

Tell me where you are and I'll tell you what you learn. Investigating hidden curricula using GIS analysis of place names in a case study of an English language textbook published in Japan

Abstract. The article aims to look for a way to geographically delineate the notion of target culture in the language textbook “The World We Live in” by Ogasawara et al. (2013) published in Japan for Japanese students and teachers. Looking at the textbooks as cultural artefacts, we identified geographical space within the scope of the sample textbook and analysed the pedagogical context the place names appeared in. By doing that we attempt to find the spatial bias of the book, which is a manifestation of values there inscribed, often called the “hidden curriculum”. The elaborated method, following a seminal study by Risager (2018), is an attempt to adapt the proposed content analysis of the textbooks into GIS tools in order to capture the geographic dimension of the content. The method serves as a stepping stone towards the creation of a model to analyse and identify the attitudes toward the cultural content of educational materials. This will not only enable a more authentic classroom experience responding to the needs of particular groups of students and teachers but also look for ways to make the textbooks more inclusive.

Keywords: textbook analysis, digital humanities, GIS analysis

1. Introduction

The article addresses the issue of the target culture in language textbooks by employing GIS tools in a novel way, not applied in the content analysis of the educational materials to look at the space presented there. It is a way to investigate the “hidden curriculum” (Cunningsworth, 1995, p. 90) – a set of values and biases inscribed in educational materials. The proposed method involves analysing the places depicted in the book and the way they are presented: the context they appear in, and the level of detail used to talk about them. In the study, space is included in two ways:

- as geographical space mentioned and referred to in the materials;
- and as graphic space, i.e. space of the pages of the textbooks themselves: the content's arrangements, layout.

Such an approach allows us to show trends hidden in the pages of the language textbook on a map (c.f. hidden curriculum in: Rashidi & Mei-

hami, 2016; Tajeddin & Teimournezhad, 2015) and, in turn, account for geographic variability of content deemed interesting by different communities around the globe, which is a direct result of employing GIS. Using maps as a model of reality, and a tool to investigate it (Baranowski et al., 2018, p. 273; Gotlib et al., 2016, p. 8; Krukowski, 2021), allows us to better understand the dynamics of content in the books.

So, first, we discuss the theoretical foundation of the study by looking at the way textbooks have been studied so far, particularly in terms of their cultural component and how the textbook evaluation can benefit from the development of the application of GIS in the fields of humanities. Then, we discuss the notions of the target culture in language teaching and cognitive assessment of textbooks.

Finally, we present the elaborated method of spatial analysis and show its pedagogical application on the example of a language textbook called “The World We Live in” by Ogasawara et al. (2013).

2. State of the art

Employing GIS to address space and culture in the analysis presented here is a natural consequence of two major methodological tenets that we assume: 1) culture is vital for language textbooks, 2) space and place shape human experience (Tuan, 2001) and thus can be observed in cultural artefacts. To justify our position, let us address the way Geographic Information Systems (GIS) have been formerly implemented in humanities, their possibilities and limitations, and then consider the GIS's relevance for establishing and to some extent measuring the role of the cultural content in language textbooks.

The most common way of implementing GIS in the field of humanities refers to geographical space projected onto a map to look for some spatial trend, for instance when analysing the spread of diseases (Murrieta-Flores et al., 2015), coverage of tax systems (Gochna & Związek, 2020), the linguistic landscape in texts (Venkateswaran et al., 2014). Similarly, in the field of linguistics, GIS application is also usually limited to the observation of processes on the maps e.g. when analysing linguistic diversity (Luebbering et al., 2013), language variations (Jeszczky et al., 2017), or the space in literary works, as in the classic works by Moretti (2006, 2007) or in the case of the Atlas of European Novel (Hohensinner et al., 2013; Piatti & Hurni, 2009; Weber Reuschel et al., 2014). Alternatively, we can simply investigate the spatial dimension of processes or phenomena by supplementing a corpus with geographical information, thus creating a *geocorpus* (Alves & Queiroz, 2015; Caquard, 2013; Smail et al., 2019). Finally, space, particularly presented on a map and culture have enjoyed attention by both cartographers (Cartwright, 2009; Harley, 1989) and researchers studying cultures (Barcz & Waclawik, 2022; Hauberman, 2016; Szombara, 2021)

There are, however, few studies, in which the pages of the source are treated as a plane for analysing spatial information such as topological relationships between types of content. One example particularly interesting from the perspective of this study is the Polish application developed by the Institute of History of the Polish Academy of Science (PAS) – INDEXR (https://atlas.ihpan.edu.pl/indxr/app/appoz_

[kalisz_gr_31_pub/index.php](https://atlas.ihpan.edu.pl/indxr/app/appoz_kalisz_gr_31_pub/index.php)), where historical sources are tagged for the place names they refer to and are presented both on the map and the pages of the books (Borek et al., 2020). The study here presented follows this approach by looking at both the pages of the textbooks and the geographic space they refer to.

The other key theoretical assumption at the foundation of the study is the relationship between culture and language textbooks. Our study treats textbooks as a cultural artefacts which enables us to investigate hidden values and perspectives because "it embodies cultural content, and knowledge of this content is essential if one is to understand the language" (McGrath, 2002, p. 212). Those hidden values (Cunningsworth, 1995, p. 90) are often analysed with respect to countries they mention and placing them in the so called "Concentric circles of English" (Kachru, 1986; Rashidi & Meihami, 2016). Using GIS in such cases would give a possibility to see the actual places the textbook mentions and better define the geographic points of interest.

On the other hand, the construction of the textbook, its design, choice of material, depth of coverage, and methodological considerations are manifestations of culture. However, to measure that we have to resort to some means of comparison, one particularly important being Bloom's taxonomy with its later versions (Anderson & Krathwohl, 2001). In this study we use Anderson and Krathwohl's rendition of the taxonomy of cognitive and knowledge complexity of educational materials to analyse the way space has been presented in an English language textbook. In the taxonomy, level 1 is understood as the simplest type of task, mostly referring to factual information and 6 is the highest level where evaluation and creation are expected from the learner.

To sum up, the study combines the technical, pedagogical analysis of the textbook with spatial analysis of its content, both conducted using GIS and resulting in a series of page annotations and maps. We believe that "[M]aps do more than simply describe; they simultaneously seek to construct. The same could also be said about textbooks. They too set out to map terrain, but like all maps, they are the result of decision making in which the interests, beliefs and values of the map-makers play an all-important role." (Gray, 2010, p. 1).

3. Method

By analysing the actual content of the textbooks in terms of geographical space, we can relate it to the needs and interests of different stakeholders – publishers, teachers, and students. To keep the discussion within manageable bounds we have chosen to analyse a textbook published by a Japanese publishing house, intended specifically for the Japanese market, for Japanese students and teachers. Such an approach stands in stark contrast to the so-called “global” or international textbooks, which are published in one place of the world and distributed in various countries, usually with no, or little changes to their contents.

Having in mind these very particular target groups, we seek to answer the question of the spatial definition of the “target culture”. We aim to answer two research questions:

RQ1: How can “target culture” be understood spatially?

We address the prominence of all mentioned places in the textbook, and their relation to the country of publication, which is operationalised as:

1. The amount of space taken up by words and phrases with spatial referents in the textbook. Justification for choosing the amount of space covered instead of simply counting the mentions is discussed below.

2. The level of detail of spatial information: administrative level of places mentioned, e.g., a country, a particular region, or even a city.

RQ2: What is the pedagogical context of particular places and what does it tell us about the approach towards them?

Here, we look for the context and type of tasks that places appear in, which will tell us more about the attitudes towards them. The pedagogical context is operationalised as:

3. Cognitive complexity of the task according to a revised Bloom’s taxonomy.

4. Parts of the book the words appear in, e.g., a reading prompt as opposed to vocabulary lists.

5. The theme of the entire Unit and the main referent of a space-related phrase or graphics.

As a case study for our analysis, we have chosen an English textbook “The World We Live In” by Ogasawara et al. (2013) published by EINOUSA. It is an academic textbook with reading comprehension tasks divided into

15 Units. As far as the scope of data collected is concerned, we follow Risager’s (2018) seminal study of culture in language textbooks, in which five discourses are distinguished: National, Citizen Education, Cultural, Postcolonial, and Transnational Studies. It is worth noting, however, that the vast majority of collected information in this study is of spatial character, for example:

1. in a straightforward way, as it is in the case of the national discourse, e.g., in the following research question *Which countries (nations/states) are represented? (Dealt with, or just mentioned)? Is the country of learning represented?*;

2. in a more complex way, as in the case of citizenship discourse, in questions like: *Are political institutions represented? Are key problems of the contemporary world represented?* Political institutions belong to political entities with some locations, and problems and historical events occur in particular places in space and time.

So, to best account for the complexity of the information and its spatial (geographic) aspect, we divided the data analysed in those five aforementioned discourses into a set of data layers of content (in *.shp file types used by GIS programmes):

- place names (*Placenames.shp*),
- identity of groups and people represented (*Identity.shp*),
- institutions (*Institutions.shp*),
- and historical events and ideologies (*Event.shp*).

Also, drawing on the theory of educational material design and evaluation discussed above, we supplemented them with two layers on technical aspects of the textbook: on the themes of the Unit (*Theme.shp*) and division into types and complexity of tasks (*Tasks.shp*), where Bloom’s revised taxonomy is used (Anderson & Krathwohl, 2001). The study has been divided into 3 stages (c.f. Figure 1): data preparation stage, data acquisition, and statistical and spatial analysis.

Before describing the stages of the research, let us focus for a moment on the rationale behind using GIS in this study. The stunning presence of geographic space in many, if not all research questions posed by Risager suggest a need for including geographical space in the analyses. It will allow us to visually show the distribution of content with regard to the place

of publication and target market, i.e., Japan. The second is the technical advantage of using GIS as tool of annotation – that way it is possible to overlay various types of information annotated on one page and relating e.g., the information on task types and cognitive complexity of tasks with the places mentioned in them by using spatial join. And finally, GIS offers means to deepen the analysis by ascribing each element of content marked by a polygon with a set of attributes, which later can be analysed statistically.

3.1. Data preparation stage

The selected textbook was scanned, the images cropped and entered into the GIS (QGIS) in a Popular Visualisation CRS (EPSG:3785) to the scale 1:1 and set side by side (Figure 1). Then, the data layers (file type: shapefile, *.shp) were created along with their attributes: *Placenames.shp*, *Identity.shp*, *Event.shp*, *Institutions.shp*, *Tasks.shp*, and *Theme.shp*.

3.2. Data acquisition

In the second stage of the research, each page of the book was investigated and data were collected and put into layers. For example, in layer *Placenames.shp*, we selected all the instances of words with the spatial referent. Each data point was ascribed a set of attributes, for example attribute “spatial referent” denoting the administrative level of words and phrases

(“spatial referent” for the phrase Polish food would be country). Figure 1 illustrates the result of this stage – it presents how all layers have been overlain on sample pages of the analysed textbook.

3.3. Data analysis

Finally, the collected data were analysed statistically and spatially. To set the ground for the next section presenting the results of the analysis, let us briefly justify the need to use a space-oriented approach in this study.

Firstly, the goal of this text is to analyse target culture in terms of its spatial manifestations in a chosen sample language textbook. Also, there are two types of space in the textbook: the geographical space presented in the content and the spatial arrangement of this content in the pages of the book. The two are interconnected and only looking at them comprehensively will allow us to pose the two research questions mentioned above: (RQ1): How can “target culture” be understood spatially? and (RQ2): What is the pedagogic context of particular places and what does it tell us about the approach towards them?

By using a map as a model – we can correlate a spatial focus of the content with its pedagogical context and the way it is presented (its theme, level of detail, cognitive complexity) and relate it to the place of publication and the assumed Japanese audience (students and teachers). We postulate that the place of origin

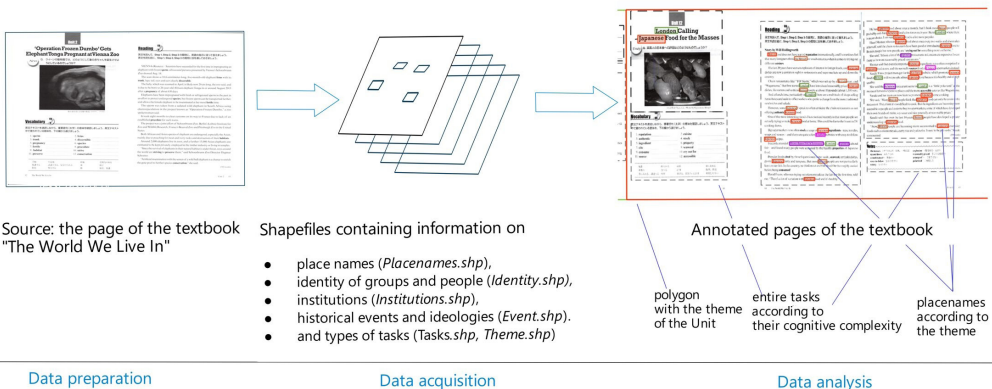


Figure 1. The schema of the stages of data processing: data preparation, acquisition and analysis

Table 1. The distribution of references to space divided by the part of the textbook they appear in

Type of task	introductory	multiple choice	reading comprehension – open-ended	reading prompt	useful expressions – sentence translations	vocabulary list	vocabulary translation	Total area	% of total area	% of total aggregated to countries
Place name (aggregated to countries)	%	%	%	%	%	%	%	[sq cm]	%	%
other	3.0	4.9	3.1	14.5	2.0	4.0	0.1	165.89	32.1	
Japan	1.6	3.9	1.7	12.5	1.4			110.45	21.4	31.5
United States of America	1.4	5.3	0.6	9.8	0.6	0.3		94.49	18.3	26.9
United Kingdom	0.8	2.6	1.3	5.3	0.7			55.74	10.8	15.9
Palau	0.6	0.4	0.7	2.6	0.4	0.5		27.62	5.3	7.9
France		0.3	0.3	2.4				15.67	3.0	4.5
Austria	1.1	1.0		1.3				18.26	3.5	5.2
Indonesia			0.2	0.8	0.9			10.41	2.0	3.0
Belgium		0.2		0.5				3.60	0.7	1.0
Germany		0.4		0.5				4.67	0.9	1.3
Ireland		0.1		0.3				2.13	0.4	0.6
Norway			0.1	0.1				1.40	0.3	0.4
China				0.3				1.58	0.3	0.4
Australia				0.4				1.87	0.4	0.5
Russia			0.1	0.1				1.16	0.2	0.3
Denmark			0.2	0.2				1.68	0.3	0.5
Grand Total								516.599		
anglophone countries								154.22	30	44
countries abutting Japan								135.25	26	39
Japan and countries abutting it								245.70	48	70

of a cultural artefact (textbook) strongly impacts the space it denotes.

Finally, looking at pages of the textbook, i.e., the arrangement of the pages, as a plain of spatial analysis, allows us to equally account for all areas covered by words, phrases and other means of presentation, like pictures and drawings referring to space. Choosing an area of a page covered by the text or picture as

a common denominator for the analysis, we avoid, as is the case in Japanese textbooks, the problem of comparing different scripts (romance script, kanji, kana) and different fonts; we account for the recycling of information when a text is accompanied by a picture or when phrases reappear in different parts of the Unit (e.g., in the word lists as translations and in the tasks).

4. Results

Looking for a spatial definition of the target culture presented in the textbook “The World We Live in”, we answer the following research questions using the metrics given in points 1–5.

RQ1: How can “target culture” be understood spatially?

1. The amount of space covered by words, phrases and graphics with spatial references.

2. The level of detail of geographic information: administrative level of places mentioned.

RQ2: What is the pedagogical context of particular places and what does it tell us about the approach towards said places?

3. Cognitive complexity of the task according to a revised Bloom’s taxonomy

4. Parts of the book the words appear in and type of tasks, e.g., reading prompt as opposed to vocabulary lists.

5. The theme of the entire Unit and the main referent of a space-related phrase or graphics.

Considering the geographic distribution of textbook parts (words, phrases, photographs), referring to particular places, we can observe that the category higher than country, called “other” prevails. It includes all the phrases pertaining to celestial bodies, e.g., Solar System, Saturn, Earth; continents, e.g., Africa, Asia;

regions: the arctic region, Nordic countries; organisations of countries: the EU (c.f. Table 1). However, when we look at the remaining data aggregated to the level of countries, Japan comes first with nearly 21.5% of the total area of the pages devoted to geographical space in the textbook, which highlights the focus of the book. The countries and places usually associated with the term “target culture”, i.e., English-speaking countries or Kachru’s inner circle only account for one-third of the total.

When we observe the data on a map (c.f. Figure 2), the geographical profile of the book becomes even more vivid. There is no single focus in terms of place, but if some had to be specified, it would be Japan itself. References to it take the greatest share of the total area of the book. Declaratively, the book is supposed to be about the world (as indicated even in the title), but the map is strongly skewed towards Asian territories and there are such hot points as Japan (110.45 cm²; 31.5% of all mentions of places aggregated to countries and 21.4% of all references to space in the book), United States (94.49 cm²; 26.9%; 18.3% respectively), United Kingdom (55.74 cm²; 15.9%; 10.8%), but also Palau (27.62 cm²; 7.9%; 5.3%). All together countries abutting Japan (this tally includes Australia and the USA) account for 39%. When

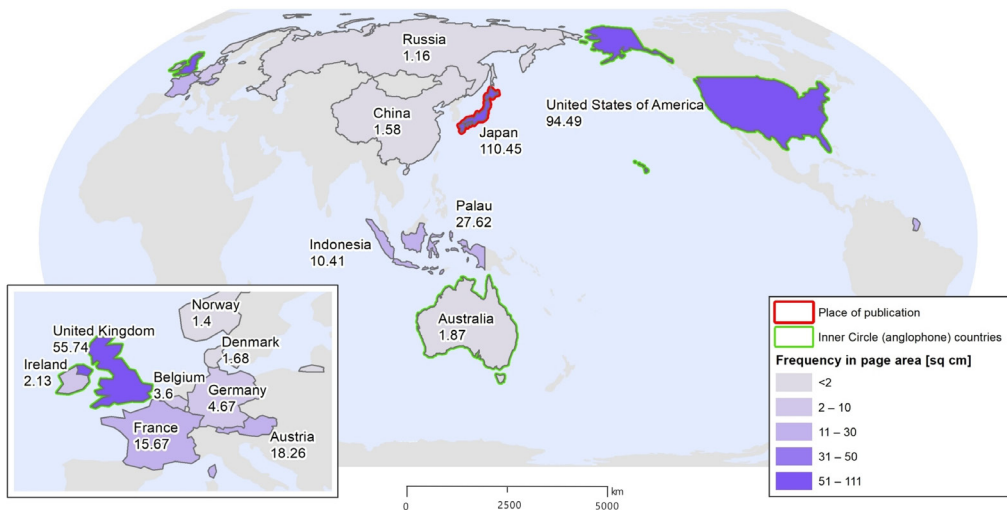


Figure 2. A map of the frequency of occurrence of words with spatial reference given in the area they cover in the textbook [cm²]

we add to this number the places within Japan, they account much as 70% of the total area of words and phrases with the spatial referent. The remaining 30% account for places in countries further from Japan. At the same time, if we compare the space of the textbook taken up by places where English is spoken natively (44%) with those where it is a foreign or second language (56%), the question arises of whether the English-speaking countries are sufficiently represented in the textbook under investigation?

When considering the issue of the focus and role of space in the textbook, we can also look at the function the references to space serve, or in other words to what entities or phenomena do place names in the book actually refer. To measure that, we separate two types of referents: the "spatial referent" and the phenomenon the phrase denotes ("artefact referent"). As an illustration let us take the phrase "Japanese sushi", which refers to the country of Japan spatially and to "food" in terms of the artefact of culture.

So, how many of the place names in the book actually refer to space and how many to some other artefacts? When places appeared relatively rarely and denoted particular lake or island, palace or palaces the spatial and phrasal referent and artefact referent were equivalent. However, when we dealt with countries, they could refer to a variety of artefacts, like: animals, technology, food, nationality, language, shop, venue, or even to actual words (c.f. Table 2). The last case is particularly interesting, as the country of Palau appears in the dictionary section and is treated as a novel vocabulary item. Let us now break the data according to the countries. An interesting pattern arises: the greatest variability in the spatial category of 'country' can be observed in Japan, which apart from meaning the country itself (over 30%) appears in the context of: food (nearly 40%), nationality and people (12%), but also: entertainments, events, venues. Comparing that to the USA, which appears as a country in 38% of the cases and in the context of some animal species in 31% of the mentions, some publications (15%), institutions (8%), and nationality (8%). With all other mentions of countries, the geographical meaning of the phrase denoting country becomes more and more dominant: the UK (53%), France (67%), Norway (78%) and Belgium, Denmark, Indonesia, Ireland,

Norway, and Russia (100%). The only exception is China which appears in the context of trade (goods, shop). All the data support the claim that the closer the country geographically and culturally the more diverse the context it appears in and the more complex functions it may serve.

In the second research question (RQ2), we wanted to better understand the pedagogical context the countries discussed above appear in and the manner in which they are addressed. As it was mentioned above in the literature review, Bloom's revised taxonomy (Anderson & Krathwohl, 2001) of cognitive and knowledge complexity of educational materials have been used to assess and analyse them. We attempt to learn how the type and difficulty level of tasks that reference space differ according to the geographic distribution. For that, we use six levels distinguished by Anderson and Krathwohl (1 – being easy cognitive operations subsumed under the label "remember", 2 and 2.1 – more complex mental operations like "comprehend", and 6 being a demanding task requiring a lot of effort like creating or re-organising knowledge). From that perspective, the analysed textbook rather rarely addresses the higher-level thinking skills, which is visible on a map in Figure 3. Place names mostly appear in reading prompts and tasks simply asking the student to compare the answer to the information given verbatim in the preceding text. Even more interestingly, we can see a lot of recycling of spatial information – the same word would simply re-occur in the part explaining grammatical structure or in a task – usually, no new places were mentioned. Also, for the word to appear in the tasks requiring for example some inference (level 2 and 2.1) it had to be in the places mentioned in the book multiple times.

Let us have a closer look at two countries differing in terms of the cognitive complexity they appeared in Japan and the USA. The reason for frequent appearance in complex types of tasks can be ascribed to the geographic location of the publisher and the target audience, i.e., the familiarity of a place. Let us take a closer look at "Japan" which, as a country (spatial referent: 'country'), has been mentioned 101 times, covering 85.2 cm² of the book, while the places within this country cover another 25 cm². The mentions of the USA, on the other hand, cover ca. 22 cm² while mentions

of particular places ca. 72.5 cm² of the book (six of the places were mentioned only once: Alaska, Baylor, Harvard, Hawaii, Melbourne, and Pittsburgh). Altogether, there were 20 different ways places in the USA were referred to (including 12 different cities), while in Japan – only eight cities were mentioned. The more frequently a place was referred to, the more complex tasks it appeared in, which can be observed in Figure 3 – Japan has nearly three times bigger share of more complex tasks (level 2 and 2.1) than the USA. We can also signal a similar trend when it comes to Europe. Apart from the United Kingdom, the mentions of which appear on nearly 56 cm², Europe and the EU are the most referred to as political entities in the region. The data support the claim that to appear in a more cognitively demanding task, the place had to occur in the textbook multiple times. Places mentioned rarely (up to three times), like Denmark, Ireland, and Germany only appeared in the reading prompt (“knowledge (1)” level in Bloom’s taxonomy).

5. Discussion

Concerning our two research questions, we can clearly state that the spatial focus (RQ1)

of the book is shifted towards the country of publication – Japan. Despite the title indicating the “world” perspective and English being the language of tuition, Japan accounts for over 21% of all places mentioned in the textbook. It appears in 8 out of 15 Units and in 16.5% as a country or nationality. Moreover, places in Asia can be found in 10 out of 15 Units, while two other Units are about space exploration. It certainly sheds some new light on the issue of the target culture and its spatial focus. The approach adopted in “The World We Live In” represents a Japanese rendition of ELF teaching (Hino, 2020, 2021). Hino (2018) also postulates liberation of the English teaching in Japan by using a locally appropriate methodology, called the Model of Japanese English. It is not, as she stresses, an attempt to create a national variety of English but rather a pedagogical alternative to conventional Anglo-American English in educational contexts, a possible option for those who seek a means of expressing themselves in international settings (Hino, 2018, p. 57). Reiteration of the same places accounts for nearly 72% of all of the references to geographical space. Such an approach is in line with Hino’s observation that “[i]n the textbook currently in use, cultural con-

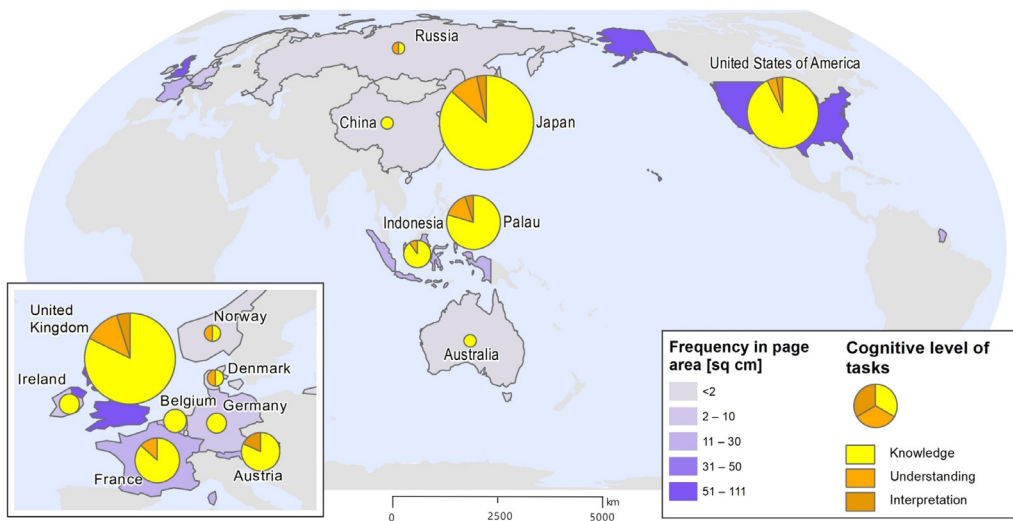



Figure 3. A map of the cognitive level of tasks including places referring to geographical space (place names aggregated to countries)

Unit 3
Divers' Paradise Palau



Notes: too blue to be true, reefs, fill one's field of vision, an wonder that, South Pacific, the national flag of Palau, breathtaking

Vocabulary: stretch, characterize, common, administrative, terminal, destination, currents, oscillator, fences, expansive

Reading 1
Step 1: Step 2

Step 1: Scan - Find the main idea of each paragraph.

Step 2: Read - Answer the questions.

Step 1: Scan - Find the main idea of each paragraph.

Step 2: Read - Answer the questions.

Notes: the Republic of Palau, a procession of, reefs, fill one's field of vision, an wonder that, South Pacific, the national flag of Palau, breathtaking

Vocabulary: 1. stretch, 2. destination, 3. characterize, 4. currents, 5. oscillator, 6. common, 7. administrative, 8. terminal, 9. expansive

Pages of the book

- Theme: language
- Theme: personal identification
- nationality
- people
- language
- Theme: shopping
- shop
- event
- venue
- Theme: food and drink
- food
- Theme: house, home, environment
- astronomical object
- continent
- ocean
- region
- island
- lake
- country
- city
- organisation of countries
- Theme: services
- company
- computer, product
- institution
- shop
- technology
- Theme: travel
- event
- historical event
- historical place
- island
- lake
- venue
- OTHER
- object
- product

Step 1: Choose the best answer.

1. **(A)** ...

Step 2: Draw the best answer.

1. **(A)** ...

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Figure 4. Pages of the book with words of spatial character marked according to the type of their referent (e.g., "arctic fox" would be an animal). Colours according to the colouring scheme for the themes

tents are certainly not restricted by the values of native English-speaking countries, but varieties of culture are included" (1988, p. 312).

This brings us to the second research question (RQ2) on the pedagogical context for references to geographical space. As evidenced in Figure 3, the proposed use of GIS enables both the analysis of space references and their pedagogical context (cognitive complexity of task, theme of the Unit). So far, only one of those two planes of analysis could be taken into consideration or made prominent – content (Hollenback, 2017; Litz, n.d.; Risager, 2018) or the construction of the book (Tomlinson, 2011; Tomlinson & Masuhara, 2017). However, in our study, we can look at the spatial component of context along with the assessment of the cognitive complexity of the task. Similar maps can be drawn for types of tasks (e.g., true/false, multiple choice, gap filling), or the skill they are meant to develop (e.g., reading comprehension, speaking, listening). We can see that places closer to the place of publication not only appear more often but also appear in more demanding tasks. A certain place had to appear in multiple contexts, i.e., become more familiar to the users, to be a subject of more cognitively demanding tasks, as was the case with Japan, and the United Kingdom. Let us look at the UK and places there located more closely – 8.5% of nearly 11% of all areas taken up by mentions of places in the UK were repetitions. The case of the USA, however, stands in stark contrast, as there was an equal amount of area devoted to first mentions (per each Unit) of the places and repetitions (9% of all of the mentions were first appearances in the Unit compared to approx. 9% of the area taken up by repetitions). The mentions were more detailed and spread along the country (mostly cities) and appeared predominantly in reading prompts.

Such a two-dimensional analysis is a result of introducing the tools of spatial analysis into the field of language material creation and evaluation. However, taking into consideration the area of the pages of the textbook (Figure 4) and geographical space also departs from the methods established in GIS studies in linguistics (Alves & Queiroz, 2015; Caquard, 2013; Caquard & Fiset, 2014; Lueberrig et al., 2013)

It allows for juxtaposing the attitudes inscribed in the cultural context of the book and the geographic space they refer to. This, in turn, opens new questions concerning the role of space in the textbook, e.g., does it merely serve as an illustration or does it serve some other purpose, for instance, can it be used to promote Intercultural Communication (Byram, 1997; Hollenback, 2017)? The latter way of reasoning is in line with that of Risager (2021) who postulates looking at the local and global scale in the textbook position the user "more towards the real, diverse, interdependent world, already from the beginners' level" (p. 13).

6. Conclusion

The paper is an attempt to find a way to spatially define the notion of a "target culture" in language textbooks, based on a study of a textbook published in Japan for Japanese students and teachers "The World We Live in" by Ogasawara et al. (2013). We discovered an interesting shift in the spatial focus of the content towards the country of publication, which suggests the existence of a hidden spatial bias. Such a tendency is indicative of the presence of the so-called "hidden curriculum", i.e., a set of values inscribed into the entire textbook, the arrangement, choice of materials, perspective, etc. In the title, we urge all the users of textbooks to consider the places connected with them: the place of publication and the countries the target audiences (students and teachers) live. The case study provides arguments in favour of this approach. Noting the predominance of Japan and Japanese cities or regions, we suggest changing the perspective on the role of culture and geographic space in the textbook from illustrative to supporting self-discovery among users. Our findings indicate that the places familiar to the users appear in more demanding tasks. It, in turn, supports our claim that careful choice of spatial references, not necessarily tantamount to countries where English is spoken as a native language, can help the textbook meet the needs and perspectives of the students and teachers.

References

- Alves, D., & Queiroz, A. I. (2015). Exploring literary landscapes: from texts to spatiotemporal analysis through collaborative work and GIS. *International Journal of Humanities and Arts Computing*, 9(1), 57–73. <https://doi.org/10.3366/ijhac.2015.0138>
- Anderson, L. W., & Krathwohl, D. R. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives* (Complete ed.). Longman.
- Baranowski, M., Gotlib, D., & Olszewski, R. (n.d.). Próba zdefiniowania domeny współczesnej kartografii. *Roczniki Geomatyki*, 16(4(83)), 269–281.
- Barcz, A., & Waclawik, P. (2022). *Aquacritical Atlas of the River Vistula*. Zenodo. <https://doi.org/10.5281/ZENODO.7414929>
- Borek, A., Związek, T., Słomski, M., Gochna, M., Myrda, G., & Stoń, M. (2020). Technical and methodological foundations of digital indexing of medieval and early modern court books. *Digital Scholarship in the Humanities*, 35(2), 233–253. <https://doi.org/10.1093/dlsc/fqz030>
- Byram, M. (1997). *Teaching and assessing intercultural communicative competence*. Multilingual Matters. <https://doi.org/10.21832/9781800410251>
- Caquard, S. (2013). Cartography I: Mapping narrative cartography. *Progress in Human Geography*, 37(1), 135–144. <https://doi.org/10.1177/0309132511423796>
- Caquard, S., & Fiset, J.-P. (2014). How can we map stories? A cybercartography application for narrative cartography. *Journal of Maps*, 10(1), 18–25. <https://doi.org/10.1080/17445647.2013.847387>
- Cartwright, W. (2009). Art and cartographic communication. In W. Cartwright, G. Gartner, & N. Lehn (Eds.), *Cartography and Art* (pp. 9–22). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-540-68569-2_2
- Cunningsworth, A. (1995). *Choosing your coursebook*. Macmillan Publishers Ltd.
- Gochna, M., & Związek, T. (2020). Spatio-temporal aspects of the extraordinary tax collecting system in Greater Poland (1492–1613). *Roczniki Dziejów Społecznych i Gospodarczych*, 80, 65–111. <https://doi.org/10.12775/RDSG.2019.03>
- Gotlib, D., Baranowski, M., & Olszewski, R. (2016). Properties of cartographic modelling under contemporary definitions of a map. *Polish Cartographical Review*, 48(3), 91–100. <https://doi.org/10.1515/pcr-2016-0011>
- Gray, J. (2010). *The construction of English: culture, consumerism and promotion in the ELT Global Coursebook*. Palgrave Macmillan.
- Harley, J. B. (1989). Deconstructing the map. *Cartographica: The International Journal for Geographic Information and Geovisualization*, 26(2), 1–20. <https://doi.org/10.3138/E635-7827-1757-9T53>
- Hauberman, I. (2016). “Drifting away in the tide”: Water Symbolism and Indigenous Environmentalism in Eden Robinson’s *Monkey Beach*. *Trans-Canadiana*, 8, 123–144.
- Hino, N. (2018). *EIL education for the expanding circle: A Japanese model*. Routledge Taylor & Francis Group/Singapore Association for Applied Linguistics. <https://doi.org/10.4324/9781315209449>
- Hino, N. (2020). English as a Lingua Franca from an applied linguistics perspective: In the context of Japan. *Russian Journal of Linguistics*, 24(3), 633–648. <https://doi.org/10.22363/2687-0088-2020-24-3-633-648>
- Hino, N. (2021). Language education from a post-native-speakerist perspective: The case of English as an international language. *Russian Journal of Linguistics*, 25(2), 528–545. <https://doi.org/10.22363/2687-0088-2021-25-2-528-545>
- Hohensinner, S., Sonnlechner, C., Schmid, M., & Winiwarter, V. (2013). Two steps back, one step forward: Reconstructing the dynamic Danube riverscape under human influence in Vienna. *Water History*, 5, 121–143. <https://doi.org/10.1007/s12685-013-0076-0>
- Hollenback, M. (2017). Exploring the development of intercultural citizenship: a holistic semiotic analysis of Japanese junior high school EFL Textbooks. *Hirao School of Management Review*, 7, 54–65.
- Instytut Historii im. Tadeusza Manteuffla Polskiej Akademii Nauk (n.d.). *INDXR – indeksowanie historycznych rękopisów*. <https://atlas.iipan.edu.pl/indxr/index.php>
- Jeszszeszy, P., Stoeckle, P., Glaser, E., & Weibel, R. (2017). Exploring global and local patterns in the correlation of geographic distances and morpho-syntactic variation in Swiss German. *Journal of Linguistic Geography*, 5(2), 86–108. <https://doi.org/10.1017/jlg.2017.5>
- Kachru, B. B. (1986). The power and politics of English. *World Englishes*, 5(2–3), 121–140. <https://doi.org/10.1111/j.1467-971X.1986.tb00720.x>
- Krukowski, M. (2021). Status of the cartographic model. *Polish Cartographical Review*, 53(1), 63–76. <https://doi.org/10.2478/pcr-2021-0006>
- Litz, D. R. A. (n.d.). *Textbook evaluation and ELT management: a South Korean case study* [PhD Thesis]. UAE University Al Ain. [http://www.asian-efl-journal.com/Litz thesis.pdf](http://www.asian-efl-journal.com/Litz%20thesis.pdf)
- Luebbering, C. R., Kolivras, K. N., & Prisley, S. P. (2013). Visualizing linguistic diversity through cartography and GIS. *Professional Geographer*, 65(4), 580–593. <https://doi.org/10.1080/00330124.2013.825517>
- McGrath, I. (2002). *Materials evaluation and design for language teaching*. Edinburgh University Press.
- Moretti, F. (2006). *The Novel, vol. 2: Forms and Themes*. Princeton University Press.

- Moretti, F. (2007). *Graphs, maps, trees: abstract models for literary history*. Verso. <http://hdl.handle.net/2027/heb.08911.0001.001>
- Murrieta-Flores, P., Baron, A., Gregory, I., Hardie, A., & Rayson, P. (2015). Automatically analyzing large texts in a GIS environment: the Registrar General's Reports and cholera in the 19th century. *Transactions in GIS*, 19(2), 296–320. <https://doi.org/10.1111/tgis.12106>
- Ogasawara, S., Hiroe, A., & Cutrone, P. (2013). *The World We Live In*. EINOUSHA.
- Piatti, B., & Humi, L. (2009). Mapping the ontologically unreal – counterfactual spaces in literature and cartography. *The Cartographic Journal*, 46(4), 333–342. <https://doi.org/10.1179/000870409X12554350947386>
- Rashidi, N., & Meihami, H. (2016). Hidden curriculum: An analysis of cultural content of the ELT textbooks in inner, outer, and expanding circle countries. *Cogent Education*, 3(1), Article 1212455. <https://doi.org/10.1080/2331186X.2016.1212455>
- Risager, K. (2018). *Representations of the world in language textbooks: languages for intercultural communication and education*. Multilingual Matters. <https://doi.org/10.21832/9781783099566>
- Smail, R., Gregory, I. N., & Taylor, J. E. (2019). Qualitative geographies in digital texts: representing historical spatial identities in the Lake District. *International Journal of Humanities and Arts Computing*, 13(1–2), 28–38. <https://doi.org/10.3366/ijhac.2019.0229>
- Szombara, S. (2021). Using different mapping techniques and GIS programs in the analysis and visualisation of mental maps. *Polish Cartographical Review*, 53(1), 91–104. <https://doi.org/10.2478/pcr-2021-0008>
- Tajeddin, Z., & Teimournezhad, S. (2015). Exploring the hidden agenda in the representation of culture in international and localised ELT textbooks. *The Language Learning Journal*, 43(2), 180–193. <https://doi.org/10.1080/09571736.2013.869942>
- Tomlinson, B., & Masuhara, H. (2017). *The complete guide to the theory and practice of materials development for language learning*. Wiley-Blackwell.
- Tomlinson, B. (Ed.). (2011). *Materials development in language teaching* (2nd ed.). Cambridge University Press.
- Tuan, Y.-F. (2001). *Space and place: the perspective of experience*. University of Minnesota Press.
- Venkateswaran, R., Weibel, R., & Purves, R. S. (2014). Exploring and visualizing differences in geographic and linguistic web coverage. *Transactions in GIS*, 18(6), 852–876. <https://doi.org/10.1111/tgis.12071>
- Weber Reuschel, A.-K., Piatti, B., & Humi, L. (2014). Data-driven expansion of dense regions – a cartographic approach in literary geography. *The Cartographic Journal*, 51(2), 123–140. <https://doi.org/10.1179/1743277414Y.0000000077>