallery of the castle, for which the author expresses her sincere gratitude.

[31] See E. Neurdenburg, "Hendrick de Keyser en het Beeldhouwwerk aan de Galerij van Frederiksborg in Denemarken", in *Oudheidkundig Jaarboek*, 12, no.1/2, December 1943, pp.33-41; Meir Stein, "The Iconography of the Marble Gallery at Frederiksborg Palace" in *Journal of the Warburg and Courtauld Institutes*, Vol.35, 1972, pp.284-293.

Actually, the Museum of National History of Denmark does not possess an original copy of prints from the 17th century.

These European prints might have had a strong impact on both Shozan and Naotake, and also, eventually, their circle. Especially the print showing the title with a couple of female and male Centaur-Tritons, today missing, is similar to the image of a merman and mermaid couple by Johnston, and might be connected with the Naotake's mermaid drawing that the *Rikubutsu shinshi* (Record of six items)[32], published in 1786, mentions. His contemporaries produced similar drawings of a merman and a mermaid couple (Figures 14, 16, and 17), perhaps inspired by the merman and mermaid images found in Jan Jonston's book (Figure 15).

The above mentioned six copper prints of sea-god images owned by Shozan were compiled in Shozan's *Sketchbooks* along with his art theories previously mentioned. According to H. Johnson, probably he wished to compile a scientifically oriented encyclopaedia in colour, rather than making sketchbooks to be used as references for painting. Shozan might have intended to make scientific entries on *Insects and Seashells* as volume I, *Fish and Birds* as volume II, and *Art theory and Flowers* as volume III, using reference books of natural science like the above mentioned book, *Spectacle in Nature,* by the French naturalist Noel-Antoine Pluche[33].

Shozan's art theories based on Western art are closely connected with Akita Ranga paintings, especially those made by the school's most noted painter, Naotake. The most significant point of the Akita Ranga school was probably a compositional invention.

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[32] *Rikubutsu shinshi* 六物新志 (1786) wrote by ōtsuki Gentaku (大槻玄沢 1757-1827), a Rangaku scholar introduces six items as medicines: Mermaid, Unicorn, Mummy, Saffron, Nutmeg, *Eburiko* (a mushroom).
[33] H. Johnson extensively developed this thesis in her work: *Western Influence on Japanese Art*, pp.97-128.

Compositional Invention: Foreground and Background

While applying Western pictorial techniques, Naotake invented a unique and striking arrangement of motifs in space with perspective for a landscape. Naotake did not adopt a typical Western style space structure composed of foreground, mid-ground, and background for creating natural transitional recession. He eliminated, instead, the middle ground. The foreground would be reserved for traditional Japanese motifs such as flowers and birds in close-up seen as auspicious signs. In the background, he set motifs with a horizon line probably borrowed from Western landscapes, yet greatly reduced in size, and painted in an aerial perspective in soft tones with fine and long hatching lines. With such a juxtaposition of motifs, dramatically different in size and tone in the foreground and in the background, was created a sensational recession. Naotake conceived this compositional device "as a tool of *differentiation*, exaggerating the heterogeneity between what is near and what is far away", according to Inaga Shigemi[34]. This scheme became a unique Akita Ranga school compositional style.

The best demonstration of this point could be seen through analysis of Akita Ranga's hanging scroll masterpieces: Naotake's *Hawk* (Figure 20) and Shozan's *Pine Tree and Parrot* (Figures 21 and 22). The contrast between the near object and distant landscape is underlined in both these paintings, and also in the painting by Naotake: *Peony in the Basket* (Figure 23) in which the landscape is painted in tones too delicate and pale to be perceived clearly. The foreground always contains a large object in close up. This compositional device reflects the idea of Shozan who wrote in *Gato Rikai*: "it is natural for the human eye to see things large when they are close to us and small when they are far away." Another painting of Naotake's, the most famous painting of Akita Ranga, *Shinobazu Pond* (Figure 24), shows a more natural rendition of Western-style perspective for the

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[34] See I. Shigemi, *op.cit.*, p.159.

landscape. In his painting, Naotake placed three potted flowers: Peony (red and white), Official sage (blue), Calendula officinalis (yellow), all medicinal plants, showing Naotake's particular interest in the study of herbal medicine which flourished in Japan at that time as seen in Hiraga Gennai's enthusiasm[35]. However, these large motifs of potted flowers, as auspicious elements, placed in the foreground, are intentionally rendered in close up, as if seen as a "still life-landscape" painting. He also puts in one fixed light source, which comes from the right, in order to emphasize the focal point in the background.

Akita Ranga and the 19th Century Japonisme in Europe

The compositional close up element was practiced in the Chinese art tradition, including in the Shen Nanpin school. However, the Akita Ranga school was the first to use such an element in conjunction with the horizon line in the far distance in terms of perspective. As Shozan's examples in his theoretical essay *Gato Rikai* suggest, in the case of Akita Ranga, the idea of placing enlarged motifs in the near picture plane probably originated from the European tradition of etching illustration of fauna and flora found in encyclopaedias. It is thought that Naotake's first contact with Western illustration was through the illustrations of anatomy books, including those of Andreas Vesalius and Juan Valverde de Humasco, as mentioned previously. Especially the famous illustrations of Andreas Vesalius's anatomy book *De humani corporis fabrica* (1543)[36] (Figure 30) have the similar approach as Akita Ranga painters' for arranging objects: a close

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[35] Imported western herbal books and encyclopaedias such as R. Dodonaeus' *Cruydt-Boeck* (1608) and E. Sweerts' *Florilegium* (1631) owned by Gennai were available for Naotake. Especially for Official sage and Calendula officinalis, colourful western herbal books like B. Basillius' *Hortus Ystettensis* (1613) were supposedly used as references.

[36] Andreas Vesalius's *De humani corporis fabrica* was introduced to Inoue Masashige, a commissioner for the Dutch East India Company in Nagasaki, in 1654. See Yoro Takeshi, "Anatomy books in Edo", in *Edo no naka no kindai: Akita Ranga to Kaitaishinsho* (The Modern in the Edo Period: Akita Ranga and The New Anatomy Book), 1996, pp.189-228, p.184.

up object in the foreground (human body) with a cast shadow, a horizon line, and an extremely reduced panoramic landscape with perspective in the background. This arrangement of motifs became Akita Ranga's most appealing point.

Tragedy caused the Akita Ranga school to disappear after less than ten years in existence. Mysteriously, they all died young. Naotake died at the age of 32 soon after Gennai's death in 1779. Six years later Shozan died at the age of 38, in 1785. There were no followers, no direct disciples, and the Akita Ranga school marked its end.

However, Akita Ranga's compositional elements can be indirectly detected in the print art of Katsushika Hokusai's *Thirty-Six views of Mt. Fuji* and Ando Hiroshige's *One Hundred Famous Views of Edo*. Known as one the most important stimuli for the Japonisme movement, these Japanese woodblock prints, reached 19th century Europe. Through comparative studies of some artworks we can see that Claude Monet or Vincent van Gogh explicitly show influences from Japanese woodblock prints reflecting Akita Ranga's original composition: Far and Near[37]. Although the Akita Ranga school did not directly produce artists like Hokusai and Hiroshige, it was Akita Ranga that had started and stimulated a Westernized pictorial movement in Japan, one that would eventually and indirectly revolutionize Western art in the late 19th century. At the same time, the travelling images that had inspired the Akita Ranga painters were themselves of European (Renaissance and Baroque) origin, and in this sense the later enthusiasm in Europe for Japanese design brought about through the importation *ukiyo-e* was really the completion of a circle. Akita Ranga, in other words, far from being a short-lived, isolated phenomenon, should be seen as a key moment in a long history of cultural interaction and travelling images.

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[37] See Fujio Naruse, "Edo kara Pari e – Akita Ranga kara Seiyō kindai kaiga e" (From Edo to Paris – From Akita Ranga to the Modern Western Paintings", in *Kikangeijutsu*, 1977, Winter, no.11(1), pp. 86-105.

Conclusion

In Japan the sources of Western art brought first by the Portuguese and then by the Dutch VOC travellers played a vital role in this process, as seen in the works of Akita Ranga painters. However, it was not by simply imitating the techniques of the Western art they encountered, but by seeking rather to synthesize them with Japanese and Chinese traditions, to invent the first hybrid compositional framework, that these artists created a real turning point in the cultural history of Japan.

The Akita Ranga paintings were produced by a small young elite group of samurai – a lord and his retainers – from the north of Japan during the Age of Exploration. For Japan, this was its second period of globalization following its much earlier connection with the Silk Road. With a strong pioneering spirit these artists rose to the challenge of studying Western art and integrating it into the Japanese painting tradition. For a reassessment of Akita Ranga's aesthetic quality, artistic value, and historical meaning, it is time to reconsider and resituate this art in a global history context. It is in this global and complex context that the historical significance of the short-lived Akita Ranga school becomes clear.

This can provide a new and dynamic perspective on the scope and arc of centuries-long cultural and artistic interchanges between West and East. Seeing Akita Ranga's history of travelling images come full circle with their eventual return to 19th century Europe, this view could go even further changing the global hierarchy of values.

References

Abe Kuniko, "Sekai no naka no Akita Ranga" (Akita Ranga in the World Context), in *Bunka Isan Kenkyu Hokoku* (Cultural Heritage Studies Report), no. 2, The Institute for Asian Studies and Regional Collaboration (IASRC) / Akita International University, 2017, pp. 25-56.

Abe Kuniko, *Akita Ranga and Its International Dimensions: A Short Tour*, The Institute for Asian Studies and Regional Collaboration (IASRC) / Akita International University, 2018.

Beckett, Francis, *Frederiksborg ungivet af det National Historiske Museum/Slottets Historie*, Copenhagen, 1914.

da Vignola, Jacopo Barrozzi, *Vignola, Le due regole della prospettiva prattica di M. Jacopo Barrozzi da Vignola, con il comentarij del R.P.M. Egnatio Danti dell'ordine del Predicatori Matematico dello Studio di Bologna*, Rome: Francesco Zanetti, 1583, pp.143-144.

de Lairesse, Gerard, *Le Grand livre des peintres*, 2 vol., Paris : A l'hotel de Thou, 1787.

de Vries, Lyckle, *How to create beauty: De Lairesse on the theory and practice of making art*, Leiden: Primavera Press, 2011.

Dodonaeus (Dodoens), Rembert, *A Nieve Herball, or Historie of Plantes*, 1578,

Forrer, Matthi, "From Optical Prints to *Ukie* to *Ukiyoe*. The Adoption and Adaptation of Western Linear Perspective in Japan", in Thomas Dacosta Kaufmann and Michael North (eds), *Mediating Netherlandish Art and Material Culture in Asia*, Amsterdam University Press. 2014, pp. 245-266.

Haga Toru, *Hiraga Gennai*, Tokyo: Asahi Shimbunsha, 1981.

Hirafuku Hyakusui, *Nihon yōga shokō* (The Dawn of Western-Style Painting in Japan). Tokyo: Iwanami Shoten, 1930.

Imahashi Riko, *Edo no kachō-ga: Hakubutsugaku o meguru bunka to sono hyōshō* (Birds and Flowers: The Representation of Natural History during the Edo Period), Tokyo: Skydoor, 1995.

Imahashi Riko, *Akita Ranga no kindai. Odano Naotake "Shinobaze no ike" o yomu*, Tokyo University Press, 2009.

Imahashi Riko, *The Akita Ranga Shool and The Cultural Context in Edo Japan* (translated into English by Ruth S, McCreery), Tokyo: LTCB International Library Trust / International House of Japan, 2016.

Inaga Shigemi, "Reinterpretation of the Western Linear Perspective in Eighteenth- and Nineteench-Century Japan, in W.F. Vande Walle and Kazuhiko Kasaya (ed), *Dodonaeus in Japan. Translation and the Scientific Mind in the Tokugawa Period*, Leuven and Kyoto, 2001, pp.149-165.

Isozaki Yasuhiko, *Edo jidai no ranga to ransho – Kinsei nichiran hikaku bijutsushi* (Dutch style painting and Dutch books – Comparative History of Art of Modern Netherlands and Japan) Vol 1, Tokyo: Yumani shobo, 2004.

Johnson, Hiroko, *Western Influences on Japanese Art: The Akita Ranga School and Foreign Books*, Amsterdam: Hotei Publishing, 2005.

Kemp, Martin, *The Science of Art: Optical themes in western art from Brunelleschi to Seurat*, Yale University Press, 1990.

Kobayashi Bunji, "Shozan no Niju Rasen Kaidan-zu ni tsuite (About the drawing of a Double Spiral Staircase by Shozan)", *Bijutsu-shi*, 88, 1973, pp.105-111.

Kobayashi-Sato Yoriko, "Japan's Encounters with the West through the VOC: Western Paintings and Their Appropriation in Japan", in Thomas Dacosta Kaufmann and Michael North (eds), *Mediating Netherlandish Art and Material Culture in Asia*, Amsterdam University Press, 2014, pp.267-290.

Matsuo Yuka and Narusawa Katsushi (eds), *Akita Ranga to sono jidai* (Akita Ranga and Its Period), Exhibition catalogue, Akita: Akita Senshu Museum of Art, 2007.

Miwa Hideo, *"Odano Naotake to Akita Ranga"* (Odano Naotake and Akita Ranga), *Nihon no bijutsu*, 8, No. 327, Tokyo: Shibundo, 1993.

Moxon, Joseph, *Practical Perspective or Perspective Made Easie*, London: Joseph Moxon, 1670.

Nanni, Romano, " 'Il modo di disegnare queste scale è cosa trita': Note on the History of The 'Double Spiral' Staircase", in *Leonardo da Vinci & France: Chateau du Clos Luce, Parc Leoardo da Vinci, by Carlo Pedretti*, exhibition catalogue, Poggio a Caiano, Italy, 2010, pp.169-181.

Naruse Fujio, *Ga no yō taru ya nitaru o tōtobu* (Satake Shozan: Painting Values Naturalism). Kyoto: Minerva Shobo, 2004.

Naruse Fujio, "Edo kara Pari e – Akita Ranga kara seiyō kindai kaiga e" (From Edo to Paris – From Akita Ranga to Western Modern Paintings), *Kikangeijutsu* (Arts), 1977, Winter, no.11(1), pp. 86-105.

Neurdenbur, Elizabeth, " Hendrick de Keyser en het Beeldhouwwerk aan de Galerij van Frederiksborg in Denemarken", in *Oudheidkundig Jaarboek*,12, no,1/2, December 1943, pp.33-41.

Pluche, Noël-Antoine, *Spectacle de la Nature ou Entretien sur les particularités de l'histoire naturelle qui ont paru les plus propres à rendre les jeunes gens curieux et à leur former l'esprit*, 9 vols, Paris : Chez la veuve Estienne, 1732-1742.

Satake Shozan, *Gahō Kōryō* (Summary of the laws of Painting)*, Gato Rikai* (Understanding Painting)*, Tansei bu* (Colours)*, in Shaseichō* (Sketchbooks), N.p. : n.p., 1778.

Screech, Timon, *The Shogun's Painted Culture: Fear and Creativity in the Japanese States 1760-1829*, London: Reaktion Books, 2000.

Screech, Timon, *The Lens Within the Heart / The Western Scientific Gaze and Popular Imagery in Later Edo Japan*, Honolulu: University of Hawai'i Press, 2002.

Stein, Meir, "The Iconography of the Marble Gallery at Frederiksborg Palace", in *Journal of the Warburg and Courtauld Institutes*, vol.35, 1972, pp. 284-293.

Suntory Museum of Art, *Sekai ni idonda nana nen / Odano Naotake to Akita Ranga* (Seven Daring Years: Odano Naotake and Akita Ranga), exhibition catalogue, Tokyo, 2016.

Sweerts, Emmanuel, *Florilegium amplissimum et Selectissimum*, Amsterdam, 1647.

Takashina Shuji (ed.), *Edo no naka no kindai: Akita Ranga to "Kaitai shinsho"* (The Modern in the Edo Period: Akita Ranga and the New Anatomy Book), Tokyo: Chikuma Shobo, 1996.

Takehana Rintaro, *Gashu Akita Ranga* (Akita Ranga Illustrated), Akita: Akita Sakigake Shinposha, 1989.

Yamamoto Takeshi, "Akita Ranga wo meguru michakushu no bunka haikei (Uninitiated cultural background around Akita Ranga), *Kokusai Nihongaku* (International Japanology), Annual Report No.8, 2000, pp. 275-289.

Yamamoto Takeshi, "Rearizumu no keifu – Akita Ranga to Shinobazuno ike wo meguru shosō" (The genealogy of Realism – divers aspects surrounding Akita Ranga and Shinobazu Pond), *Bijutsu Forum 21*, 2013, pp.104-108.

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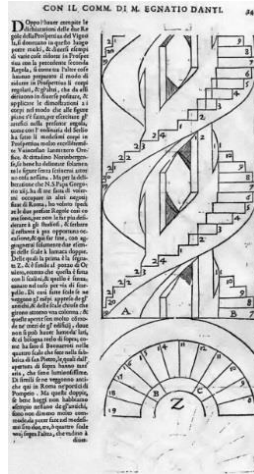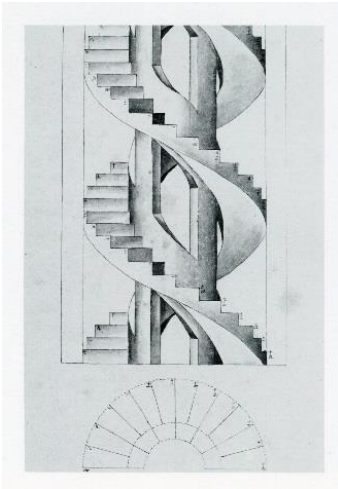
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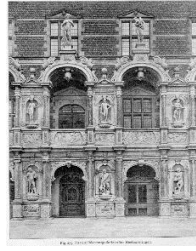
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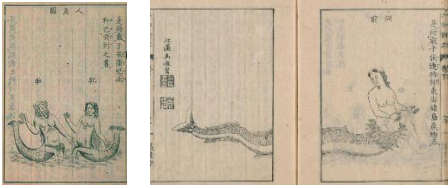Museum of Art.

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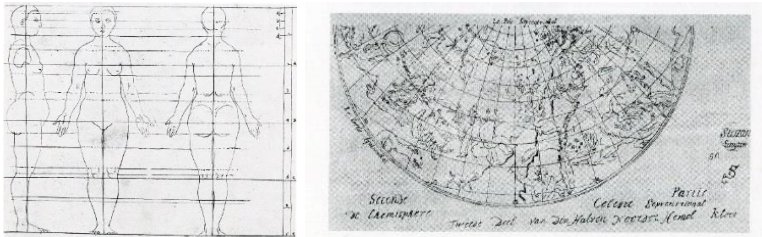

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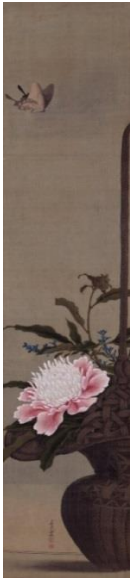
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Examining the Impact of Small Tourist Events on Local Economies: The Case of an Open Campus Event

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Abstract: Even though event tourism is important for stimulating local economies, the economic impacts of small events are rarely examined by event managers or policy planners. As a case study, we estimate the economic impact of an open campus event at a Japanese public university in a remote rural area. We estimate the direct expenditures to be approximately 16 million yen and the secondary effects to be approximately 9 million yen. The event is held two or three times a year and contributes to sustaining the local economy.

Introduction

Event tourism is considered to be part of a portfolio of tourism products that stimulate the economy (Ryan, 1998). Even though each event has its own theme and purpose, the event also invigorates the economy though increased consumption by visitors. Policy planners in the relevant government agencies and related private sectors sometimes try to host big events, called meetings, incentives, conferencing, and exhibitions (MICE), to bring more business activities to the region. Therefore, the magnitude of economic impacts is of interest to policy planners and event organizers, and these impacts are studied by research think-tanks and academic researchers (Getz, 2008). However, with a few exceptions, the economic impacts of small events tend to be ignored because the event organizers do not have sufficient funds to study them or the expected economic impacts are relatively small (Kim et al., 1998; Ryan, 1998; Chhabra et al., 2003). Even though the economic impacts of small events are negligible to the economy at the national level, the magnitude of the impact can be relevant to small local economies at the

prefecture or municipal level. The purpose of this paper is to estimate the economic impact of a small event on the local economy. As a case study, we select a college open campus event held in the remote Tohoku area of Japan that attracts participants from all over the country. Akita International University (AIU), a small liberal arts university in rural, northern Japan, held an open campus event on July 15, 2018. It drew 1,153 visitors, and 94% of the visitors came from different prefectures. As we discuss later, tourists do not visit Akita Prefecture without the event, so their expenditures can be considered to be exogenous: We avoid including the consumption which would occur even if the event were not held. The average total spending on the visitors' trip is 31,197 yen. The total expenditures are estimated to be 36 million yen. Out of this, 16 million yen are poured into Akita Prefecture as direct expenditures. These direct expenditures generate a secondary economic impact of 9 million yen. The total economic impact of the event is 25 million yen. The microeconomic data obtained through this research provide event organizers and local government officials with useful information for their investment decisions regarding future events.

Literature Review

Planned events generally have a positive impact on the region in which they are held. While the regions or organizations must invest in holding the event, larger benefits generally cover the costs. These benefits can include social, cultural, and economic impacts. Since an economic impact is one of the important and necessary factors in decision-making by regional planners and policymakers, this research focuses on the economic impact of a planned event (Wagner, 1997). "Event tourism" is a growing field in both the tourism industry and the research community (Getz, 2007). For example, in New Zealand, seven short-term events require around $2,200 to $240,000 US in direct spending (Ryan, 1998). Gartner and Holecek (1983) report that a nine-day exposition requires approximately $1.03 million of total direct spending in Michigan. Total output for the Flora Macdonald

Highland Games (FMHG) in 2000, a one-day festival held in southeastern North Carolina, is estimated to be $3.7 million (Chhabra et al., 2015). A local food festival in Northeastern Iowa with 22,806 visitors has an impact of $2.6 million (Çela et al., 2007).

Several studies on event tourism in Japan have been conducted, some of which examine the events on a smaller scale. Akiyoshi (2012), for example, studies the economic impact of the "B-1" Grand Prix, a competition of local light meals in Japan. The competition features a food festival where visitors choose their meals from among registered food providers. The event began in 2006 with 17,000 visitors in Aomori Prefecture, but it soon became widely known by the public. The sixth competition, held in Himeji on November 12 and 13, 2011, attracted 185,000 visitors and had direct expenditures of 1.2 billion yen, an indirect impact of 270 million yen, and an induced impact of 172 million yen on Himeji city (Akiyoshi, 2012). Although the competition is held at different locations each year and, hence, can be considered a temporal demand increase in Himeji city, the economic impact of 1.64 billion yen is a considerable contribution to the local economy with a government budget of 220 billion yen (Himeji city, 2018).

Terada (2010) estimates the economic impacts of two big events held every year at the same location: the Nebuta Festival in Aomori and the Kanto Festival in Akita. The tourism consumption of the Nebuta Festival is estimated to be 57 billion yen while that for the Kanto Festival in Akita is 24 billion yen. In his study, transportation is the second highest expenditure among all items in both areas, indicating that the two events attract tourists from distant regions (Terada, 2010). However, there is a difficulty in estimating the impacts of the consumption on transportation for the events. These events are held in neighboring prefectures at the same time; the Kanto Festival is held from August 3 to 6, and the Nebuta Festival from August 2 to 7. Typically, tourists visit both events in one trip. If a tourist from Tokyo visits two events in one trip and his/her

transportation cost is included separately in the economic impact of the events, the economic impact will be overestimated. However, it is also difficult to split the cost of transportation for the two events in an appropriate manner. As this case suggests, calculation of the economic impact must be observed precisely. Fortunately, this problem does not apply to our research since attending the open campus is the main purpose of the visit for most of the visitors, as described in the next section.

Research Environment

As a case study of economic impact, we select a college open campus event held at AIU. AIU is located in Akita Prefecture, in the northern part of Japan, having a population of 983,000 (Akita Prefecture, 2018a). The economy is relatively smaller than the economies in major metropolitan areas in Japan. The gross domestic product (GDP) of the Tokyo metropolitan area in 2015 is 104.3 trillion yen, whereas the GDP in Akita Prefecture in the same year is 3.4 trillion yen, the smallest among prefectures in the Tohoku region (Cabinet Office, 2018). Akita Prefecture is experiencing the fastest rate of population decline in Japan, which is expected to accelerate in the future, with an estimated population in 2040 of less than 700,000 (Akita Prefecture, 2015a). The population under the age of 15 is 10.1%, the lowest in Japan, and the population older than 65 is the highest. With fewer working people, the economy is not expected to grow as fast as in other metropolitan areas.

The tourism sector in Akita Prefecture also lags behind other prefectures, especially those in the area called the "Golden Route." Tourism consumption in Akita Prefecture is ranked 38th among 43 prefectures where statistical data are available for 2014 (Japan Tourism Agency, 2018a). Akita Prefecture receives 11,541,000 tourists in 2014, and 5,848,000 of them come from outside the prefecture. The total tourist consumption in Akita Prefecture for 2014 is estimated at 140 billion yen. Out of the 140 billion yen, 71.3% of the total consumption is made by tourists from other prefectures. The open campus event at AIU is thought

to contribute to the tourism industry in Akita Prefecture, but its magnitude has not been studied previously.

AIU holds two or three open campus events every year. As indicated in Figure 1, the average number of visitors to the events over the past five years is 971. However, the number of visitors varies across the timing of the events. The visitor counts are accurate because almost all visitors attend at least one mock lecture or open workshop that requires prior registration through AIU's website. Those who do not register beforehand must register on site to participate in the events. Since no big event is held in Akita Prefecture around that time and the event requires prior registration, it is highly unlikely that the visitors attend the event because they just happen to be in Akita Prefecture for other reasons. A typical tourist group consists of one high school student who is seriously considering attending AIU and his or her family members. The duration of the event is approximately 7.5 hours from 9:30 to 17:00, and visitors spend most of the time on campus where they buy food and beverages from food trucks and souvenirs at the university stores.
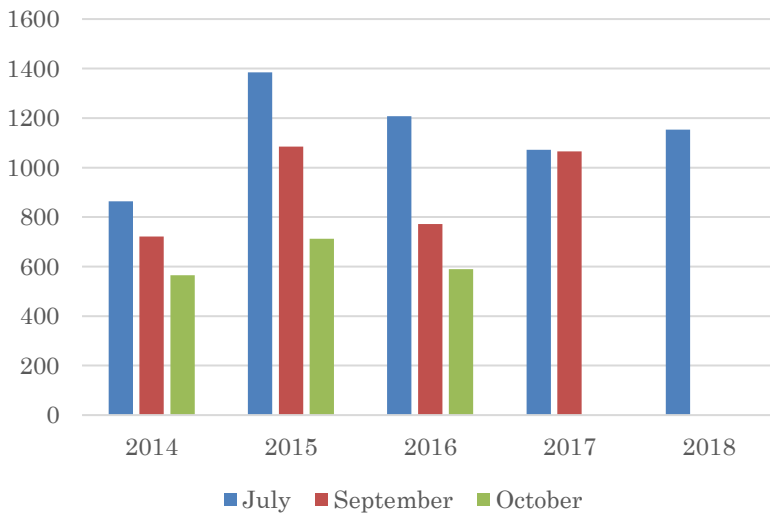

Figure 1. Number of visitors in open campus events (Source: AIU Admission Office).

Survey Implementation

Survey Design

We conduct a questionnaire survey at the open campus event held on July 15, 2018. There are 1,153 visitors at the event that day. Seven enumerators are deployed to the campus for interviews. The questionnaire includes three sections: questions on demographic characteristics of the group members, questions on the schedule of the entire trip, and questions on expenditures. We ask about expenditures in the following five categories: lodging, transportation, food and beverage, souvenirs, and other costs. Transportation costs are divided into three categories: flight, bullet train, and other transportation expenses including gasoline and taxis. Excluding transportation cost, we ask the respondents to calculate the expenditures which occur in Akita Prefecture. We collect responses from 575 tourists.

Profile of the Survey Respondents

Table 1 describes the characteristics of the survey respondents. The mean size of each group is 2.4 people. About 60% of the sampled respondents are groups of two visitors, which reflects the nature of the event where one high school student is accompanied by one of his or her parents. About half of the respondents stay at least one night in Akita, and about one-third stay two nights. There are 432 visitor-stays from the sampled 575 tourists, which indicates that 866 visitor-stays from 1,153 tourists in Akita Prefecture are due to this event. Only 13 groups, or 36 visitors, live in Akita Prefecture. More than half come from the Kanto region (54%). Two groups come from Israel and New Zealand. Those from overseas come to the event as a part of their trip to Japan, and their travel expenditures include originating costs from their home countries. To obtain a conservative estimate of the local economic impact, we exclude these responses from the demand estimation. Sixty-four tourists are also visiting other areas on this trip. Approximately 50% of them visit other prefectures in the Tohoku region.

Table 1: Descriptive Statistics of the Survey Respondents

	Mean	Standard Deviation
Number of group members	2.406	0.84
Count of visitor-stay	1.81	2.15
Fraction of groups who stay		
Day trip	46.0%	
One-night stay	38.4%	
Two-night stay	14.8%	
Three-night stay	0.8%	
Region of residence		
Akita	5.4%	
Tohoku (except for Akita)	11.3%	
Hokkaido	3.8%	
Kanto	54.0%	
Chubu	12.6%	
Kinki	7.9%	
Chugoku	1.3%	
Shikoku	0.4%	
Kyushu	2.5%	
Overseas	0.8%	

Estimating the Economic Impact of the Event

Computation of Total Expenditures

Several procedures are followed to compute the total expenditures of the tourists. The first is to separate the cost of packaged tours into lodging and flight expenditures. Sixteen groups purchase a packaged tour which includes lodging and flights. We decompose the price of the packaged tours into lodging and flight expenses by using the share of these expenses for other tourists to the events. The second procedure is to convert the cost of the flights for those that are exchanged by mileage points the visitors have accumulated. Fifteen groups convert their mileage points to flight tickets, 13 from the Kanto

region and 2 from the Chubu region. We use the average flight expenditure per person from the same region as the flight cost.

Table 2 shows the average and the total expenditures for each item. The total expenditures are computed as 35,877,111 yen. The average expenditures of 31,197 yen per tourist are not so different from the nationwide average tourism consumption per trip (32,606 yen in 2017) reported by the Japan Tourism Agency (2018b).   The largest expenditure among all items is transportation at 23 million yen; flight expenditures account for 16 million yen. This makes sense considering the location of residence described in Table 1. The second largest expenditure is lodging at 6.8 million yen. The average lodging expenditure of 7,852 yen per night seems reasonable for Akita Prefecture. Souvenir expenditures are relatively smaller: Visitors spend an average of 1,872 yen.   Considering that a tourist spends approximately 11% of total expenses per trip on souvenirs, visitors to the open campus event spend less on such items (Japan Tourism Agency, 2018b). We suggest that it would be advisable for the event organizers or policy planners to explore possible media to increase souvenir expenditures to stimulate the local economy to a greater degree.

Table 2: Average and Total Expenditures, All Samples

	Average expenditures by visitors with positive expenditures	Average expenditures by visitors	Total Expenditures
Lodging	10,831	5,889	6,772,054
Transportation			
Flights	27,194	13,835	15,909,974
Rapid express	19,015	3,557	4,090,542
Other	4,678	2,601	2,990,945
Meals	3,677	3,356	3,858,833
Souvenirs	2,705	1,872	2,153,234

Other expenditures	1,629	88	101,530
Total		31,197	35,877,111

Tables 3 and 4 show expenditures across different areas of residence.   Total expenditures are 35,713,458 yen for non-residents and 163,654 yen for residents.   The average expenditures for non-resident tourists are estimated to be 33,141 yen; resident visitors spend 2,261 yen.   Visitors from Akita Prefecture spend a lower amount because of low transportation costs and no lodging costs.   Since 94% of the tourists are from other prefectures, and those from Akita spend less on transportation and lodging, nearly all the expenditures come from other prefectures.

Table 3: Average and Total Expenditures, Visitors from Akita Prefecture

	Average expenditures by visitors with positive expenditures	Average expenditures by visitors	Total Expenditures
Lodging	-	0	0
Transportation			
Flight	-	0	0
Rapid express	6,000	833	60,315
Other	708	472	34,178
Meals	800	733	53,077
Souvenirs	800	222	16,084
Other expenditures	-	0	0
Total		2,261	163,654

Table 4: Average and Total Expenditures, Visitors from Prefectures Other than Akita

	Average expenditures by visitors with positive expenditures	Average expenditures by visitors	Total Expenditures
Lodging	10,831	6,284	6,772,054
Transportation			
Flight	27,194	14,764	15,909,974
Rapid express	19,653	3,740	4,030,227
Other	5,002	2,744	2,956,767
Meals	3,871	3,532	3,805,756
Souvenirs	2,754	1,983	2,137,150
Other expenditures	1,629	94	101,530
Total		33,141	35,713,458

Estimating the Economic Impact on the Local Economy

In this subsection, we estimate the economic impact of the event on the local economy. First, we isolate expenditures which belong to the income in the local economy and then estimate the secondary effects from direct expenditures. Visitors from Akita Prefecture would consume food and beverages in the region even if the event were not held. Therefore, we do not treat this as an exogenous increase in demand due to the event, and we subtract these visitors' food and beverage expenditures from the direct spending. Next, we subtract expenditures which become the profit of enterprises located outside Akita Prefecture. Part of the total spending of 36 million yen belongs to the income of companies outside the region. For example, part of air fare is profit for airline companies whose headquarters are located in Tokyo. So, once we calculate total expenditures from the event, we identify how much of the total expenditures is realized as income in Akita Prefecture. Since exact amounts of such expenditures are unknown, we use the shares of local and non-

local profits for 108 items estimated by Akita Prefecture (2018b). To do so, we decompose lodging, transportation, meals, and other expenditures into 108 items, following the standardized procedures in this step (Kim et al., 1998; Ryan, 1998; Chhabra et al., 2003). Second, expenditures on other transportation are divided into railway transport, bus transport, taxi, car rental and gasoline use, and parking fees based on the ratio of representative tourists studied by the Japan Tourism Agency (2015). Third, souvenir expenditures are divided into related items based on the same study by the Japan Tourism Agency (2015).

Table 5 presents the estimated economic impact of the open campus event in Akita Prefecture. The direct expenditures are estimated to be 16 million yen. In other words, out of 36 million yen direct expenditures, 20 million yen is realized as income outside of Akita Prefecture. The main reason for the leakage of income is the low internal self-sufficiency rate for the air transportation industry (0.34 in Akita Prefecture). Once we consider the leakage of income, lodging expenditure which has the internal self-sufficiency rate (1.00 in Akita Prefecture) constitutes the largest portion of the direct expenditures.

Table 5: Total Economic Impact of Tourist Expenditures from the Open Campus Event (million yen).

	Output	Value added	Labor income
Direct	15.96	5.30	2.72
Indirect	6.74	3.76	1.61
Induced	2.47	1.57	0.58
Total	25.17	10.63	4.90
Multipliers	1.57		

The second step is to estimate secondary effects from the direct expenditures. Secondary effects include the changes in economic activities from the subsequent round after direct expenditures become profits or incomes of economic agents in the region. There are two types of secondary effects in impact studies:

indirect and induced. Indirect expenditures are changes in sales and employment opportunities in the supplying sectors. Increased sales in the agricultural sector due to increased food consumption by visitors are one example. Induced expenditures are changes in consumption by employees whose income increases due to the direct expenditures of the visitors. In other words, we estimate the multiplier effect of the new demand for the other sectors and additional spending results from the generated income of employees in the supporting industries. In economic impact studies, these secondary effects are estimated using multipliers in the related input-output table. We use multiplier coefficients of 108 regional sectors prepared by Akita Prefecture (2018b). The impact studies of events should reflect the cost of holding the event for the event organizers since the event generates secondary effects on the local economy. However, we do not include expenditures by the event organizers due to the lack of data and, therefore, the impact may be underestimated.

The secondary impact is estimated to be 9 million yen, as reported in Table 5. The total output multiplier (the sum of direct, indirect, and induced impact divided by the direct impact) is estimated to be 1.57. This suggests that every yen that visitors spend on the event turns over 1.57 times in the region. The total economic impact is 25 million yen due to the event, that is not overly influential considering the size of Akita Prefecture's economy (GDP of 3.4 trillion yen in 2015), but it contributes to the accommodation & food service industry in Akita Prefecture. Also, this event is held multiple times every year, and thus it is the sustainable source of income for the local economy.

Conclusion

The economic impacts of small events are not often determined due to limited financial resources and the small influence on large economies. However, a small event can have a relevant impact on a local economy with a smaller economic scale. As a case study, we estimate the economic impact of an open campus

event on Akita Prefecture, a remote area in the Tohoku region of Japan. The estimated direct expenditures are 16 million yen. The secondary impacts are estimated to be 9 million yen. The main source of the impacts is transportation and lodging expenditures. The open campus event is conducted two or three times a year, and the estimated economic impacts occur each time. These impacts certainly contribute to the economic sustainability of the local area. Thus, the research findings from this study provide beneficial information to event organizers for event management purposes. It would also be helpful for the event organizers and policy planners if we conduct the impact study at the municipality level. It is suspected that most of the consumption on the event was realized in the Akita city, the part of Akita Prefecture. Therefore, the impact has a more significant influence on the smaller economy. The survey data and the input-output table at the prefecture level do not allow us to estimate the impact at a more disaggregate level, and we suggest it for future research.

References

Akita Prefecture. (2015a). *Report on the population decline in Akita Prefecture*. Akita, Japan: Akita Prefecture.

Akita Prefecture. (2015b). *Statistics on tourism in Akita Prefecture*. Akita, Japan: Akita Prefecture.

Akita Prefecture. (2018a). *Monthly report of population in Akita Prefecture*. Retrieved June 14, 2018, from https://www.pref.akita.lg.jp/pages/archive/9910

Akita Prefecture. (2018b). *Analysis tool for the economic impact study*. Retrieved June 15, 2018, from https://www.pref.akita.lg.jp/pages/archive/32229

Akiyoshi, I. (2012). A research on economic effects caused by the sightseeing consumption of "B-1 Granprix in Himeji." *Review of the Kobe University of Commerce, 64*(1), 57-75.

Cabinet Office. (2018). *Gross domestic products of all prefectures*. Retrieved December 5, 2018, from https://www.esri.cao.go.jp/jp/sna/data/data_list/kenmin/files/contents/pdf/gaiyou.pdf

Çela, A., Knowles-Lankford, J., & Lankford, S. (2007). Local food festivals in Northeast Iowa communities: A visitor and economic impact study. *Managing Leisure*, 12(2), 171-186. doi: 10.1080/13606710701339470

Chhabra, D., Sills, E., & Cubbage, W. F. (2003). The significance of festivals to rural economies: Estimating the economic impacts of Scottish Highland Games in North Carolina. *Journal of Travel Research, 41*(4), 421-27. doi: 10.1177/0047287503041004012

Gartner, W. C., & Holecek, D. F. (1983). Economic impact of an annual tourism industry exposition. *Annals of Tourism Research, 10*, 199-212. doi: 10.1016/0160-7383(83)90026-9

Getz, D. (2008). Event tourism: Definition, evolution, and research. *Tourism Management, 29*(3), 403-428. doi: 10.1016/j.tourman.2007.07.017

Gibson, C., & Connell, J. (2012). *Music festivals and regional development in Australia*. London: Routledge.

Himeji City. (2018). Financial situation of Himeji city in 2011. Retrieved December 22, 2018, from http://www.city.himeji.lg.jp/s10/2212210/_1465/_23048/_23052.html

Japan Tourism Agency. (2015). *Research study on economic impacts of tourism in Japan*. Retrieved November 11, 2018, from http://www.mlit.go.jp/kankocho/siryou/toukei/shouhidoukou.html

Japan Tourism Agency. (2018a*). Statistics on the number of tourists.* Retrieved June 18, 2018, from http://www.mlit.go.jp/kankocho/siryou/toukei/irikomi.html

Japan Tourism Agency. (2018b). *White paper on tourism in Japan, 2018.* Retrieved December 12, 2018, from http://www.mlit.go.jp/common/001260955.pdf

Kim, C., Scott, D., Thigpen, J. F., & Kim, S. S. (1998). Economic impact of a birding festival. *Festival Management and Event Tourism, 5*(1-2), 51-58. doi: 10.3727/106527098792186702

Ministry of Land, Infrastructure, and Transport. (2017). *White paper on land, infrastructure, transport and tourism in Japan, 2017*. Tokyo: Author.

Musha, K. (2010). Input-output analysis of tourism industry on local economy. Retrieved July 8, 2018, from https://www.kwansei.ac.jp/i_industrial/attached/0000027895.pdf

Polo, C., & Valle, E. (2008). An assessment of the impact of tourism in the Balearic Islands. *Tourism Economics, 14*(3), 615-630. doi: 10.5367/000000008785633604

Ryan, C. (1998). Economic impacts of small events: Estimates and determinants — a New Zealand example. *Tourism Economics, 4*(4), 339-52. doi: 10.1177/135481669800400403

Terada, R. (2010). Economic impacts of Aomori Nebuta Festival and Akita Kanto Festival. Hirosaki University. Retrieved May 9, 2018, from http://human.cc.hirosaki-u.ac.jp/jinbun/web/img/pdf/research22/econ4.pdf

Wagner, J. E. (1997). Estimating the economic impacts of tourism. *Annals of Tourism Research, 24*, 592-608. doi: 10.1016/S0160-7383(97)00008-X

Yokosuka City. (2018). Economic impact study tool for policy making in Yokosuka-city. Retrieved May 13, 2018, from https://www.city.yokosuka.kanagawa.jp/0830/upi/jouhou/documents/ikkatsu_suzuki.pdf