Plurilingual STEAM and School Lunches for Learning?
Beyond Folklorization in Language Education

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ABSTRACT

In Japan, where there is a bias toward English-only in foreign language education, there are also grassroots efforts to introduce greater plurality in the classroom. However, introducing diverse languages and cultures into the classroom can lead to folklorization, the delivering of essentialized information in pre-packaged formats, which can potentially delegitimize other languages and cultures. This contribution examines a collaborative integrative plurilingual STEAM practice at an elementary school in Western Japan. In the 'school lunches project,' the children experience various international cuisine, leading up to which they would engage with related languages and cultures through collaboratively produced plurilingual videos and museum-like exhibits of cultural artifacts. The interdisciplinary, hands-on, experiential learning within this project helped the children to develop an investigative stance toward linguistic and cultural artifacts, nurture a deeper awareness of languages and openness to diversity, foster reflexivity, and encourage interdisciplinary engagement.

KEYWORDS

Collaboration, Community Engagement, Folklorization, Food & Nutrition Education (Shokuiku), Inquiry-Based Learning, Interdisciplinary Education, Plurilingual & Intercultural Education, STEAM

INTRODUCTION

In 2020, foreign languages were introduced as a compulsory subject in elementary schools in Japan, a context in which English is often viewed as the only useful foreign language for international communication and is given priority at all levels of education (Oyama & Yamamoto, 2020). Cognizant of the fact that the globalized world is not just English, calls have been made to include greater linguistic and cultural diversity into the curriculum.

These calls have not been entirely unheeded. While government policy states that the target language to be taught is "in principle, English," (MEXT, 2017a, p.164/178), the accompanying commentary to the national curriculum at least pays lip service to languages and cultures beyond the traditional Anglosphere:

Many people in the world speak languages other than English. Therefore, in order to understand the people in the world, it is important to take into account the daily lives of people who use languages other than English. (MEXT, 2017b, p. 134, translation ours)

Nevertheless, little top-down information is provided for teachers as to how other languages or cultures should be incorporated into lessons, and government-prepared teaching materials, as well as much of the literature, remain entirely focused on English.

This English-only bias is perhaps most conspicuous in policy documents surrounding Assistant Language Teachers (ALTs) and "local human resources with English ability" (MEXT, 2017a, p.162/178), both foreign and Japanese, employed to provide linguistic (primarily English) support, as well as to act as 'cultural informants.' Despite the fact that nearly a third of ALTs come from countries outside of the traditional Anglosphere, and most ALTs are at least bilingual (Pearce, 2021), policy documents consistently refer to ALTs as monolingual speakers of English, and there is no official recognition of linguistic or cultural diversity in their population or the local community, nor how this might be incorporated into lessons (Pearce, 2021).

Despite monolingualizing trends in educational policy, there is a growing movement to include greater linguistic and cultural diversity in the foreign language curriculum (e.g., Nishiyama, 2017). Given the diversity of the ALT and volunteer population, there is also a preexisting wealth of cultural information and experience to be capitalized upon. However, when introducing other cultures in the classroom, particularly those that the teachers or students are not familiar with, there is also a danger of essentialization; oversimplifying and stereotyping content, sometimes referred to as 'folklorization' (McDowell, 2010; explored further in the next section).

Within this context, we focus on an ongoing grassroots STEAM (science, technology, engineering, arts, and mathematics) project, centered around plurilingual foreign language classes, and conducted in tandem with nutrition teachers, members of the local community, and language teaching assistants. We will trace the development and implementation of the project which weaves together foreign language, intercultural education, and school lunches while promoting openness and fostering awareness through experiential engagement with a plurality of foreign cultures and languages.

THEORETICAL BACKGROUND: FOREIGN LANGUAGE EDUCATION, FOLKORIZATION AND STEAM

Foreign Language Education, Intercultural Learning & Folkorization

Foreign language education globally has been undergoing a shift away from the native-speakerism paradigm of the 20th century towards more inclusive, wholistic pedagogies influenced by theories such as plurilingualism (Marshall & Moore, 2018) and trans/plurilanguaging (Moore, Oyama, Pearce, Irisawa, & Kitano, 2020; Cenoz & Gorter, 2017), a rejection of target-language only pedagogy (Galante, et al., 2020), and increasing awareness of the value of experiencing a variety of languages and cultures. A commonality of such approaches is that they represent a movement away from more conventional language teaching, toward developing more reflexive understandings of language, in which all linguistic resources, inclusive of languages other than the target language, are seen as beneficial to constructing knowledge.

While the call for including a greater diversity in materials often necessitates the introduction of different linguistic and cultural practices in the classroom, doing so also runs the risk of 'folklorizing' the languages and cultures entailed. For the purposes of this paper, we borrow McDowell's (2010) definition of folklorization, "to remove traditional expressive culture from an original point of production and relocate it in a distanced setting of consumption" (p. 182). While there is debate about the concept of folklorization in various fields (Hafstein, 2018), in language education, specifically, folklorization has been described as the process of "denot[ing] the use of 'local' languages in irrelevant

domains, thereby denying them access to meaningful areas of contemporary life" (Yamamoto, Brenzinger & Villalon, 2008, p. 63), and is considered particularly damaging in the revitalization efforts of indigenous languages.

In the Japanese context, which has its own share of indigenous languages, such as Ainu and several Ryukyuan languages, for instance, the trivializing process of folklorization, delivering tidbits of cultural or linguistic information in pre-packaged formats, potentially runs the risk of delegitimizing languages and cultures other than those explicitly promoted in the curriculum – not only minor languages, but also other global languages. This can be problematic in essentially hiding away the aforementioned languages other than English in society, both amongst children and the language assistants there to help teach them.

For instance, in the literature on ALTs, it has been pointed out that assistants will sometimes conceal the fact that they speak other languages or identify with multiple cultures, and portray themselves as monolingual native speakers of English, ostensibly in order to fulfil the 'English expert' role they feel is expected of them (Pearce, 2021). Within the ALT community, this is sometimes referred to as playing the 'dancing monkey,' or acting like a "stereotypical *gaijin* [外人: foreigner]" (Menard-Warwick & Leung, 2017, p. 15). It is possible that such representations have contributed to conceptions amongst young learners such as 'foreign language = English,' 'one country, one language,' and 'foreign = American,' which have been reported elsewhere (Oyama & Pearce, 2019).

The question that plagues practitioners is how to approach inclusive instruction while avoiding pitfalls such as essentialization and folklorization. Much as approaches such as *Éveil aux langues* (Candelier, Daryai-Hansen & Schröder-Sura, 2012) incorporate multiple languages simultaneously as objects of inquiry and examination, there is potential for a similar approach to teaching about cultural practices, through experience and reflection. In other words, teachers might take a stance of not delivering information *about* culture but creating opportunities for children to collaboratively *experience* languages and diverse practices and beliefs. Plurilingual STEAM approaches may help to create such opportunities.

Plurilingual STEAM Education: Promoting Collaboration between Silos

STEAM is an integrative approach to education that expands upon integrative STEM (Science-Technology-Engineering-Math) teaching, which sought to connect the subject-specific silos[1] in K-12 education. STEAM has been proposed as a framework to integrate Arts (meaning fine arts, language arts, motor and physical arts, and liberal arts including sociology, theology, history, civics etc., see Yakman, 2008) into STEM for more wholistic learning. STEAM seeks to break down the artificial separating of subjects into discrete silos by emphasizing the interconnectivity between subjects and encouraging interdisciplinary learning through an understanding that the arts are "important to the overall creation of knowledge and well-rounded citizens" (Yakman, 2008, p. 15).

Within the language arts, specifically, the wholistic view of STEAM learning resonates with plurilingualism (Coste, Moore & Zarate, 2009[1997]; Marshall & Moore, 2018), which, in contrast to traditional language teaching that treats individual languages in isolation (or, linguistic silos), defines plurilingual (and pluricultural) competence as follows:

the ability to use languages for the purposes of communication and to take part in intercultural interaction, where a person, viewed as a social actor has proficiency, of varying degrees, in several languages and experience of several cultures. This is not seen as the superposition or juxtaposition of distinct competences, but rather as the existence of a complex or even composite competence on which the social actor may draw. (Coste, Moore & Zarate, 2009[1997], p. 11)

While plurilingualism is gaining increasing attention in Japan, few studies have yet specifically focused on the interconnectivity between plurilingual/pluricultural approaches and other subject

learning (although see Moore, Oyama, Pearce, Irisawa, & Kitano, 2020; Pearce, Oyama, Moore & Irisawa, 2020).

Connecting Isolated Silos: School Lunches and Foreign Languages

Japan is well-known for the quality of its school lunches, which have a long history, dating back to the late 19th century. School lunches in Japan are not simply served to children, but form an important part of their learning, in what has come to be called *shokuiku* (食育), or "education to promote knowledge about and awareness of food and one's diet" (Kojima, 2011, p. 49). *Shokuiku* has been enshrined in law since 2005, and many elementary schools employ nutrition teachers (栄養教諭), including one of the co-authors of this paper, Emiko Fujita (Emiko-sensei). It is expected that "*shokuiku* for children will have a great impact on their physical and mental growth and on their character formation" (Kojima, 2011, p. 50).

Children in Japan are not simply passive receivers of *shokuiku*, but are actively involved in the process, assisting in preparing and distributing meals to their classmates. *Shokuiku* thus forms an integral part of the social fabric in Japanese schooling, with one of the key ideals being that children eat together. It is also relevant to note that children share their lunches in the classroom, which potentially legitimizes the educational aspect of *shokuiku*, as it happens where the children do their learning. Extended learning in *shokuiku* includes aspects such as studying food production, and where food comes from, as well as history education, food choice (Bisogni, Connors, Devine & Sobal, 2002), identity, and cultural practices (Johnston & Longhurst, 2012; Kong, 2015).

Despite the inherently interdisciplinary (and multicultural) nature of *shokuiku*, it is often taught in isolation from other subjects, much as foreign languages are in the Japanese curriculum (although see Kanda, et al., 2012[2]). While many other subjects in elementary schools (such as physical education or social studies, for instance) encourage interdisciplinary study and reflection on connections between subject silos, this has traditionally not been the case for either *shokuiku*, or foreign languages (Wakabayashi, 2016).

The potential for a plurilingual STEAM approach, bridging *shokuiku* and plurilingual foreign language education to promote experience and engagement in learning, while curbing the essentialization of other cultures, is what the school lunches project in this article sought to achieve.

Essentialization (or folklorization) cannot by entirely avoided in the classroom, as pedagogic materials are by necessity chosen and curated by the practitioners and are therefore influenced by their individual beliefs. However, this may be somewhat alleviated by collaborative production of interdisciplinary materials, in which the focus is on multiple subjects rather than simple 'cultural information' alone. It may also be possible to limit the potential for children's internalizing of essentialized descriptions through more investigative approaches.

The exploratory study in this paper therefore sought to examine a plurilingual STEAM initiative, part of a broader, ongoing materials development project in which the authors are involved, in order to address the following broad research questions:

1) Through a plurilingual STEAM approach, how do practitioners collaborate to reduce folklorization/ essentialization in their teaching practices and learning content?
2) What kind of learning takes place through the implementation of such approaches?

THE RESEARCH CONTEXT, DESIGN, AND DATA COLLECTION

A School Invested in Collaboration and Ongoing Plurilingual Education

The school lunches project took place at a public joint elementary/junior high school in the Kansai region. The school emphasizes interdisciplinary learning through collaboration; teachers and students from all levels of the school regularly engage in collaborative work, both within specific school subjects

Table 1. Schedule for the plurilingual school lunches project

Month	Country introduced	Food experienced	Main languages represented
Apr	Indonesia	Nasi goreng	Bahasa Indonesia
May	Canada	Poutine	French (Quebecois)
Jun	France	Cake salé	French (Français)
Jul	Gambia	Benachin	English
(summer break)			
Sep	United States of America	Country Captain	English
Oct	Peru	Lomo saltado	Spanish (Español)
Nov	Aotearoa New Zealand	Kumara soup	Te Reo Māori
Dec	Vi⊠t Nam/Vietnam	Pho ga (ph⊠ gà)	Vietnamese (Ti⊠ng Vi⊠t)
Jan	⊠⊠⊠⊠⊠⊠⊠/Thailand	Pad Thai (⊠⊠⊠⊠⊠)	Thai (⊠⊠⊠⊠⊠⊠)
Feb	Sverige/Sweden	Pytt i panna	Swedish (Svenska)
Mar	日本/Japan	Chirashizushi (ちらし⊠司)	Japanese (日本語)

and in interdisciplinary learning. Teachers are also encouraged to engage in the wider community, including academia, through which the researchers involved in this paper became acquainted with one of the leaders of the project, co-author Yuki Kitano (Yuki-sensei).

Yuki-sensei is a specialist teacher of mathematics and foreign language education, and she weaves plurilingual practice throughout her foreign language classes (see Moore, Oyama, Pearce & Kitano, 2020). In the remainder of this article, we will examine how she and Emiko-sensei collaborated with each other and other teachers, and with researchers, community members, and language assistants outside of the school to develop lessons centred on the children's experiencing of diverse culinary cultures, including inquiry-based learning through plurilingual video and textual materials, as well as cultural artifacts, in order to promote openness to diversity, and cultivate reflexivity and engagement.

Overview of the Project

Over the period of one year, once a month, children would try cuisine representative of diverse social identities, connected to their prior learning in foreign language classes. The country/language choices were chosen in part to encourage questioning of common (often hegemonic) sociolinguistic representations such as one-country-one-language, to be inclusive of local and indigenous languages, and to show languages in contexts different to those they are usually related to, such as English in Gambia and Spanish in Peru (see Table 1). For the purpose of this article, we will examine one month's practice (November, 2020: Aotearoa New Zealand).

Rationale and Materials: Storying the Food

Prior to the school lunches, an hour of class time was allotted for learning about the cuisine's country of origin. Three plurilingual activities were included in the lessons; 1) watching a video prepared by Japanese-speaking bilingual collaborators, 2) examining picture books, and 3) engaging with cultural artifacts in museum-like displays.

As the ultimate goal of the project was to engage the children in a storying and multisensory experientiation of food from around the world, the associated learning materials were prepared with that intention. Yuki-sensei reflects on the rationale for the materials:

Children are more conservative with food than adults, and often reject things they haven't had before. By learning about the country beforehand, hearing people's personal memories of the food and how much they loved it, actually holding the objects from the country in their hands, and feeling them, they get a sense of the country. It's really great when they begin to look forward to trying the food. (Text message, December 2020)

Yuki-sensei specified general content to be included in the video, although collaborators had a great degree of freedom regarding the specifics. The content she requested was interdisciplinary, and covered various aspects of STEAM, including geography/topography, natural sciences (wildlife, climate, flora), local histories and languages, as well as, for the reason given above, personal memories related to the specific cuisine (storying lived experiences).

Each video was prepared by a volunteer, collaborators from Yuki-sensei's extended community, including the lead author of this paper, research colleagues, international students at the authors' universities, and assistant language teachers at schools around the country. In this way, the project's learning was not confined to the school: For instance, following the production of the New Zealand video (Figure 1), co-author Daniel Pearce spent time with students at his university devising the content of the videos on Vietnam and Indonesia, and mentoring them on how to use digital tools to produce the video[3].

Preparing the display artifacts was a similarly collaborative effort. Yuki-sensei relied on artifacts lent or donated by other staff at her school, children's parents, and the wider community, including the Nasca pottery in the Peru exhibit (Figure 2, below) which were donated by Takashi Hamada, CEO of an educational game development company with whom she had become acquainted through Facebook. For the Aotearoa New Zealand materials, items such as currency were donated by children's parents, a postcard collection by another teacher at the school, and various other realia including passports, *pounamu* (jade) jewellery, and Māori language/bilingual picture books lent by co-authors of the paper.

Figure 1. Screenshots from the video materials

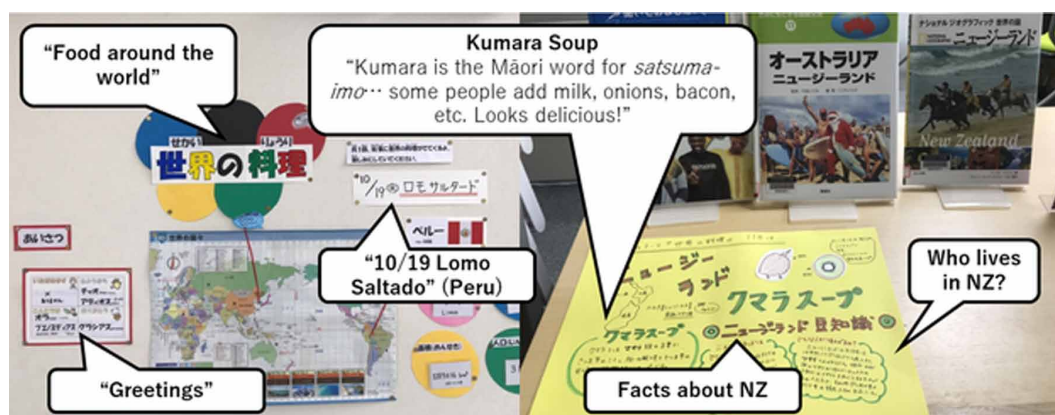Figure 2. Museum-like displays (left: Peru, right: Aotearoa New Zealand)

The displays were intended to be interactive, and the children were able to not only visually examine the items, but also pick up and handle them (sometimes even wear them, as in the case of *áo dài* dresses from Vietnam or the *pounamu* necklace).

Finally, although the core subjects of the project were nutrition (*shokuiku*) and the foreign languages subject, learning was not confined to these alone. As first- and second-year children do not have foreign language classes, outside of class time the displays were set up in the corridors so that the younger children might also engage with the objects (Figure 2, left). Figure 3 shows separate displays by both the home economics teacher and the school librarian; the school as a whole was invested in the project. This collaboration further helps to demonstrate to the students that these cultures and languages are acknowledged by the school, and not simply curiosities of the foreign language classroom.

In the one-hour lesson prior to the school lunches, time was set aside for the children to watch the prepared video, and to examine the picture books and other cultural artifacts. The children were
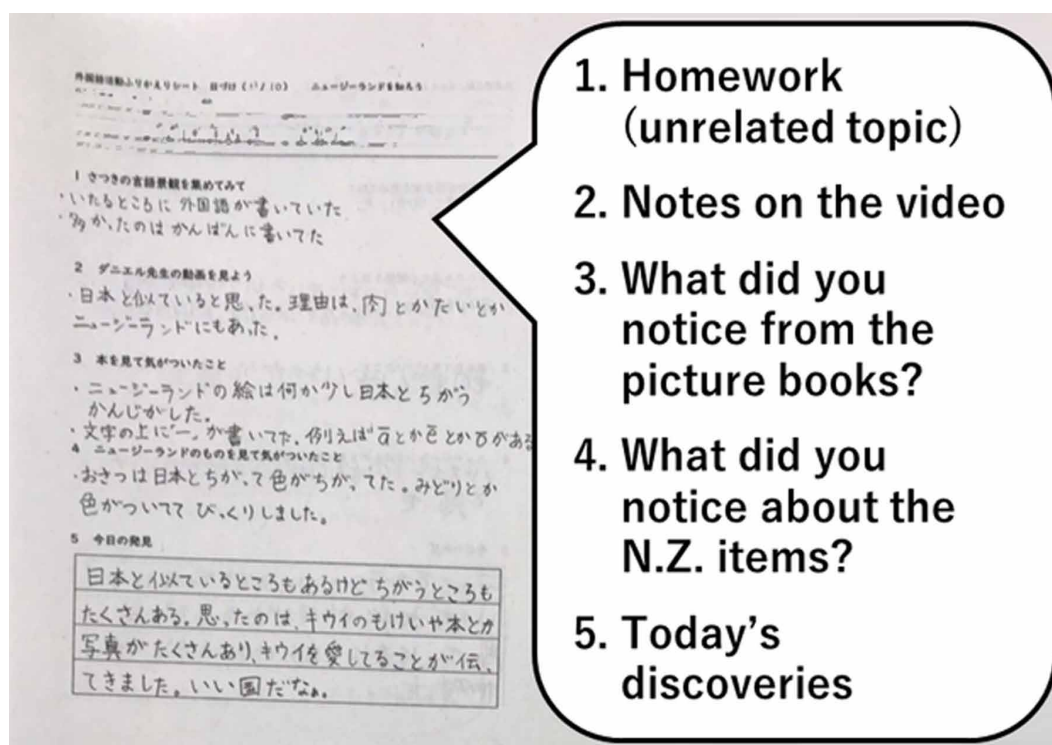
Figure 3. Collaborative displays (left: home economics teacher, right: librarian)

not given any specific instruction as to what aspects of the videos or items they should pay attention to, and they were thus free to examine what interested them.

The children were expected to complete structured reflection sheets (Figure 4), which included space to take notes on the videos, what the children noticed about the picture books and the cultural artifacts, and a space to summarize their discoveries of the day (in the same way a local museum offers reflection sheets to support engagement). Reflection sheets, one type of journaling, is common practice in Japanese schools, and Yuki-sensei's children engage in reflection sheets after every lesson. For the school lunches project specifically, the sheets were filled out after the lesson prior to experiencing the cuisine, and it was their second time engaging in journaling specific to the project, after the prior lesson on Peru[4]. No specific instructions vis-à-vis content were given, other than the general categories shown in Figure 4.

Figure 4. Targeted reflection sheets

Research Design and Participants

The participants in this study include two of the co-authors, Yuki Kitano and nutritionist teacher, Emiko Fujita, two 4th grade classes ($n = 72$, 39 boys and 33 girls), and two 5th grade classes ($n = 70$, 37 boys and 33 girls). Multimodal data collected include visual documentation of Yuki-sensei's classes, video recordings, field notes, minutes from materials development exchanges, numerous personal interactions including text messages, field-notes and interviews with Yuki-sensei, as well as the children's reflection sheets.

This variety of ethnographic data allowed us to document: (1) the children's engagement in plurilingual STEAM learning (through video and photographic recording of the practice), (2)

interaction and hypothesizing by the children (through video recordings and Yuki-sensei's field notes), (3) the children's reflective journaling, and (4) retrospective reflections on the practice through interviews with Yuki-sensei. Subsequent interpretation of the ethnographic data is collaboratively constructed between the researchers and the teachers, which allowed for differently situated perspectives, while thematic analysis (Braun & Clarke, 2006; see Appendix) was used to qualitatively code the children's reflection sheets.

FINDINGS AND DISCUSSION

As mentioned above, Yuki-sensei maintains a plurilingual stance in her lessons (reported in detail in Moore, Oyama, Pearce, & Kitano, 2020), and her children are thus used to engaging with unknown languages and cultures. Yuki-sensei herself video recorded the children's interactions with the picture books and displays, totalling around 17 minutes[5] between the two classes, extracts from which will be examined below. The video recordings were supplemented by ethnographic photography of the children's engagements with the materials.

Thematic analysis of the structured reflection sheets generated 965 discrete codes and sub-codes, which were coded using MAXQDA 2018.2. Given the wide variety of topics covered by the STEAM learning content and the diversity of codes that resulted, themes were organized along children's learning behaviours: Repeating content, reporting perceptions, analyses, retelling content, and questioning (see appendix for more details). Examples of codes were chosen to give a representation of both the 4th and 5th grade children's learning across disciplines (such as natural sciences: flora/fauna), in an attempt to display as accurately as possible the trends of content across the entire data set, rather than focussing overly on one grade or specific subject-related content.

Ethnographic data of the children's learning and representative examples from the identified themes will be explored below, based on the structure of Yuki-sensei's targeted reflection sheets.

Learning from the Video

As requested by Yuki-sensei, and using the prior video on Peru as a template, a co-author produced the video on Aotearoa New Zealand[6], which covered the following interdisciplinary content; a) a self-introduction in Te Reo Māori and Japanese (languages), including information on the author's hometown and local mountain (geography), b) some history of the Māori people (history) and the indigenous name for New Zealand, c) flora and fauna (natural sciences), d) food culture including primary industry products (agriculture), and traditional cooking styles (*shokuiku*), e) history of *kumara* (sweet potato) in New Zealand, as originally brought over from South America (connecting content with the previous month's learning), and finally f) introducing kumara soup and personal memories of the cuisine (*shokuiku* and personal storying). The video was roughly ten minutes in length, and the children took notes as they watched.

Of the 264 codes (4th grade: 150, 5th grade: 114) generated, most were a verbatim repeating of content in the video (131: 95;36)[7]. This was unsurprising, given that the flow of information was unidirectional. Nevertheless, there was considerable variation in what aspects of the video the children picked up on, including culinary, ethnographic, natural science, and linguistic aspects. The bulk of the remaining codes comprised of perceptions (106: 34;72), many of which were positive evaluations of the month's cuisine (kumara soup), which demonstrated the video had achieved one of its intended purposes (although the response was not uniform: one student from each grade included a remark similar to "I don't want to eat it").

A small number of students from each grade began analyses or questioning of the content (14: 10;4), including raising questions such as "won't dirt get in?" in response to the *hāngi* (earth-oven) cooking. A total of three children displayed some linguistic analysis, with one noting the Māori use of the macron on vowels, and another displaying incidental acquisition of vocabulary (*shizen* [自然] = nature). This interest, while limited at the video stage, was unsurprising given Yuki-sensei's

Figure 5. Examining the Māori picture books

regular inclusion of multiple languages in inquiry-based learning in her classes. Her children do not shy away from unknown languages and cultures, but are developing a plurilingual (and pluricultural) stance (Moore, Oyama, Pearce & Kitano, 2020). This stance becomes more apparent in observation of the children's examinations of the picture books.

Learning from the Picture Books

The picture books were the children's first experience with the Māori language, save the brief exposure during the video. The children's examination of the pictures books was undirected, and they worked together in groups to examine whatever aspects drew their attention (Figure 5).

Glimpses of the children's examinations of the picture books in Figure 5 were also captured on video, and excerpts of their dialogue reveal some of their learning:

Extract (1)

L1: Wow that guy is ripped!
L2: Yeah he's really muscly [inaudible remark about clothing] (turns page to the image in Figure 5, left) That's gross, oh it's that! The greeting!
L3: Oh yeah, the greeting!

In this extract, the children are examining a picture book of the legends of Māui, and remark on the physical attributes of the character (his muscular appearance), as well as the clothing (19 [9;10] children also remarked on attire in their reflection sheets, typically that the upper body was usually naked). When L2 turns the page to the image shown in Figure 5, her reaction is very interesting: She is initially repelled by the image ('that's gross'), but this is almost instantly swept away by her realization of what she is looking at: the Māori *hongi* greeting[8], about which Yuki-sensei had told them in the introduction to the class. The experiential aspect of examining the books herself, and 'discovery' of

the greeting that she had been told about is an essential aspect of developing openness to different cultures; the excitement of her discovery immediately dispelled her kneejerk negative reaction.

The next extract is an example of linguistic analysis by a pair of students. Neither can understand the Māori language, but this does not prevent them from analysing the text:

Extract (2)

L1: There is a line on top of the 'a'
L2: And a line of top of 'e'
L1: There must be a reason for it…

Here, the children have noticed the Māori macron (recall that one child had noted its presence in the video). L1 first identifies the macron above the letter 'a', followed by L2's remark that it also appears above the letter 'e,' before L1 begins to ponder the meaning for it. Of the 17 4th grade students that commented on linguistic aspects in their reflection sheets, four noticed the presence of the macron.

For the 5th grade students, who had more experience of language learning (of Japanese, of English, and of Yuki-sensei's plurilingual lessons), the analyses were both more varied and detailed. Of the 50 comments on language in their reflection sheets, 20 remarked on the presence of macrons, of whom 6 noted that they appeared only on short vowels; two were able to hypothesis that the macron functions similarly to the Japanese *kanabou* (ー), which is used to elongate vowel sounds. 11 of the 5th grade students also remarked on punctuation, noticing similarities between Japanese and Māori (four noted that both languages use '!' and '?'), and developed hypotheses of their function (eight mentioned quotation marks, of whom five noticed they denote speech in the same way as Japanese *kagikakko*：「」). This type of noticing and connecting knowledge is likely to be a result of Yuki-sensei's plurilingual teaching and resonates with the proposed benefits of approaches such as *Éveil aux langues* (Candelier, 2003), mentioned above. Other remarks compared English and Māori versions of the same picture book, noting that "the number of words was different," or "the openings were different."

To the far right of Figure 5, one child is pointing towards an artistic representation of mountains, remarking "it's a copy of Mt. Fuji!" (Japan is well-known for turning inanimate objects and landmarks into characters; see Mt. Fuji to the bottom-right of Figure 5 which resembles the mountains in the books). Much of the analyses conducted by the children was of a similar manner; codes that fell under 'ethnographic analyses' were common (54;49), and included a wide variety of topics such as tattoos and physical appearance, housing/architecture, craftwork/tools, attire/jewellery, and artistic representations. Many made comparisons and contrasts with similar aspects in Japanese culture, showing an appreciation of the fine arts aspect of STEAM, such as the following comment by a 5th grade child: "the symbolism of light and shadow was very strong; they were different from Japanese picture books, and there weren't many subtle colours".
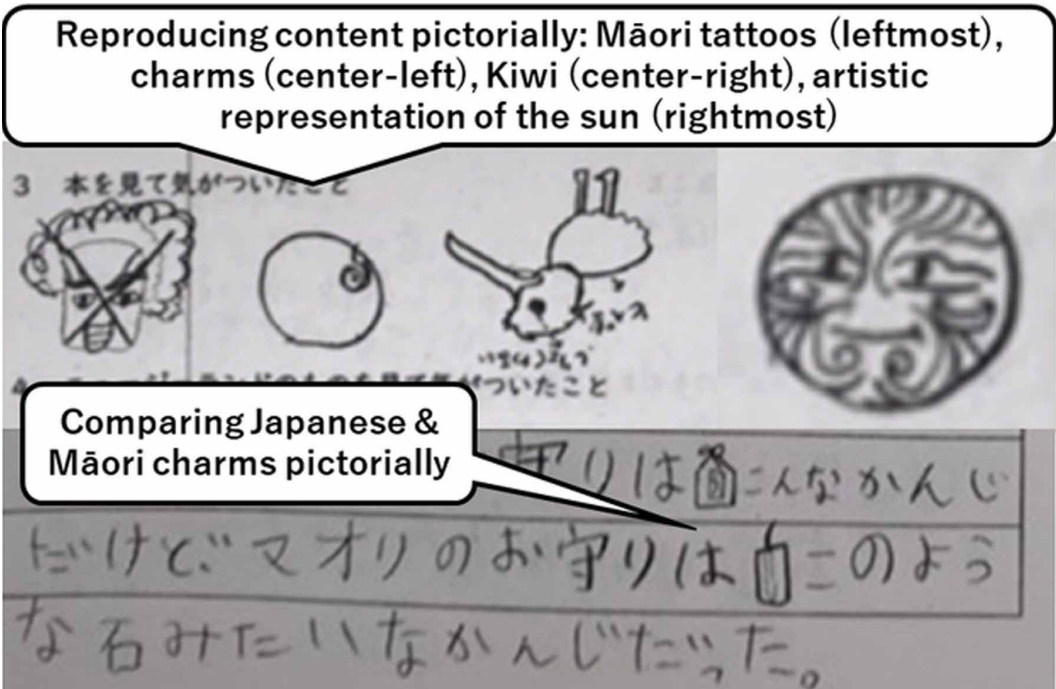
Finally, a new theme arose in analyses of the reflection sheets on the picture books: Retelling content. Seven of the children (6;1), recast what they had read in the picture books to create their own stories (storying).

The children's analyses of the content were not only textual, but several drew artistic renditions of what they had observed, including facial tattoos, *pounamu* jewellery, characteristics of the kiwi bird, and artistic representations of the sun, some of which were connected to the objects they interacted with in the displays (Figure 6).

Learning from the Displays

Learning from the displays resulted in a similar spread of reflections to the picture books, with the largest number of codes being Analyses (111: 44;67). Given the wide variety of objects in the displays,

Figure 6. Children's artistic reproductions

Reproducing content pictorially: Māori tattoos (leftmost), charms (center-left), Kiwi (center-right), artistic representation of the sun (rightmost)

Comparing Japanese & Māori charms pictorially

the coding focused on what kind of analyses the children engaged in (comparing: 16;11, describing: 24;45, and noticing: 4;11), rather than the specific objects of analyses or subject silos.

Regarding the comparing codes, many children drew comparisons between Japanese and New Zealand money; "the banknotes had people's faces on them, just like Japanese ones" (4th grade), "Japanese coins don't have people's faces on them, but the New Zealand coins did" (5th grade). Comparative descriptions of the passport included "the motifs were different to Japanese ones" (5th grade), and "it's like a Japanese flipbook [ペラペラ漫⊠]" (4th grade), as each page of the New Zealand passport has an image of a ship getting steadily closer to the mainland of Aotearoa. Regarding the *pounamu*, a number of children in each grade made specific comparisons between them and similar Japanese jewellery called *magatama* (勾玉), which are often also crafted from jade, and bear striking resemblance to one common design of the *pounamu*. The children's engagement with the objects is shown in Figure 7.

Similarly, the money, passport, and *pounamu* were common objects of description, with some analyses being quite detailed:

The jewellery worn around the neck, it was really dark. My image of jewellery was shiny and transparent, but this was almost black and smooth and not shiny at all, but it had a greenish tinge that was really pretty (5th grade)

The remainder of the codes were general or specific perceptions (26: 13;13), such as "the kiwi doll was cute" (4th grade) or "the displays were amazing" (5th grade), repeating content verbatim from the attached explanations (20: 21;8), and a few questions (1;5), mostly resulting from differences between Japanese and New Zealand items, such as "¥500 [$5] was a banknote? Why?'"

The experiential nature of the displays, being able to not only visually examine the artifacts, but to get a sense of textures through touch, potentially led to more in-depth analyses than a unidirectional

Figure 7. Interacting with the cultural artifacts (left: money; centre: passport, right: wearing pounamu jewellery)

conveying of information, by allowing the students to draw from their entire repertoire across varying disciplines (or 'funds of knowledge': Gonzáles, Moll & Amanti, 2005), and positioning children as active participants in their own learning, rather than passive recipients of pre-packaged knowledge.

General Comments in 'Today's discoveries'

As the general comments made in the 'Today's discoveries' section of the children's reflection sheets were a summary of their learning, there was overlap with the previous sections, albeit conveyed in slightly more detail. Below are some examples of the children's reflections:

The pictures in the books were really unique and the clothes were cool and I thought I kind of wanted to try on the woman's clothes. (4th grade)
In the picture books, most of the people didn't wear clothes on their upper body. In New Zealand, they used to store kumara in the ground. I'm looking forward to eating kumara soup on Friday. (4th grade)
The New Zealand language, unlike Turkish, was really easy to pronounce. […] I thought N.Z. people spoke only English, but when I watched Daniel-sensei's video I found [that wasn't true]. (5th grade)
In the past, the Māori people brought sweet potatoes [from Peru], and ate them as kumara. I thought it was amazing that they still eat kumara today. I want to try the kumara soup soon! Also, I thought it was incredible that the remains (holes) of where they used to store kumara can still be seen today. (5th grade)

These examples demonstrate how the children were drawn to, and able to draw from, different aspects that interested them, as well as make connections to prior knowledge including previous experiences with different languages and cultures (such as the references to the Turkish language, and to Peru).

Active participation is facilitated when learning is investigative, and concepts are connected to students' prior learning in meaningful ways (Yakman, 2008; Moore, 2021). This connectivity between knowledge was further promoted by the fact that the school lunches project is an ongoing series,

allowing the students to compare and contrast items, books, and concepts not only against their own languages and cultures, but also against the content they had engaged with in other sessions.

Noticeable only by their absence were remarks that trivialized (or folklorized) the various cultures and identities that the children experienced; there was an absence of superficial judgements about Aotearoa New Zealand or Māori culture or language. Rather, comments displayed how, through examination and engagement, the children had adopted an investigative stance. They were not simply absorbing 'pre-packaged content,' but noticing, analysing, and questioning. As noted earlier, avoiding essentialization entirely is not possible in the classroom, and the content and artifacts on display for the children were chosen and curated by the teachers, volunteers, and researchers. In this practice, connections were drawn between the content presented, the artifacts, and the personal storying around the objects, and as such the collaborator's personal experiences became a lens for everyone to raise understanding of cultural differences. It is important for practitioners to realise that artifacts carry personal stories, are ascribed particular meaning by some members in a particular group, and that this meaning is not static, but is socially constructed, negotiated, and evolving. This understanding is fostered in learners through multisituated examination of difference in interpretation of identity objects (Wheeler & Bechler, 2021) and how they carry cultural aspects of broader cultural groups with which different people identify.

Noticeable also is that none of the children's reported perceptions were negative towards the cultural representations they were exposed to (recall, however, the child's kneejerk reaction of 'gross' to the *hongi* greeting that was swiftly dispelled by excitement at her discovery). It is possible that the wealth of resources, the investigative, hands-on approach, and the interdisciplinary STEAM nature of the content, which allowed children to focus on what particularly interested them, contributed to a greater openness to diversity. Furthermore, all but two students that commented on the kumara soup expressed a desire to try it as soon as possible, a reflection of Yuki-sensei and Emiko-sensei's goal behind the project, to have the students experience and enjoy the various cuisine:

I feel like they move through stages, from "the unknown is scary," through "I know a little," "It's kind of fun," "It looks kind of delicious," and "I wonder how it tastes," to "I want to try it." (Yuki-sensei, text message, December 2020)

Yuki-sensei remarked shortly after the following lesson on Vietnam, before the children were to try *pho*: "By the way, the children are still saying 'the kumara soup was so delicious'" (text message, December, 2020).

Bringing Silos and Cultures Together: The Collaborative Nature of Plurilingual STEAM

As STEAM is by nature interdisciplinary, and teachers are often trained in specific subject silos, or at the very least, have certain disciplines with which they feel more comfortable, STEAM-centred projects almost by necessity require collaboration. While the analyses of this paper focused on one lesson hour conducted by Yuki-sensei before the children ate kumara soup as part of the plurilingual school lunches project, it could not have been achieved by her alone; the artifacts on display and the picture books were donated by other teachers, parents, and co-authors, and the content of the video was based on the linguistic, geographic, historic, and scientific knowledge of one of the co-authors, who based his video on the prior session on Peru, and in turn mentored other collaborators in video production and on delivering information in Japanese to young learners.

The collaborative learning was not restricted to the classroom: For instance, in sharing his video with the Peruvian collaborator, our co-author learned that earth ovens are also used in Peru. In seeking out collaborators for the Vietnamese, Indonesian, Thai, and French videos, the co-authors learned more about the backgrounds of those countries and their cuisines (not to mention more about the lives of our collaborators). Each collaborator had his or her own speciality or area of expertise,

which resulted in a unique flavour to each video[10]. Within the classroom, the taking up of the daily lives of the collaborators through the content they included in their videos, as well as their use of both Japanese and other languages, may have helped to legitimize those languages and cultures, and alleviate folklorization as problematized by Yamamoto et al. (2008).

As mentioned in the introduction, assistant language teachers and volunteers are a large part of elementary school foreign language education (and at least one of our video collaborators is currently employed as an ALT), although they are often portrayed as simply linguistic informants and monolingual native speakers of English, and unfortunately, often relegated to the periphery in schools (Kano & Ozeki, 2018; Ishihara, Carroll, Mahler & Russo, 2018). Given that ALTs have an incredible diversity in not only their linguistic and cultural backgrounds (Pearce, 2021), but also in their educational backgrounds, collaborative-STEAM based plurilingual projects such as the school lunches project could be one approach to capitalizing upon the wealth of lived information and experience that they bring to their schools, allowing them to become more fully-fledged members of the learning community, and to contribute more of their 'funds of knowledge' in a more genuine, non-trivialized way.

As we have seen in the analyses here, this goal of this project was not simply the consumption of 'folklorized' cultural information (McDowell, 2010). Through experiencing the cultural artifacts, the picture books, and engaging with the stories and lived experiences of the collaborators through their videos, the children showed a developing openness to engaging with new cultures and multiple identities. At the time of writing, the children had just enjoyed Pad Thai for lunch, and it is with Yuki-sensei's fresh reflections that we close our analyses:

I talk about the lunches every time with Emiko-sensei. We feel that by watching the videos and touching things, and thinking about them in advance […] The feeling of hesitancy toward [new food] is mitigated by that, by a growing positive image of the country and its cuisine. […] When they came to the lunchroom to get their lunch for their classmates, they were saying, "Pad Thai today! I'm looking forward to it!"
[…] The children are informed of the menu a month in advance, but the cooks have never before seen the children looking forward to a dish they have never seen, heard of or, of course, eaten. They have only ever looked forward to popular dishes like curry and fried bread. (Text messages, January 2021)

CONCLUSION

In this paper, we examined an ongoing plurilingual STEAM learning project focussed on multicultural school lunches, the aim of which was to foster openness to a diversity of languages and cultures through experiential learning, while avoiding trivializing or 'folklorizing' (McDowell, 2010) the learning content. The STEAM approach allowed the children to explore various interdisciplinary aspects of a diversity of languages, cultures, and cuisines that interested them, through which, rather than being passive receivers of pre-packaged information, they became active investigators and actors of their learning.

The school lunches project, inclusive of plurilingual and *shokuiku* learning, resonates with the goals of foreign language learning in Japanese elementary schools, "to understand the people in the world, [by taking] into account the daily lives of people who use languages other than English" (MEXT, 2017b, p. 134). Yuki-sensei's request to the volunteers to include personal memories of the cuisine, as well as the fact that the volunteers were fluent Japanese-speakers, typically living in Japan but maintaining connections with the broad cultures they identify with, was integral in highlighting the daily lives of various groups of people in Japan. The collaborative nature of the project thus also potentially demonstrates a means to capitalize upon the linguistic and cultural diversity already present in schools (the assistant language teacher population), and the wider community.

Monolingualizing trends in policy can delegitimize other languages and cultures by emphasizing English only. In contrast, the diversity of languages, cultures, and subject content in the school lunches project, as well as the collaborative approach in which related displays and learning were produced by various subject teachers throughout the school, helped to legitimize a plurality of languages and cultures, and foster an openness to new experience in the children through an aspect of life in which children are often very conservative: the multisensory exploration of new foods. This burgeoning openness was perhaps exemplified by a 5th grader's comment after the Aotearoa New Zealand lesson; "I want to learn more about other countries, too!"

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ENDNOTES

[1]   Individual subjects in isolation, "primarily revolving around the divisions of mathematics, science, language arts and social studies" (Yakman, 2008, p. 6).

[2]   A project in which international *shokuiku* exchange between Korean and Japanese children was carried out. Note, however, that the language in question was again, English only.

[3]   The video materials were produced using Microsoft Powerpoint, Audacity 2.3.3 for audio editing, and Wondershare Filmora9 for video editing and production.

4	Due to school closures resulting from the COVID-19 pandemic, the start of the project was delayed until October.
5	16:56 over 27 short recordings.
6	Full video in Māori and Japanese, subtitled in English, available here: https://youtu.be/yRJ6NbsjH9c
7	Numbers in parentheses represent number of themes/codes produced by the 4th grade and 5th grade classes respectively (Total: 4th grade;5th grade).
8	The traditional Māori greeting in which two people press their noses together.
9	In Japan, ¥500 (roughly equivalent in value to NZ$5) is a coin.
10	The project is ongoing. At the time of writing, only the New Zealand video has been subtitled in English, but other videos in the project may be viewed here: https://youtube.com/playlfist?list=PLWFmEfaRaRm TweXM_QmoDoR0C7wNy1aQW

APPENDIX

Table 2. Thematic analysis procedure

Step	Description
1. Familiarizing	Transcribing data, reading and re-reading data, noting initial ideas.
2. Generating initial codes	Coding interesting features of the data in a systematic fashion across the data set, collating data relevant to each other.
3. Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes	Checking the themes work in relation to the coded extracts, and the entire data set.
5. Defining/naming themes	Ongoing analysis to refine the specifics of each theme, generating clear definitions and names for each theme.
6. Producing the report	Final analysis. Selection of vivid, compelling extract examples, final analysis of extracts, relating back to research questions and literature.

(adapted from Braun & Clarke, 2006: 35)

Table 3. Theme definitions, codes, and sub-codes

Theme	Definition	Codes	Sub-codes
Repeating content	Verbatim reproduction of content either from the video or other sources	Culinary	Culinary
		Ethnographic	Greetings; Clothing; Artifacts; Art; Craft; Customs, Appearance
		Natural Science	Flora/fauna, geography
		Language	Language
		General	Punctuation, spelling, pronunciation
Perceptions	Reported feelings and opinions on the content	(see above)	(see above)
Analyses	Noticing, comparing, or describing resulting from the examination of content or artifacts	Noticing	Ethnographic: Greetings; Clothing; Artifacts; Art; Craft; Customs, Appearance, Natural Science; Flora/fauna, geography, Language: Punctuation, spelling, pronunciation, Other
		Comparing	
		Describing	
Retelling Content	Recasting content in the children's own words, as opposed to verbatim repeating	Retelling	Story content; characters' behaviours
Questioning	Posing of questions that arose from, but were not explained by, the content or artifacts	Questioning	Questioning
Other	General note-taking, single words etc.	Other	Single words, note-taking
Note: For the theme 'analyses', the codes noticing, comparing, describing for analyzing the children's reflections of display content (Table 5), due to the wide variety of content, and the sub-codes were content specific. In other reflections, the codes and sub-codes were reversed.			

Table 4. Video codes and examples (264 codes)

Theme	Code	Examples (Grade)
Repeating content (95:36)	Culinary (24: 21)	"Eaten when it's cold" (4th grade); "Simple, nutritious, and easy to make" (4th grade; "Easy, rich, cheap, nutritious and delicious" (5th grade"
	Ethnographic (21:4)	"There was a lot of meat in the supermarket" (4th grade); "Māori people came to New Zealand a long time ago" (5th grade)
	Natural Sciences (38:11)	"You can catch a lot of snapper/sea bream" (4th grade); "7 sheep for every person" (4th grade); "Lots of sheep and they can cause roadblocks" (5th grade); "Many different kinds of birds and lots of nature" (5th grade)
	Language (4:0)	"They use Māori [language]" (4th grade); "New Zealand = Aotearoa" (4th grade)
	General (8:0)	"New Zealand's population is small" (4th grade
Perceptions (34:72)	Culinary (17:36)	"Kumara soup looks rich and delicious" (4th grade); "I don't want to eat it" (4th grade), "I got hungry" (5th grade); "I want to taste it soon!" (5th grade)
	Ethnographic (3:11)	"Māori people seem clever" (4th grade); "I was surprised at how they stored *kumara*" (5th grade); "Amazing they cook in the ground" (5th grade)
	Natural Sciences (12:15)	"There was lots of nature, I'd like to visit" (4th grade); "The mountains were beautiful" (4th grade); "The kiwis and penguins were really cute" (5th grade); "there were so many birds" (5th grade)
	Language (2:3)	"[His] Japanese was so fluent" (4th grade); "I thought New Zealand was just English, so I was surprised to hear (and hear about) Māori" (5th grade)
	General (0:7)	"I learned lots I didn't know" (5th grade)
Analyses (9:3)	Ethnographic (5:0)	"They seem to use the ground a lot" (4th grade); "the houses were made of wood" (4th grade)
	Natural Sciences (3:1)	"It seems there is a lot of different kinds of wild animal" (4th grade); "I thought it was like Japan, because there were a lot of snapper" (5th grade)
	Language (1:2)	"In Māori, there is sometimes a line above the letters (like ā)" (4th grade); "In New Zealand, they call *shizen* [nature], nature" (5th grade)
Questioning (1:1)	Language (0:1)	"Why do they call it 'kumara'?" (5th grade)
	General (1:0)	"Wont' dirt get in [if they cook in the ground]?" (4th grade)
Other (11:2)	Other (11:2)	(general note-taking, individual key words, etc.)

Table 5. Māori Picture book codes and examples (231 codes)

Theme	Code	Examples (Grade)
Repeating content (10:1)	Ethnographic (1:0)	"They [Māori people] used to live on islands" (4th grade)
	Natural Sciences (1:1)	"There were lots of birds" (5th grade)
	Language (8:0)	"Māori is pronounced similar to Japanese" (4th grade)
Perceptions (7:8)	Ethnographic (5:3)	"I was surprised that everyone eats a lot" (4th grade); "the [faces on] the sun and moon were a bit creepy" (5th grade)
	Natural Sciences (1:0)	"The night sky looked really beautiful" (4th grade)
	Language (1:2)	"The were too many English characters, I couldn't understand" (4th grade); "I didn't know what it meant, but I could pronounce it" (5th grade)
	General (0:3)	"Everything was really different to Japan" (5th grade)
Analyses (78:111)	Ethnographic (54:49)	"Even the young children are used to animals" (4th grade); "they were naked from the waist up" (4th grade); "lots of books were about the sun" (5th grade); "they really greeted by touching noses" (5th grade)
	Natural Sciences (7:10)	"Lots of the birds seemed to eat fruit" (4th grade); "most of the books had a lot of birds in them" (5th grade)
	Language (17:50)	"Most pages had the word 'tamaiti'" (4th grade); "lots of characters had a line about them" (4th grade); "the lines above the letters are only on short vowels" (5th grade)
	General (0:2)	"The game [in the book] look like 'tag'" (5th grade)
Retelling content (5:1)	Picture book stories (5:1)	"A women wrapped the child in her own hair, and then, threw him in the river" (4th grade)
Questioning (0:5)	Ethnographic (0:2)	"I wonder if they like travels/adventures?" (5th grade)
	Language (0:3)	"I wondered what the —— (m-dash) meant" (5th grade)
Other (4:1)	Connecting multimodal information (4:0), Other (0:1)	"They were cooking kumara on stones" (4th grade); "there were pictures of hāngi [in the books]" (4th grade) "Culture is different from country to country (5th grade)

Table 6. Display codes and examples (163 codes)

Theme	Code	Examples (Grade)
Repeating content (12:8)	Ethnographic (6:0)	"They wear charms (*pounamu*) too" (4th grade)
	Natural Sciences (1:4)	"The flightless bird can't see well, so it uses its beak to sniff out and eat bugs" (5th grade)
	General (5:4)	"They don't use much cash, more often cards" (5th grade)
Perceptions (13:13)	Ethnographic (2:0)	"It seems that birds are important to them" (4th grade)
	Natural Sciences (10:7)	"I thought there were lots of forests and oceans in the pictures, they were beautiful" (5th grade)
	General (1:6)	"I thought the postcards looked beautiful" (5th grade)
Analyses (44:67)	Comparing (16:11)	"The banknotes had faces on them, like Japan's" (4th grade); "I thought [the pounamu] was like the Japanese *magatama*" (5th grade)
	Describing (24:45)	"The charm was hard and smooth like a stone" (4th grade); "the passport was like a flipbook" (5th grade)
	Noticing (4:11)	"I thought their weaving techniques were advanced" (4th grade); "there were lots of things related to water in the pictures; pools, oceans, and boats" (5th grade)
Questioning (1:5)	General (1:5)	"Is sushi the same in NZ?" (5th grade); "500 yen is a banknote!? Why!?" (5th grade)

Table 7. 'Today's discoveries' codes and examples (307 codes)

Theme	Code	Examples (Grade)
Repeating content (29:20)	Culinary (7:4)	"Kumara is… sweet potato!" (4th grade); "Kumara is sweet potato in Japanese" (5th grade)
	Ethnographic (9:5)	"Kumara were important to Māori people because they could store it" (4th grade); "The Māori people came across the see, like in *Moana*" (5th grade)
	Natural Sciences (9:8)	"There were 7 times more people than sheep" (4th grade); "The kiwi can't see very well" (5th grade)
	Language (4:3)	"New Zealand had both Māori and English" (5th grade)
Perceptions (54:59)	Culinary (6:9)	"Looking forward to the soup" (4th grade); "I want to try it" (5th grade)
	Ethnographic (27:7)	"New Zealanders look like they have survival skills" (4th grade); "I thought the way of storing kumara in the mountains was unique" (5th grade)
	Natural Sciences (8:19)	"I'd like to see the flightless birds sometime" (4th grade); "I was surprised you could see a lot of penguins in the evening" (5th grade)
	Language (8:2)	"It was difficult to read the books" (4th grade)
	General (5:22)	"Today was really fun" (5th grade)
Analyses (46:69)	Ethnographic (39:48)	"Many of the people didn't wear clothes on their upper body," "they had tattoos," "Many wore charms" (4th grade); "I wonder if there was a meaning for the tattoos?" "It seems that [pounamu] charms are important" (5th grade)
	Natural Sciences (0:6)	"There were actually many birds like the *kakapo* and the *kiwi* that can't fly or fly well" (5th grade)
	Language (7:14)	"There were lines above the vowels in Māori" (4th grade); "the lines in Māori were above the short vowels" (5th grade)
	General (0:1)	"There was a place like a parking area" (5th grade)
Retelling content (2:1)	Picture book stories (2:1)	"In the story, a woman picked up the [abandoned] child I think" (4th grade)
Questioning (1:5)	Ethnographic (1:2)	"There were a bunch of stones piled up, I wondered why?" (4th grade)
	Language (0:1)	"Why do they call sweet potato kumara?" (5th grade)
	General (0:2)	"I wonder who brought the kiwi doll" (5th grade)
Other (10:11)	Other	"The New Zealand money was real" (4th grade); "I want to learn more about other countries, too!" (5th grade)

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