Walking Linguistic Landscapes as Ways to Experience Plurality: A Visual Ethnography into Plurilingualism with Elementary School Children in Japan

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Abstract In Japan, where the language of schooling is overwhelmingly Japanese-only, and English the only widespread foreign language offered at all levels of education, elementary schools stand out as a particularly interesting context for observing the development of creative plurilingual pedagogies. Based on the documentation of local linguistic landscapes as ways to experience and reflect on plurality, and within a perspective where knowledge is grounded in experience and movement (Ingold, 2000), children's learning is contextualized through tools (like cameras and iPads). This inquiry process requires drawing on children's social imagination and the aesthetics of photography through walking explorations of the linguistic landscape to develop more complex understandings of locality and transnationalism (Moore & Haseyama, 2018; Haseyama, 2021), multilingual awareness (Melo-Pfeifer, 2015), and multilingual and multimodal literacies (Prasad, 2020). With this in mind, the exploratory research practice in this chapter was conducted with an elementary student who engaged in investigating linguistic landscapes during a self-directed research assignment. The inquiry-based methodology adopts a visual and sensory ethnography of/in movement (Pink, 2015; Vergunst & Ingold, 2008) anchored in a transdisciplinary plurilingual approach to research-based learning. Multimodal data sources include child- and researcher-initiated visual documentation and reflective journaling, digital photographs, and researchers' field-notes.

Keywords Plurilingual education · Linguistic landscapes · Inquiry-based learning · Language awareness · Transdisciplinarity · Elementary school · Japan

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1 Introduction

This contribution considers the development of inquiry-based plurilingual and transdisciplinary projects to encourage critical awareness of plurality in the context of Japanese elementary instruction. While plurilingual pedagogies are widely known and practiced across the world, the question is how to successfully implement them in a context where the language of schooling is overwhelmingly Japanese-only, and English the only widespread foreign language offered at all levels of education. In what way and to what purpose can such methodologies contribute to research-based inquiry and the building of disciplinary knowledge, and bridge school and home learning while supporting intercultural awareness as language-in-use by making real-world connections through experiential learning and exploration?

We adopt a plurilingual lens to investigate the potential of linguistic landscapes in elementary education, through investigation of which children become ethnographers of their environments and everyday lives (Dagenais et al., 2009). We build on the work of sociolinguists and sociodidacticians who strive to investigate the interrelationships and interplays between the social, physical, and cultural aspects of an environment to conceptualize the multi-layered ecosystems that frame and are framed by people's language use (Calvet, 1994, 2005, 2006), relationships to space, representations and social positioning (Bulot & Veschambre, 2006) and language learning (Van Lier, 2010). As such, we situate ourselves in contextual approaches in education, in which context is an important factor to consider when investigating learning practices (Blanchet et al., 2009), and where various sites of learning are seen as multi-faceted continua, in which temporal and spatial dimensions interact to shape knowledge. This interest in context thus expanded here to open up to more dynamic ecological frameworks to theorise context as a *relational* property, and to better emphasize the qualitative nature and the complex weaving of interconnections and relationships between the learner and the learning in different spaces and scales (Plowman, 2016).

Derived from the Greek *oikos*, meaning house or household, the word ecology "encompasses interconnecting temporal dimensions that suggest dynamic adaptation over time, and spatial dimensions that imply physical surroundings, boundaries, networks and relationships" (Plowman, 2016, p. 191). Van Lier further defines ecology as,

> the study of the relationships among elements in an environment or ecosystem, in particular the interactions among such elements. In the human sphere, we can distinguish relationships at physical, social and symbolic levels. These three levels interact in multiple ways and arrangements. […] how multiple relationships are established in and among the physical, social and symbolic worlds in human ecosystems, and how language serves to establish, maintain and expand such relationships. (Van Lier, 2010, p. 4)

This idea is important in education because it helps conceptualize learning as the interweaving of interconnected texts and processes, rather than as bounded by disciplinary areas, different languages, contexts, and norms; it also disrupts top-down and compartmentalized approaches to teaching, as it contributes to developing grounded

explanations of social phenomena (see, for example, Green et al., 2011). Of particular interest is the idea that the ecological paradigm can support the development of a transdisciplinary approach to interlink the social and natural sciences and encourage a methodological dialogue in order to create, both for teachers and for students, explicit links between languages, various disciplines, and the learners' environment, and ways of doing and learning: Here, specifically through the linguistic landscape. As Malinowski, Maxim and Dubreil state,

> Linguistics landscape, a term used to designate the visible, audible, and otherwise textualized languages of public space (Shohamy & Gorter, 2009; Van Mensel et al., 2016), has captured the imaginations of language teachers and SLA theorists for the encounters it offers with the authentic complex, and often contests languages and ideologies of everyday life (2020, p. 2).

Guyotte defines the social imagination as "a re/envisioning of social realities, considering what might be different and how individuals might *become* different through encounters with various 'Others'" (2018, p. 62). Engaging with the local linguistic landscape through sensory ethnography and visual methodologies (Pink, 2015) creates for children different ways of engaging with their social reality and opportunities to become aware of themselves as social-ethical beings who live in relation to others, fostering interconnectedness through imagination.

Using the study of linguistic landscapes in plurilingual education emphasizes the centrality of embodiment and reflexivity in the learning process. The stance here is that knowledge can be experienced and discussed, and that multimodal tools, such as iPads or cameras, help 'frame' knowledge; they contribute to *pointing* (raising attention: Berthoud & Gajo, 2020), and in doing so, contribute to language awareness. Our inquiry has been prompted by an empirical study exploring everyday material (here, signage in the urban landscape) and sensory geographies (seeking to understand how children relate to their socio-spatial environment and make sense of their social worlds). The focus on children's practice and their theories prompts the empowerment of children in their own learning, and their positionality and relationality in the teacher-parent-learner dialogue and with the materiality of their (graphic and sensory) environment (Pink, 2015). Again, the meshwork and *relational* processes are central in this work, and we align with Szabó and Dufva who argue that,

> While language awareness in its relation to learning and teaching have been extensively discussed, it has often been regarded as a property of an individual consciousness: a faculty or a tendency of a particular person to perceive, notice and reflect upon the linguistic features present in their environments. In contrast, we argue for an approach that contests the person vs. environment dualism and frames language awareness in terms of *relational* processes. (2020, p. 93)

Against this general background, the chapter focuses on an 11 year-old child, Yūki, to investigate the pedagogical relevance and implications of the study of linguistic landscapes to engage in ethnographic inquiry as embodied practice (Ingold, 2000), as a way of knowing and voicing (Baker & Campbell, 2000).

2 On Linguistic Landscapes as Plurilingual Pedagogy

In Japan, pedagogical linguistic landscape materials have already been developed (Isono, 2020), aimed at university students, to encourage analyses of preprepared Japanese linguistic landscape data, so that (mainly Japanese-speaking) learners can learn about Japanese. One of the authors, Danièle Moore, has also explored pedagogical applications of linguistic landscapes in the Japanese context (Moore & Haseyama, 2018): The study focused on practice at an international school which Japanese children attended on Saturdays, in which children photographically documented the linguistic landscape of the Tokyo Metro. The main focus of the practice was to develop children as inquirers, a focus that resonates with plurilingual education's stance of developing autonomous learners.

With the prior studies in mind, another of the authors, Mayo Oyama, encouraged her sixth-grade son, Yūki, to investigate the linguistic landscape for his self-directed research in the summer of 2020. In self-directed research, each student decides on a theme, devises a research plan, carries it out and reports the results, similar to a science fair. According to Umino and Andoh (2007), self-directed research projects trace back to science education in 1941, introduced as a means to enable learning that could not be covered within class hours, and that aligned with children's own interests, and have now become a staple summer holiday assignment at primary and secondary schools. While the most common field chosen by children is the natural sciences, they can pursue research in any discipline, including the humanities, the fine arts, and physical education, amongst others. Methods include not only experiment and observation, but survey studies and museum visits are equally encouraged. While children can conduct the research on their own, they are often assisted by family members, especially at a younger age.

The remainder of this chapter will examine Yūki's project and considers its possible application in the teaching of linguistic landscapes in Japanese elementary schools, as a way to connect, in meaningful ways, children's environments to the school curriculum.

2.1 The Evolving Linguistic Landscape in Japan

In order to arouse Yūki's interest, Mayo first showed him the following image (Fig. 1):

Here we would like the reader to consider the four stop signs in Fig. 1. Two are inverted triangles (① and ②), one is painted on the roadway (③), and the last adorns the telephone pole (④). Of the four signs, the oldest are written in a mixture of *kanji* and the phonetic *hiragana* syllabary (② and ③). The rectangular sign (④), written only in *hiragana*, is designed to be readable by those who cannot *kanji* characters (taught beginning in primary education). Stop sign ①, the newest of the four, is the only bilingual signage (止まれ STOP).

Fig. 1 Stop signs

Why the discrepancy? During Japan's modernization, the nation promoted monolingualism, with standard Japanese becoming the lingua franca of the archipelago. Following defeat in the Second World War, however, the country came under occupation, and the GHQ[1] required road-signs to be displayed in both Japanese and English. Why, then, is only the newest of the signs bilingual? After gaining autonomy, and in the lead up to the 1964 Tokyo Olympics, there was a massive increase in the number of road-signs around the nation, and laws regarding road signage were amended to promote uniformity, resulting in the abolition of English. The 1964 Olympics were an exceedingly important event for Japan, in part to demonstrate its post-war reconstruction, including the development of sophisticated transport systems; the Shinkansen high-speed rail system was opened on October 1st, 1964, airports were expanded, and the Tokyo Monorail built. Similarly, the road network was massively expanded, with new expressways developed; alongside these developments, signage was amended and uniformized—while English disappeared from road-signs,[2] pictograms became widespread to aid understanding for those who did not speak Japanese; it is also believed that the now commonly-used pictograms denoting the different sexes of toilets originated in Japan during this period.

[1] From 1945 until 1952, Japan was under occupation and the authority of the General Headquarters of the Supreme Commander for the Allied Powers.

[2] It is possible that the uniformization in Japanese-only was a part of the country's revitalization to demonstrate that it was a modern, first-world nation capable of conducting its affairs exclusively in the national tongue. While some might consider the removal of English as symbolizing the end of occupation by an 'enemy' language, as English was also a symbol of liberation from fascism, Japan's relationship with English is more complex.

The 1980s saw the return of English to various informative signs and guides around the nation, although it was not until April 2014 revisions to the Road Traffic Law that English returned to road-signs, primarily due to the dramatic increase in inbound foreign visitors, and, curiously, in the lead up to the next planned Tokyo Olympics/Paralympics of 2020/1 (Tomaru, 2014). As a result, since July 2017, beginning with road-signs due for renewal, bilingual signs have been reintroduced, not only in tourist destinations but nationwide—hence the discrepancy in the signage seen today.

3 The Practice

3.1 Initial Observations and Data Collection

Using the example above as a starting point, Yūki began his research. He was lent an iPad,[3] and encouraged to photograph the linguistic landscape, initially focusing on 'foreign languages' and 'languages other than Japanese.'

His investigations began inside the most immediate ecology, the house; stationery occasionally had English written on it (for instance, a made-in-Japan eraser labelled 'PLUS PLASTIC ERASER'). Initial investigation revealed a wide range of foreign languages, especially in the kitchen, with its variety of imported foods such as dried tomatoes, tinned foods, olive oil, and sweets, to name a few.

Yūki photographed various objects with his iPad, and using Google's camera translate, rendered them into Japanese. While some translations were serviceable, as there is variance in the camera translation's recognition of characters, others were difficult to understand—it was also difficult to determine what languages were written on some of the objects. The translations themselves also change with movements of the camera, and the scope of the language highlighted; a potentially useful phenomenon to draw attention to in teaching, as a demonstration of the difficulty, and often the impossibility, of direct one-to-one translations between languages.

In the midst of the hot Japanese summer, when the evening was cooler, Mayo decided to walk with her children through the streets of Kyoto, taking photos with her smartphone. Mayo had initially instructed Yūki to look for non-Japanese languages, as without this instruction, he may not have paid attention to foreign language signage, but nevertheless she did not instruct him to look for *only* foreign languages. Some of the photos were suggested by Mayo herself, but Yūki soon took ownership of the activity and began taking pictures of his own accord, including a flower shop, whose signboard had an unusual mix of ideographic *kanji* characters and *katakana* syllabary (花ヨシ: discussed in more detail below).

[3] As part of the Ministry of Education's promotion of ICT in public schools beginning in 2020, one iPad or similar device has been offered to each child.

3.2 *Data Collection and Hypothesizing During the Family Trip*

During the summer, Mayo's family took a trip to Tottori Prefecture, where they observed the linguistic landscape, including the vending machine in Fig. 2.

Both signs ① and ② are displayed in English, Chinese, and Korean, in that order. When Mayo asked Yūki, "Why isn't there any Japanese on the sign?" he answered: "Japanese isn't needed, because it's an explanation of coins." He was looking at sign ①, which illustrates how many coins are needed for each purchase, his reasoning being that anyone who speaks Japanese would know about the coins, and there is thus no need for a Japanese explanation. However, the QR code to the right (②) offers information in 15 different languages, this time including Japanese. According to the Coca Cola Company of Japan,[4] this is also a measure in anticipation of increased numbers of inbound tourists and for the Olympic Games. By scanning the QR code, detailed product information such as raw ingredients, allergens, and nutritional information can be viewed on the spot. The 15 languages supported are Japanese, English, Traditional Chinese, Simplified Chinese, Korean, French, Thai, German, Spanish, Portuguese, Russian, Italian, Vietnamese, Indonesian and Arabic. Illustrations on how to operate the machines can also be viewed in these languages.

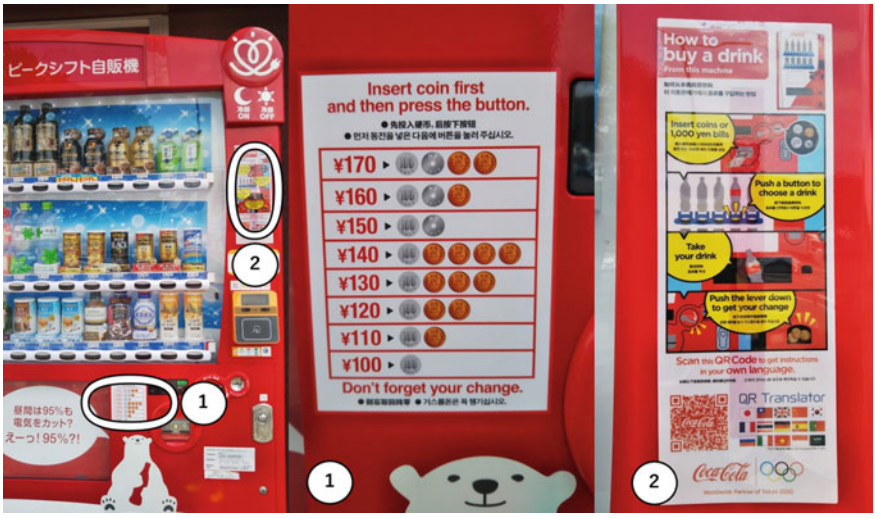

Fig. 2 Multilingual vending machine

[4] https://bit.ly/34YLdxy.

3.3 *Conducting Analyses*

Having collected photographs in his home city and in Tottori, Yūki begins to analyse the data. He considered using the Google camera translation as a tool for analysis, but as it seemed easier to concentrate on paper than a screen, opted instead to print the photos. Yūki selected the data himself; images that either piqued his interest, or he thought might be easy to analyse. Figure 3 shows his work analysing a photograph of a French restaurant.

After hypothesizing about what languages were present, he typed various words into Google Translate to identify them. The analyses were thus multimodal; employing printed photographs, pen and paper, and iPads. His analysis of the restaurant showed that the restaurant's name and year of founding are in French (フランス語), while other information is a mixture of both English (英語), Japanese (日本語) and pictograms (represented by the *kanji* character, 絵).

Upon identifying the languages, he began to develop hypotheses from the question, "why these languages?" For the vending machines, it had been relatively easy to explain why there was no Japanese. As for the French restaurant, he began with "It's in French because it's French food," but the other languages present prompted the question, "why is the rest of the information in Japanese or English, or pictograms?"

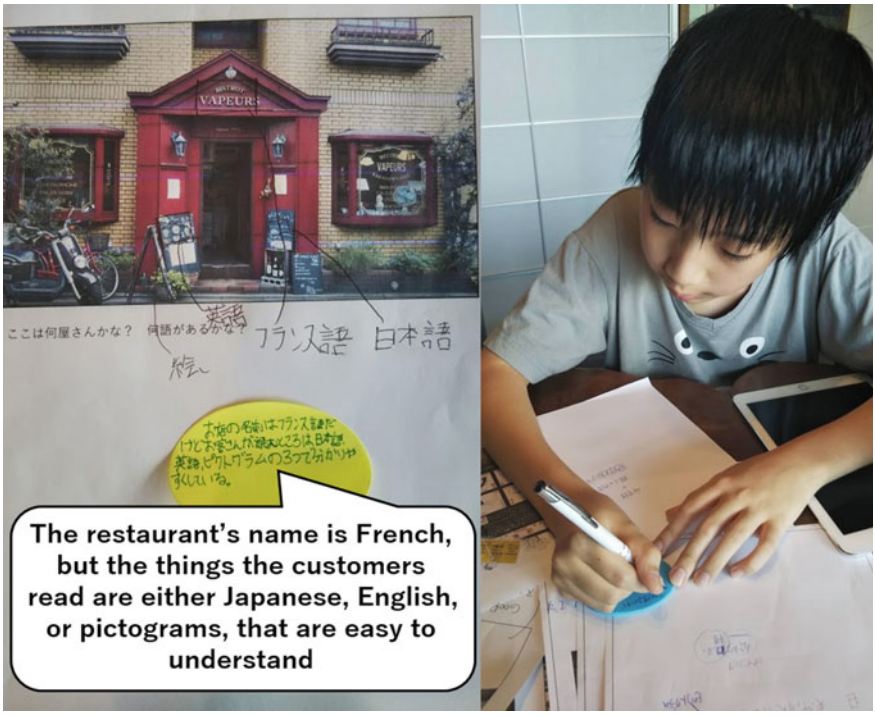

Fig. 3 Conducting analyses

It took a little more time to develop the reasoning that "most of the customers would read Japanese or English."

There were some examples that were difficult to explain. For instance, Yūki had already discovered that public signage in Kyoto was often in Japanese, English, Chinese, and Korean. In Tottori, however, he noticed tsunami evacuation signs included Russian as well. Why the difference? He first predicts that "there are lots of Russians living there." After discussing this with his mother, he developed the hypothesis that "the language of official signs is determined by the size of the population [that uses those languages]." This hypothesis engendered a further question, "why are there many Russian residents in Tottori?" (In fact, there is not a large Russian population, but historically many Russian sailors have visited the ports on the Japan Sea for trade).

In the process of observing the data and forming hypotheses, children are encouraged to link their findings to topics that they have previously studied in their elementary school classes. Recall the flower shop, mentioned above, which included a mix of *kanji* ideograms and *katakana* syllabary (花ヨシ: *hanayoshi*).[5] When Mayo asks, "why *katakana*?" Yūki recalled learning in Japanese class that *hiragana*[6] and *katakana* are used in different expressive contexts: i.e., *katakana* has a rigid feeling to it, while *hiragana* is 'softer.' Why would a flower shop opt for a more rigid expression? Yūki ventured, "to make it cool," to which Mayo asked, "so it's not cool to use *hiragana* (花よし)? How about more *kanji* (花善し)?" The questions were endless. Yūki then turned to a photo of a pharmacy, taken close to the flower shop: 'Smile Pharmacy,' again in *katakana* and *kanji* (スマイル薬局). Is 'smile' in *katakana* cool? Prompted by Mayo, "what language is smile, originally?" he knows that it was English. What about *yoshi* from *hanayoshi*, then? It is a Japanese word (和語). The question "why do we use *katakana* to write Japanese words?" arises.

In addition, some of the Japanese shops' names 'used difficult *kanji*.' For instance, Yūki remarked at the difficult characters in the sign of a tea shop in Kyoto named *chikusei* (竹聲). When Mayo explained that the second character has the same meaning as 声 (*koe*: voice), he pondered why the more complicated character was used. 聲 is the old writing of the 声 character, included in school learning until 1945. In 1949, a table of kanji for standard use was established, which allowed for the use of mundane and abbreviated forms of kanji, and the forms of some kanji used up to that point were newly changed. So, why is the old character in use here? Again, the child's hypothesis is that 'it's cool' to use the old writing. It is likely that the usage of this *kanji* is to demonstrate an affinity of, and connection to, the traditional and sophisticated—these old characters have been in common usage in Japan from at least the eleventh century through to the 20th, and although no longer used in official

[5] Katakana is one of Japan's phonetic scripts, used today primarily for loanwords—it is rare to find a Japanese name written in katakana. It is also occasionally used for emphasis, much as italics might be used in English.

[6] Another of Japan's phonetic scripts, and the most commonly used in the present day. Japanese terms are typically written in hiragana, or a mixture of kanji and hiragana.

documents, are still taught in the secondary school curriculum as part of *kobun* (古文: classical literature).

In this way, while Yūki was first instructed to look for languages other than Japanese, the experience prompts him to consider the Japanese language around him, too, and triggers historical inquiry into the language, and shifts and changes in its usage, traces of which remain in the local linguistic landscape (including the evolution of road-signs with which he began his investigation). Yūki's mostly self-directed examinations of the linguistic landscape become a way to link his environment with trajectories of the language itself, and becomes an engaging way to explored linguistic histories, resulting in hypotheses that prompt further research—in order to address the hypotheses raised, a search through library books for answers and websites was necessary to gather more information.

3.4 The Lapbook as a Creative Authoring Process for Collating, Displaying, and Sharing Results

Shino Abe, an acquaintance of the authors and elementary school teacher, recommended using a lapbook as a learning portfolio (Abe, 2018). Lapbooks include various foldable sections in which three-dimensional storage and display systems within a nested structure allow for dynamic presentation of learning and research results. This is an excellent way for children to engage in authoring and take ownership of their learning, as it requires them to be 'hands on' in organizing their newly acquired knowledge. Mayo introduced lapbooks to Yūki through a YouTube video,[7] to help him visualize how he could present his research. To fully enjoy the hands-on craftwork, Mayo prepared a variety of coloured papers, coloured pens, scissors, glue, and other tools necessary to make the foldables—also suggesting a variety of ideas for display by folding origami together. Yūki, sufficiently excited by the potential of the lapbook, began to think about how he would organise his foldables. His final creation is shown in Fig. 4.

Within Fig. 4, section '1' (titled 写真を撮る, 'taking pictures' in Japanese) is the first depiction of the research process, with the foldables labelled 'open gently.' When opened, the reader finds the places photographed (travel destinations, houses, and shops within the local neighbourhood, etc.) and the points that Yūki noted in his observations.

As the results of self-directed research projects are to be read by other children in the school, he crafted the content for section '2' (写真を印刷して気づいたことを書き込む: Printing the pictures and recording what is noticed) as a quiz for other children (Fig. 5).

Alongside the characters 什么语言 is the Japanese question, 'what language are these characters?' (incidentally, 什么语言is the Chinese translation of the question

[7] https://www.youtube.com/watch?v=SJEztgwUvv4 (*Lapbooks 101: Why I Love Them and How I Use Them in My Classroom*, see also https://lapbooking.wordpress.com/).

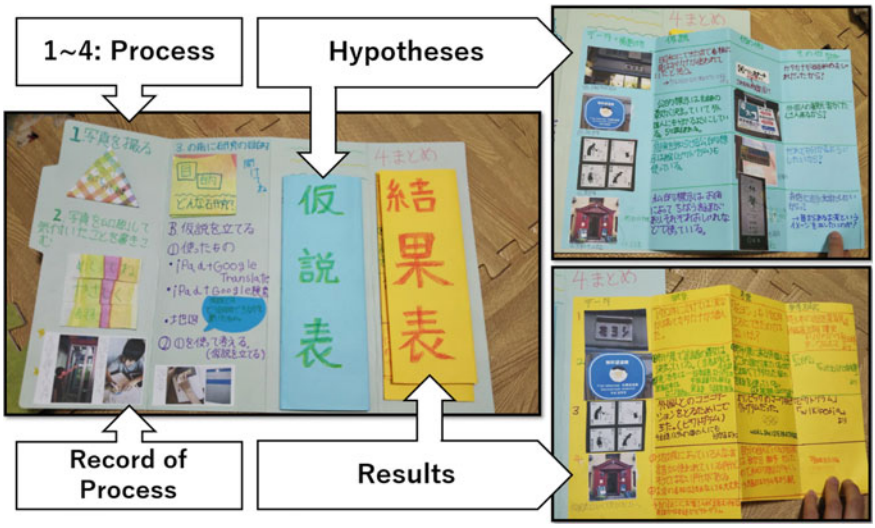

Fig. 4 Yūki's lapbook

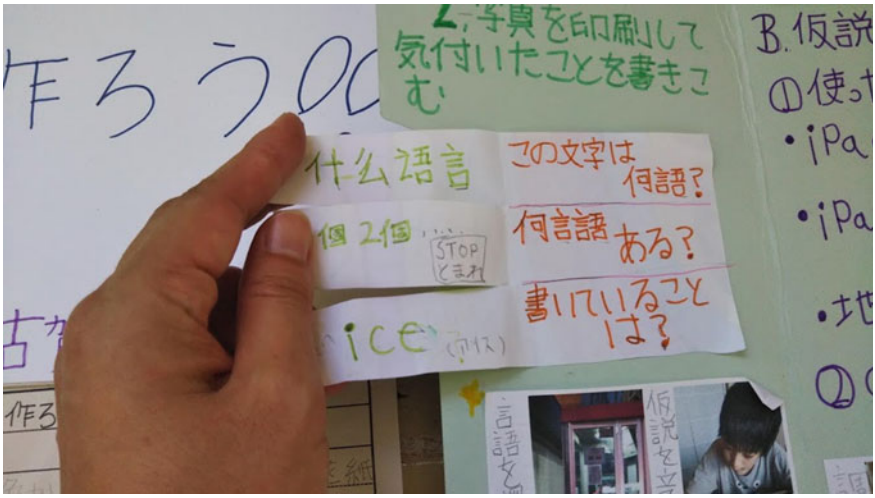

Fig. 5 Quiz for other children

itself, in simplified *hanzi* characters[8]). He has also drawn a 'STOP, とまれ' sign, alongside the question, 'what languages are here?' Finally, 'ice' (recall it is the height

[8] The reason non-Chinese speaking children can attempt this quiz is, despite both Chinese *hanzi* and Japanese *kanji* originating from ancient Chinese characters, there is a clear difference between them, partly a result of mainland China's simplification of *hanzi*, and a difference obvious enough even for schoolchildren.

of summer) at the bottom is accompanied by the question, 'what is written here?' In other words, his focus is on three things: The number of writing systems, the languages present, and the content of what is written.

Section '3' (Fig. 4) covers the purpose of the research (研究の目的), and the tools he used to carry it out. The two references to Google denote to the translation software as well as Google search—to fully address his hypotheses, the translation software alone was insufficient, and required searching for more information.

To the far right are large foldables of coloured construction paper that cover both his hypotheses and the results of his research. The hypothesis table includes, for each picture, 'date and location,' a 'hypothesis,' 'examples,' and 'other.' Accompanying the first photo, the florist, *Hanayoshi*, is the following hypothesis: "The shop was founded in the Shōwa era, and I think *katakana* used to be used on signs then.[9]" In the other 'examples' is the name of a local supermarket, a Japanese name, but again written in katakana. In the final column, 'other,' the hypothesis is expanded upon: "Is this because katakana was fashionable during Shōwa?" Here, Yūki lists examples through which he has identified patterns and drawn generalizations, while also positing further research questions. He is developing a posture of inquiry, and acquiring academic literacy, further demonstrated by his results section.

The 'results' foldable contains information that Yūki has researched, including references. The columns are labelled in order: Data, Observations, Discussion, and References—Keeping a record of references is an important part of learning with a lapbook, and of academic literacy, localizing new knowledge within what is already known. It is this literacy that the schoolteacher who introduced the lapbooks to the authors, Shino Abe, attempts to foster through her practice (Abe, 2018).

Finally, the lapbook is not simply a personal record of learning, it is intended to be viewed by others, which required Yūki to voice his discoveries in way that others could understand: He makes use of the flexibility in Japanese writing conventions, writing some elements vertically and others horizontally (much as the stop signs in the first figure: Note that two of the signs are written vertically). Yūki's use of colour is also not random, but he employed a different colour for each theme. Design construction itself is closely linked to scientific organisation and is an important aspect of hands-on interdisciplinary plurilingual learning.

Throughout the project, the research was experiential. Starting with observations at home, before walking linguistic landscapes both local and further removed, Yūki made new discoveries and raised new questions about language that might not have otherwise occurred to him—including the shifting and evolving nature of the Japanese language. His final presentation of his discoveries was also experiential, as he considered how he might relate his discoveries of language old and new to other students: A voicing process that coincidentally included *voice* itself, both old (聲), and new (声).

[9] The Shōwa era spanned from 1926 to 1989.

4 Discussion: Walking to Voicing

Child-led walks are a common method for investigating children's use and perceptions of their neighbourhoods (Carroll et al., 2015; Derr et al., 2018). In this contribution, the activity positioned Yūki as a legitimate co-researcher of his own language and literacy practices, purposefully drawing upon creative visual techniques and tools to facilitate data collection and reporting.

Much research on linguistic landscapes has focused on historically important languages, representations of minority languages, and why certain languages are important in a given region. Linguistic landscapes have also been introduced in Japan in this manner (e.g., Shoji et al., 2009; Oyama, 2021), and formed part of Yūki's discoveries—including differences in signage between regions. But what Yūki sees in his walking the linguistic landscape is also a history of change in the Japanese language itself, something touched upon by Isono (2020); children can actually see, smell, touch, and feel that the language is dynamic. They can also encounter and reflect on plurality in and outside the classroom, and the materiality of the signage in the home or the street, contributing to cultivating a meaningful relationship with their social worlds that connects children to their environment and communities. Photographing contributes to making visible, dialoguing, and imagining children's social landscapes, through an aesthetic experience of the language(s) in use around them.

Our observations of Yūki's experiences and his reflective lapbook illustrate his acute awareness of what he has learnt, and of the process of his learning. His creative crafting of his findings, and the multilayered quiz he developed, show his ability to envision and challenge what he believes might be his peers' preconceived ideas of language use in their community, to offer alternative ways of rethinking their social world. His work also illustrates pedagogical consciousness; he strives to inspire curiosity through *movement* (one must fold and unfold papers to discover answers; move one's eyes both vertically and horizontally, from left to right and right to left, top to bottom, and can engage in clockwise and counterclockwise directions); *aesthetics* and *visual* cues (colour coding for questions and answers, different scripts and writing systems, distribution of images and textual information; the play with different shapes to display information, such as triangles, rectangular boxes, and speech bubbles, but also lines, stripes, and fonts); and *touch* (collages of various paper types). The iPad and paper together offer affordance for multimodal composing that supports the crossing of boundaries between languages and sign systems (photographs, print and handwriting, voice-recording, camera translations), the play with visual and textual content, genres, and the development of a *metastance* that creates a framework to interpret text (Jaffe, 2009).

The exploratory engagement with linguistic landscapes thus anchors the development of metalinguistic and plurilingual awareness (Melo-Pfeifer, 2015). This is visible in Yūki's use of various norms in different languages, such as language-specific use of capitalization (i.e., for English words like Google), or the use of iconicity and different scripts in Japanese for effect (i.e., the use of hiragana, katakana,

or kanji 'to look cool' or to display sophistication, historicity, or foreignness), the raised awareness of the ease of coining words in Japanese, and his (re)constructing bridges between the writing systems of Japanese, English, and other languages (such as *kanji* to lever access to other languages using sinograms, and letters to bond Japanese with languages using alphabets), and the discovery of language power in language use made visible in the street semiology (Calvet, 1994; 2005). Code-mixing, borrowed words and translingual practices are creatively used as resources for affect and effect:

> Translingual refers to an orientation to communication and competence that treats words as always in contact with diverse semiotic resources and constantly generating new grammars and meanings out of this synergy. (Canagarajah, 2020, p. 6)

Yūki used his digital images as anchors for conversation and multimodal composing, reentextualizing his images to make sense of his environment. The reentextualization of his documentary photographs into his reflective lapbook, from the context of the home and the street to that of his school across media, amplifies and recontextualizes meaning to attend to a larger audience: His schoolmates and teachers. Photographing, then reentextualizing pictures in a textual message in a lapbook, frames learning; what it is that children deem significant, and how they voice, construct, and circulate knowledge, while offering the potential for a more comprehensive whole-body engagement. The need for dialogue is crucial in this process, with the guiding parent, and with peers and teachers when back to school (which is anticipated by Yūki when he produces his lapbook for a specific audience, his classmates after the summer vacation[10]).

The linguistic landscape provided affordances for more complex understandings of the dynamics of society. The study of signage in the street opened a glimpse of Japanese governmental policy and language policy (in vitro policies) in practice in the urban landscape (in vivo policies, see Calvet, 1994), the difference in official signs between regions (four languages in Kyoto, five in Tottori), how private signs are used to express various identities in a specific urban area; all are examples of historical links made visible between region and language, and of the socio-historical implementation of local and transnational communities, how they cohabit, share and choose to "mark" their social and geographical territories (Calvet, 1994, p. 174).

5 Conclusion

This chapter considered the potential of the linguistic landscape in education to address the challenge of supporting children's critical multilingual awareness in relation to their local geographies in a predominantly Japanese monolingual and English-only oriented country and school system.

[10] Summer vacations in Japan do not mark the end of the academic year. Children return to the same class, with the same teachers and classmates after the break.

In this qualitative case-study, we explored how a child engages in a culture of inquiry and develops scientific methods to construct knowledge. We put emphasis on the educational potential of the study of linguistic landscapes (i) to develop awareness of diversity and interlink learning in various disciplines and ecological contexts (at school, at home, in the street), and (ii) to understand children's world-making. We used visual methodologies as ways to support sensory and experiential participation to engage with all the senses with situated multimodal texts. In this view, the walking to take pictures in smelly or noisy streets is a meaningful practice, in which 'reading' a sign is experienced through the body and a slow exploration of plurality and diversity in the child's everyday environment to map out and unpack social relations within the child's local geographies that builds on their experiences of their local environments to form their own understanding of the relational nature that cement people, places, and practices (Wales et al., 2021). The centrality and full body engagement of visually recording the linguistic landscapes through photographs and reflective conversations and writing scaffold how children experience and develop a sense of place and take on new roles and identities (Prasad, 2013). The study of linguistic landscapes, in this sense, opens new affordances to construct children's social geographies, as well as their sense of the social history of their local environment against the backdrop of other localities, in Japan and beyond.

The transdisciplinary approach to learning stimulates points of connection and overlapping between home and school, formal and informal learning in and beyond the classroom, digital web-based and book-based access to information; and the links between orality, sensory perception, photographs, and written messages to expand comprehension and sharing of information. The social purpose of the activities both support multimodal and plurilingual literacies and foster intercultural encounters, engaging children as mobile social actors. Mobilities create complex spaces of contact, where standard systems are constantly renegotiated. The texts and textual practices that are created through the visual documentation and critical reporting of signage take on new forms, values, and meanings within geographically situated textual ecologies, in which the child can endorse new identities as a learner and an experienced author-writer and take ownership of their learning. The linguistic landscape opens affordances to make real-world connections through exploration. Children can engage in experiential learning, problem-solving, critical thinking and understanding; knowledge can be lived, discussed and theorized. It is within this relationality that a better sense of what constitutes one's community is fuelled, as well as the realization of its complex and woven pluralities.

Though this study provides descriptive information about the learning processes of one child only, we believe that this chapter can contribute to our understanding of the complex interplay between social and physical factors contributing to children's agency in learning and their sense of community and belonging.

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