

From L1-Dominant Homes to an English-Dominant School: Domain Allocation and Linguistic (In)Security among Bilingual Boarding School Students in Japan

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ABSTRACT

This paper examines the extent to which a shift from an L1-dominant home environment to an English-medium school environment reshapes linguistic security and domain allocation among bilingual students aged 16–19 at an international boarding school in Japan. While previous research has explored these constructs independently, their interaction within boarding school contexts remains unexplored. This paper combines both quantitative survey data with qualitative semi-structured interview data, employing a mixed-methods case study design. This case study approach has been chosen for the research because it allows for insights relevant to broad discussions of bilingual language while enabling an in-depth examination of a bounded educational environment. Key findings suggest that domain allocation shifted markedly toward English across academic and social contexts, alongside the continued, though reduced, use of L1 in home-related domains. In addition, linguistic insecurity is more pronounced among students who lack access to a supportive speech community. This study contributes to the body of literature on bilingualism in educational contexts by addressing a previously unexplored intersection, highlighting the interaction of linguistic environment and language use. Results suggest potential implications for educational practices, particularly the value of fostering peer networks and community spaces that support minority language use in order to mitigate linguistic isolation.

Keywords: Linguistic insecurity, domain allocation, bilingualism, complementarity principle, international school, Japan

INTRODUCTION

The particular relevance of researching international, multilingual schools and their consequences on teenagers is more important than ever in a world in which the popularity of such institutions has more than doubled over the last decade, according to a white paper by ISC Research (2023).

The global expansion of international schools has created a growing population of adolescent bilinguals who navigate language shifts, moving from L1-dominant home environments to English-medium educational spaces. This transition is not merely logistical but linguistic: it reconfigures which languages

are used, for what purposes, and with what degree of confidence. Understanding how such shifts reshape linguistic security and domain allocation among young speakers is, therefore, both timely and underexplored.

Central to this study are two theoretical frameworks. First, linguistic (in)security: the phenomenon whereby speakers evaluate their own language practices negatively “due to a perceived gap between their own practices and valued, prestigious, and legitimized linguistic forms” (Levasseur et al., 2023, p. 1). This concept offers a lens through which to examine the emotional and evaluative dimensions of language use among the students in this research. Second, Grosjean's (2016, p. 4) complementarity principle posits that bilinguals acquire and use their languages for different purposes, in different domains and with different people, making domain allocation a key variable in understanding how language use shifts in a new environment, for instance, when moving from an L1 dominated home environment to an English dominated boarding school.

The focus on only one of these concepts would miss the interconnected relationship that they hold. A sudden shift in domain allocation will affect the usage of students' L1s. This paper's aim is to understand whether the subsequent lack of exposure will result in lower security and gradual language attrition, as even though bilingualism has been studied in depth, the particular age group of bilingual teenagers between 16 and 19 in international boarding schools remains underexamined in relation to domain allocation and linguistic insecurity. In order to acknowledge this gap, this paper will examine an institution located in a rural, central region of Japan's main island. It was founded in 2014 and has a diverse international student body of around 200 students aged 14 to 20 that represents more than 80 nationalities, where the language of education and communication is predominantly English. In contrast, many students come from environments dominated by their L1(s), often differing from English. The study of this diverse community allows for a thorough examination of the linguistic environment of international boarding schools.

The age group researched ranges between ages 16 and 19. Rosselli et al. (2014), in their paper about language development in adolescence, discuss the importance of language development in this particular age range, motivating the development of the range employed in this study. As a result of these observations, this paper aims to assess the extent to which shifting from an L1-dominant home environment to an English school environment reshapes linguistic security and domain allocation among bilingual students aged 16–19 at an international boarding school in Japan.

To do so, this paper adopts a mixed-methods case study design, combining quantitative survey data with qualitative semi-structured interview data. A case study approach is appropriate because it allows for an in-depth examination of a specific, bounded context, namely, a single international boarding school in Japan. Simultaneously, it generates insights relevant to broader questions of bilingual language use (Dörnyei, 2007). This mixed-methods approach is employed to collect information on patterns across different participants, while also facilitating the exploration of contradictory or unexpected findings. Moreover, the methodology chosen allows for access to personal and individual experiences of linguistic security. This combination provides a comprehensive framework for analysis, capturing dimensions that cannot be fully expressed through numbers alone.

The remainder of this paper is organized as follows. Section 2 reviews the existing literature on linguistic security, the complementarity principle, and multilingual education, identifying the research gap this study addresses. Section 3 outlines the data collection methods, participants, and analytical framework. Section 4 presents and discusses the findings in relation to the research question and existing literature. Section 5 draws conclusions, highlights limitations, and suggests directions for future research.

LITERATURE REVIEW

This literature review will review concepts such as linguistic (in)security (Levasseur et al, 2023), the complementarity principle and domain allocation (Grosjean, 2016), and an exploration of methodologies employed by authors when investigating such topics, which shaped and informed this study. Alongside this, it will explore the limitations and gaps in knowledge still present in the literature currently available.

2.1 Linguistic (In)security

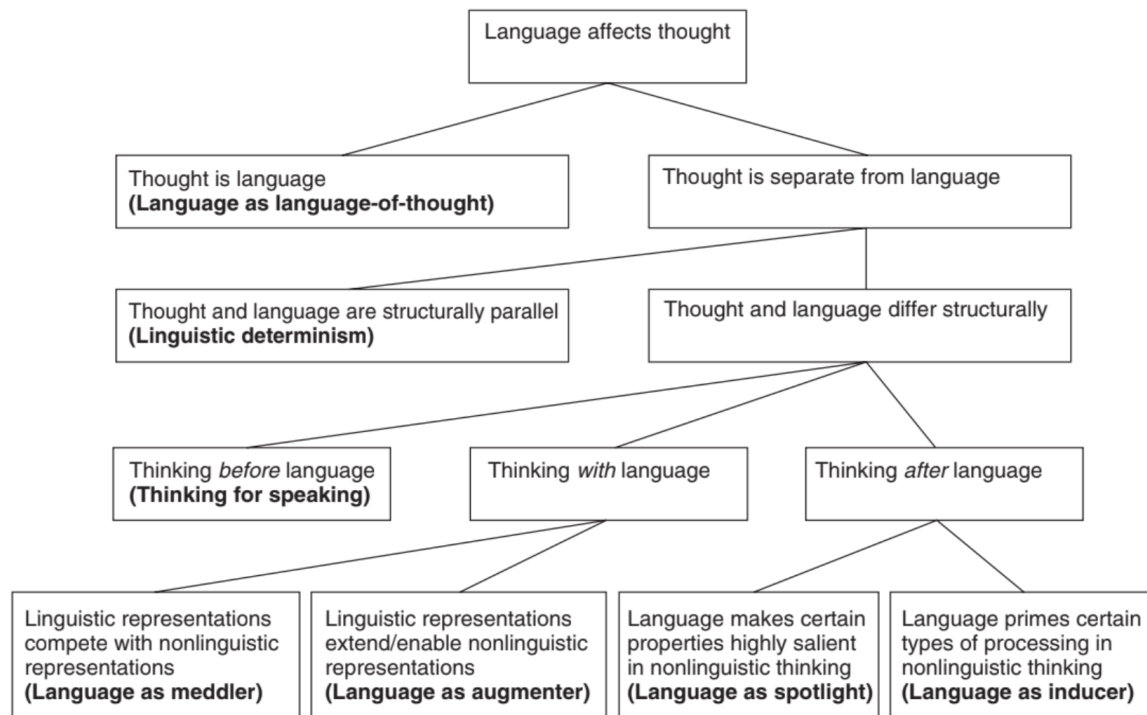
Previous research has put an emphasis on investigating linguistic (in)security within multilingual educational contexts, attempting to identify trends and patterns amongst students in different environments, as to comprehend the causes and effects that trigger and result from linguistic (in)security (Levasseur et al, 2023; Mukmin et al, 2025).

Levasseur et al's 2023 paper explores the definition of linguistic insecurity, along with the factors and triggers that affect speakers. When focusing on an educational context, the authors emphasize that "the linguistic insecurity observed in schools could, for example, be reduced by educational practices that instead aim to foster linguistic security" (Levasseur et al, 2023, p. 4). Nevertheless, the authors do not address the linguistic conflict that surges in multilingual boarding schools when the language employed for communication and academics differs from students' L1(s).

Conversely, Quvanch et al., (2024) analyze speaking anxiety among students in Afghanistan who study English as a Foreign Language (EFL) and highlights the relevance of English in education worldwide, emphasizing the challenges faced in countries with no traditional English-speaking community. As they claim, "the English language has significantly reflected global development in recent decades" (Quvanch, 2024, p.2), and consequently, "given the prevalence of anxiety in global educational contexts, it is likely that university students [...] encounter similar challenges" (Quvanch, 2024, p.2). The previously discussed linguistic insecurity is particularly visible in contexts that involve speaking (Quvanch, 2024, p.2). Students coming from all over the world will hence face the challenge of having to quickly adapt and leave linguistic anxiety behind, for the sake of navigating communication and their academic development. However, we must also take into consideration the fact that different students with diverse linguistic backgrounds will approach the sudden language shift with varying strategies and reactions.

2.2 Language, thought, and the mother tongue(s)

Preceding studies have analysed and proved the influence language has on thought, and the variations in expression present in speakers with different mother tongues. In their 2011 paper, Wolff & Holmes demonstrated the importance of mother tongues, researching whether bilinguals think differently, a theory known as the Whorfian hypothesis. The authors illustrate how language may affect the way of thinking through the following table:



Classes and subclasses of hypotheses on how language might affect thought, by Wolff & Holmes (2011, p. 2)

As the table shows, individuals that speak different L1s will have varying ways of understanding and processing the world around them. Hence, what must be considered is how the separation from environments that support the practice of said L1s will affect the individual's perception and interpretation of the world.

Furthermore, Keysar et al (2016) demonstrated that switching languages influences biased decision-making, specifically affecting whether people are willing to take risky choices, or against making such decisions. The authors claim that people rely more on systematic processes that respect

rational rules when making decisions in a foreign language. Similarly, participants tended to make more objective choices, due to factors such as the increased emotional distance that the use of a foreign language can bring. This paper explores the effect of this shift in the language environment not only in decision making, but in everyday life, perspectives, and behaviours.

Nevertheless, a number of questions regarding the impact language shifts can have on bilinguals or multilingual individuals remain to be addressed, as the main focus has been placed on bias and emotion (Keysar et al, 2016), not on aspects such as linguistic security. Regardless, if language affects cognition and emotion, we can infer that there will be tangible consequences for students who shift from operating almost exclusively in their L1s to an L2 (English).

Another concept discussed in this paper is subtractive bilingualism, a term employed to describe the process where “the acquisition of a second language results in the deterioration of the heritage language” (Nguyen, 2022, p.1). Nguyen explores the concept through the perspective of children of immigrants, who often face a tension between adapting to the dominant language of their new environment, and actively maintaining their heritage language, sometimes at the risk of social alienation. In a similar manner, the present study investigates the effect the dominance of English has on the students’ use of their L1(s) within an international school context. Participants may experience a comparable tension between linguistic integration and the active maintenance of their mother tongue(s), highlighting the potential for subtractive bilingualism to occur.

2.3 The complementarity principle and domain allocation

A sudden linguistic shift will inevitably lead to the use of language in previously unexplored areas and domains. Grosjean (2016, p. 4) provides a solid framework for understanding this phenomenon by establishing the complementarity principle (CP), defined as follows: “Bilinguals usually acquire and use their languages for different purposes, in different domains of life, with different people”. Domain allocation, similarly, is the reason for which “levels of fluency in a language will depend on the need for that language and will be extremely domain specific.” Through his exploration of different research papers, he analyses the importance of domain allocation in language perception, production and acquisition. The method introduced by Gasser (2000) is an effective way to collect data related to the CP, since it requires participants to reflect on the connection between their lived experiences and specific domains of language use.

As discussed in Yukio’s paper (1998), Japan has been consistently introducing English in both administrative and educational fields, defining this process as *Anglomania* “the infatuation and preoccupation with learning English on a nationwide scale” (Yukio, 1998, p. 9). This insistence in introducing domains that can be accessed only through the English language has led to “an increasing number of people feeling disadvantaged or deprived in the English-dominated international communication” (Yukio, 1998, p. 12). The author emphasizes that these disadvantages come from “denying the use of languages other than English and preventing the non-English speakers from expressing their ideas in international communication” (Yukio, 1998, p. 18), while simultaneously

provoking “feelings of anxiety and uncertainty on the part of the non-English-speaking” (Yukio, 1998, p. 18). Accordingly, an international community such as an international boarding school will find a majority of the student body in the position of requiring English for academic survival and social integration for the first time, facing the anxiety and insecurity the author describes. Yukio (1998) illustrates the negative consequences that can be observed when placed in overwhelmingly English-dominant international communities, which refers back to linguistic insecurity. This phenomenon reflects a sociolinguistic problem: the anxiety provoked in international communities where English is the dominant language, yet not the majority’s L1. Additionally, this problem can also be explored through a psycholinguistic lens by analysing individual responses to the dynamics within these multilingual environments.

2.4 Psycholinguistic and sociolinguistic perspectives on living multilingual lives

Abduvohidov (2018) provides a framework for integrating sociolinguistic and psycholinguistic perspectives when researching multilingual contexts by outlining the historical development of both fields. After reviewing classification methods in each domain, the author highlights the need for collaboration, arguing that individual case studies can only be fully understood through a combined perspective. As he notes, “The psycholinguistic perspective tells us how languages are learned, [whereas] the sociolinguistic perspective tells us how it is lost in the community” (Abduvohidov, 2018, p. 2). This point of view underscores the importance of employing both approaches simultaneously, as they offer complementary insights into the linguistic environments individuals navigate, allowing researchers to grasp their subjective experiences.

The methodology employed for data collection in this paper consists of a survey and semi-structured interviews, which have been selected due to the different socio and psycholinguistic perspectives they each explore. The survey taps into sociolinguistic patterns (domain use across social contexts) while the interviews access psycholinguistic experience (individual perception, confidence, and identity), thus justifying the mixed-methods design.

A relevant concept in sociolinguistics explored in this study is language attrition, described by Weltens and Cohen as the “mirror image of acquisition” (Weltens and Cohen, 1989, p. 4). By examining factors such as proficiency level, skill, and frequency of use, the authors explore both the extent and the consequence of this phenomena. Furthermore, their work places particular emphasis on students, including cases of L2 attrition after finishing language programmes, and L1 attrition due to a reduction of use as a consequence of environmental change. This focus is especially relevant for the present study, which similarly seeks to understand how shifts in linguistic environments impact speakers’ L1 use and maintenance.

2.5 Multilingual educational contexts and boarding schools

Students with diverse linguistic backgrounds will face a challenge when attempting to adapt to multilingual communities with a focus on education. Mukmin et al. (2025) pointed out the lack of educational environments that do so, highlighting the influence of multilingual contexts on students' language development and acquisition strategies. Moreover, the authors explore how homogenized teaching approaches fail to address the individual needs of multilingual learners. Mukmin et al conducted their research in a multilingual school in Indonesia, looking at results from the sociological perspective of language choice. In a similar manner, when studying the context of boarding schools, Alias & Azal (2022) discuss the process of second language acquisition and the linguistic factors related to it in this particular environment. They conclude that additional studies to understand more completely the key tenets of students' linguistic adaptation are required. Similarly, Mukmin et al raise the question of how education can be made inclusive from the linguistic perspective, acknowledging the current limitations of the teaching systems established in such places.

2.6 Summary and research gap

Shared themes across studies indicate that bilingual language use is both dynamic and context-dependent. Previous research has emphasized the role of domain allocation and the complementarity principle (Grosjean, 2016; Grosjean, 2012), showing that language proficiency and use vary according to context, need, and social environment. Similarly, studies on bilingual cognition and language processing (Wolff and Holmes, 2011; Keysar et al., 2016) suggest that language choice influences not only communication but also thought processes and decision-making. Multilingual educational environments have been previously investigated (Mukmin et al, 2025; Quvanch et al, 2024); however, the issue of multilingual contexts and domain allocation has yet to be explored in the context of international schools, as studies focusing on such environments (Alias and Azal, 2022) have not investigated the particular intersection between domain allocation and linguistic (in)security this paper focuses on.

Moreover, linguistic security (Levasseur et al, 2023) and its ties to both subtractive bilingualism (Nguyen, 2022) and language attrition (Waltens and Cohen, 1989) have not been explored in the context of multilingual international schools, and studies focused on the impact of English in Japan have analyzed the general (Yukio, 1998), not focusing on the particular environment of certain institutions. The benefits of employing psycholinguistic and sociolinguistic methods have been discussed (Abduvohidov, 2018), nonetheless, this mixed methods approach has not yet been employed in similar case studies.

A new approach is therefore needed to fully understand international, multilingual schools, along with their implications for teenagers. The popularity of such institutions has more than doubled over the last decade (ISC Research, 2023), and yet the research on such institutions is scarce, as UNICEF (2024) explains, "There is little explicit mention of boarding schools or residential special schools [...] and even less discussion about their role" (UNICEF, 2024, p.14).

The present study addresses this gap by examining linguistic security and domain allocation among bilingual students aged 16-19 in a Japanese international boarding school, combining survey and interview data to provide both breadth and depth of insight.

DATA COLLECTION, ANALYSIS, AND METHODS

3.1 Research Design

This paper adopts a mixed-methods case study design, which combines quantitative survey data with qualitative semi-structured interview data. This case study approach is appropriate, as it allows for an in-depth examination of a specific, bounded context (a single international boarding school in Japan) that still generates insights relevant to broader questions of bilingual language use (Dörnyei, 2007). This mixed-methods approach is employed to collect information on patterns amongst the different participants, meanwhile, it still retains the ability to explore unexpected findings, as to grant access to the personal experience of linguistic security that otherwise could not be captured.

3.2 Participants

The 10 students interviewed for this paper were all between the ages of 16 and 19. Beforehand, participants had filled out a survey regarding domain allocation and language use, along with 2 other students, however, due to the incomplete answers given, these were not contacted for a follow-up. Amongst the respondents, 10 were chosen for the following stage of the study, provided they had filled out the survey correctly and had expressed their willingness to be contacted for a follow-up interview.

The school, which will remain anonymous to protect the identities of those involved, offers the International Baccalaureate (IB) Programme for 16 year old students, a holistic curriculum, as well as a special G10 program, designed for 15 year old students who wish to attend the school from an earlier age. Most students attend the school for 3 years, although some join exclusively for the IB program and study for 2 years instead.

This table illustrates the age, languages, and nationalities of the research participants, along with the years the respondents have been at the school, which range from 1 to 3:

Name of participant	Age	L1(s)	Other languages	Country of origin	Years at school
P1	18	Lithuanian	English , Spanish (beginner)	Lithuania	1
P2	18	Sinhala	English , Japanese (beginner)	Sri Lanka	2
P3	18	Spanish	English , Japanese (beginner)	Bolivia	2
P4	19	Estonian	English , German (intermediate), Japanese (beginner)	Estonia	2
P5	16	Iñupiak	English , French (beginner), Japanese (beginner)	Alaska	1
P6	16	Vietnamese	English , Japanese Sign Language (beginner), Japanese (beginner)	Vietnam	2
P7	18	Arabic	English	Lebanon	2
P8	17	Spanish	English , French (intermediate), Japanese (beginner)	Spain	1
P9	19	Belarusian	English , Ukrainian, Japanese (beginner)	Belarusia	3
P10	17	Swahili	English , Japanese (beginner)	Tanzania	2

Table showing participants' information

3.3 Data Collection

As previously explained, data were collected both through a survey and through semi-structured interviews.

3.3.1 Survey

The domain allocation survey was administered online via Google Forms and remained open for 7 days, between April 9th, 2026 to April 15th, 2026, both included. It was adapted from the data collection method developed by Gasser (2000), which asks participants to reflect on the language(s) they use across specific domains of their daily life. The survey included 42 questions covering domains such as academic tasks, social interactions with peers, communication with family, and informal personal activities. Participants were asked to indicate which language(s) they use in each domain and to what extent. The survey questions are listed in the appendix at the end of this paper.

3.3.2 Interviews

Semi-structured interviews were conducted with 10 participants who had previously filled out the survey, being subsequently contacted for follow-up interviews. Each interview lasted between 10 and 15 minutes, and were audio-recorded with the participant's consent. Interviews were analyzed and summarized through interview protocols. The questions explored the participants' feelings of confidence and comfort when using their L1 versus English, their sense of language loss or gain since arriving at the boarding school, and their perceptions of how their stay at the school shaped their language use.

Similarly to the survey, the interview questions are listed in the appendix at the end of this paper.

3.4 Ethical Considerations

Ethical considerations were observed throughout the data collection process. Participation was voluntary, and participants were informed of their ability to withdraw at any time, without consequence. Before the interviews, consent was obtained verbally after an explanation of the interview's content was given, including explicit permission to audio-record the meetings.

3.5 Data analysis: thematic analysis

Survey results were analysed by using basic descriptive statistics. Participants were asked to employ percentages to break down different domains used in their everyday lives. Posterior comparison and contrast allowed for the identification of common trends and contradictory findings.

Each individual interview was listened to repeatedly and then summarized in an interview protocol. The interview protocol was created in regard to key themes emerging in the data that are relevant to answering the research question. Direct quotes of the participants were obtained and included in the interview protocol, which employed thematic analysis, following Braun & Clarke (2006). This is a widely used qualitative research method used to identify and analyze the patterns found in the data. It allows for the researcher's understanding of common themes and patterns, similarities, and differences, while highlighting surprising or contradictory results. The inductive approach allowed themes to emerge from the data after collection, rather than being imposed in advance, which is appropriate given the exploratory nature of the research.

3.6 Limitations of the methods

One limitation to consider is that this paper focuses on the lived experiences of students within one boarding school in Japan. Moreover, the age group is limited to a very particular range, not accounting for other relevant groups and demographics. Furthermore, the pool of participants is reduced due to time limitations, and the manageability of data collection and analysis. To minimize these factors, the focus of the research was placed in depth, not on extensiveness, prioritizing deep and extended responses over a larger pool of participants.

Besides these, other challenges were present. As the online survey was to be filled out individually in unsupervised settings, answers might have been submitted incorrectly or have been rushed. Through piloting the form with a test person and writing clear instructions for participants, the impact limitation was minimized.

In addition, there was a risk of falling under the observer paradox and confirmation bias, as participants might have changed their behaviour or answers due to knowing they were part of a study. Moreover, the personal relationship between some participants and myself could have influenced the results obtained. Even though this was not easily avoidable, the limitations were minimized by standardizing procedures and regarding all participants in an equal manner.

Finally, due to my own position as a student at the school this paper focuses on, my experiences and pre-existing ideas might have guided my interpretations of the data collected. However, by using structured methods, maintaining flexibility and data diversity, and discussing my methodology throughout its development stages with a third party, I was able to integrate different perspectives on the data in my analysis.

3.7 Questions and hypothesis

The main question this paper examined was “to what extent does shifting from an L1 environment to an English-medium school affect students’ proficiency in their L1?”. However, as the research and the experiment’s design developed, more questions arose regarding the way the Japanese language impacted the setting (as none of the students had Japanese as their L1), the emotional connection students experienced towards both languages, and the importance of their L1s when considering their cultural identity and sense of belonging.

The hypothesis with which this research began was that students’ English abilities would progressively improve, while L1 skills would gradually deteriorate.

RESULTS AND DISCUSSION

Analysis of the survey results and interview data identified two primary themes: domain polarization and the shift of distribution between students' L1 and English, and the shifts in linguistic (in)security due to the immersive nature of the environment.

4.1 Domain polarization: English in academic settings, L1 in home and family domains

All participants grew up in homes where a language other than English was primarily spoken, but upon entering an English-speaking school environment, their language use shifted dramatically. The following table illustrates current linguistic behaviours on some chosen, relevant domains, reported through the survey. Results are approximate.

Domain	English (%)	L1 (%)	Other (%)
School (general)	90 - 95	3 - 8	2 - 5
Class	90 - 95	0 - 5	2 - 5
Friends / Peers	80 - 85	10 - 15	5 - 10
Social (leisures, outings)	80 - 90	5 - 15	5 - 10
Immediate family	20 - 30	70 - 80	0 - 5
Distant family	10 - 25	75 - 90	0 - 5

Table illustrating (with approximate values) survey results of some specific domains

Within the school setting, every participant claimed they have used English in at least 70% of their daily interactions. Similarly, in classroom settings, all participants indicated that at least 80% of their daily communication takes place in English. Notably, seven of the twelve survey responders report they did not use their L1(s) in this domain, further illustrating the extent to which the English-medium environment has reshaped domain-specific language allocation.

Moreover, social and interpersonal domains also reflect this shift. In communication with close friends, classmates, and other students, participants' answers indicated a mean English usage of 82.55% of their daily communication. Furthermore, only two-thirds of the participants report using their L1(s) in this domain, suggesting that some students lack consistent access to a speech community in their mother tongue(s).

In contrast, domains associated with the home environment remain strongly L1-dominant. In the immediate family domain, participants document a mean L1 usage of 87%. However, this communication typically occurs on a weekly rather than a daily basis, in contrast to the daily frequency observed in school-based domains. This contrast highlights a clear divergence between school-related domains and home-related domains. While the shift towards English is substantial, L1 usage persists in family domains, albeit with a lower overall frequency, illustrating how daily life is dominated by English.

These findings are further supported by interview data. Participant 7 noted, “*My English definitely has improved since I came here, due to having to practice it most of the day for 2 years*”, underscoring the role of sustained exposure in developing English proficiency, and highlighting the daily usage of said language.

As Grosjean (2016) argues, “many bilinguals are accustomed to discuss some topics in only one of their languages” (Grosjean, 2016, p.1). The present findings reinforce this claim, as seen in the clear division between school and home-related domains, while also adding nuance to the effects of sudden linguistic shifts on bilinguals’ domain allocation. Furthermore, interview data reinforces the hypothesis that “*the level of fluency attained in a language [...] will depend on the need for that language and will be domain-specific*”. As the following statement from a participant shows, “*I definitely have gotten better [at English] at least in terms of academics*,”. This highlights the role of domain-specific exposure in language development. Overall, these observations suggest that increased reliance on English within academic domains accelerates language proficiency in those specific domains. As participant 9 notes, “*I used to not speak my language at all, other than when calling my family back home. Everything was English, but I wasn’t able to speak English, so I just wasn’t speaking*”, there is a strong correlation between proficiency and confidence, as when the former lacks, the latter will, most probably, not be found.

Multiple participants spontaneously identified thinking as the domain most resistant to English takeover and also felt the most distressed to lose their L1 proficiency here. Participant 9 expressed fear at noticing she was beginning to think in English, deliberately preserving Belarusian as her “*language of thought*”. Participant 10 similarly noted she now “*even thinks in English*”. This is a consistent finding: participants associate their internal cognitive domain with their L1 identity, making shifts in this domain particularly upsetting.

Regarding the loss of domains, both participant 9 and participant 5 reveal that family phone calls have become the only remaining domain for L1 use, and crucially, this reduces both the complexity of vocabulary and topics available in the L1 to casual, basic conversation. Participant 5 notes, “*If I am having a deeper conversation about something deeper than just basics, like about politics or relationships, I feel a lot less confident, because it’s not as regular anymore*”. By claiming that she can no longer hold deeper conversations in Iñupiaq “about politics or relationships”, as those topics simply never arise in phone calls, she suggests that domain loss is not just quantitative (due to fewer domains) but also qualitative (there is a reduction in the development of vocabulary within remaining domains). It also suggests that the school environment reshapes domain allocation not just by introducing English, but by

removing the formal L1 domains students previously had access to.

4.2 Immersion-driven shifts in linguistic (in)security

With regards to shifts in linguistic security, interview data suggests that participants' confidence in their L1 has decreased substantially, particularly amongst those who lack a supportive speech community. Participant 2 observed that, "*since you are given less opportunity to speak that language here (unless you have community, which unfortunately I don't), it does mean that your proficiency level falls, at least a little bit.*" This reflects how reduced opportunities to use the L1 contribute to domain reallocation towards English, potentially leading to language attrition, concept expanded and categorized by Weltens and Cohen (1989). The absence of a speech community further exacerbates this decline in linguistic security, placing speakers in a position of linguistic isolation, and further confirming Weltens and Cohen's hypothesis: "elements that are less "functional", "marked," or "frequent" are more vulnerable than those that are more so" (Weltens and Cohen, 1989, p.4).

It is also important to consider the strategies employed by students to maintain their L1. Participant 9 stated, "*[It is important for me to speak my language] because sometimes when I don't speak Belarusian for, for example, 1 week, I feel like I am starting to think in English, and it's scary because I don't want to lose my language at all. I think that even if I lived in the US all my life, I would still try to keep my language as the "language of my thought", and English just to communicate with others.*" This response highlights both a perceived risk of gradual language attrition and an active effort to preserve L1 use in specific cognitive domains. Cross-linguistic influence is also evident, as the perceived trigger for linguistic attrition is the speaker's use of English. Consequently, the participant intentionally maintains their L1 as the "language of thought", reserving this domain for Belarusian in an effort to mitigate language attrition. Therefore, this indicates a deliberate management of language use, supporting the Complementarity Principle (Grosjean, 2016).

However, linguistic security remains context-dependent. Participant 5 reported feeling "*[more confident speaking Iñupiaq] when I'm home, with my grandfather and my auntie, where it is more normal to speak with them in my language, and it's more automatic.*" She further noted feeling "*more confident in English when speaking with my family and friends, just because I feel more confident and less judged*". These observations suggest that linguistic security is strongly shaped by context and perceived language expectations, where "home" is a specific domain where Iñupiaq is encouraged. Therefore, in environments where there is a speech community that supports the use of the L1, confidence increases, whereas reduced perceived judgment in English-speaking interactions similarly enhances L2 confidence.

In contrast, an increase in English linguistic security is observed across all participants. Participant 3 reported that "*My English confidence shifted from a 5, before I came here, to an 8*". This increase suggests that the linguistic immersion has led to an expansion in this participant's confidence in their L2, contributing to greater English linguistic security. However, in light of earlier findings from the same participant, who noted that "*I can't just purely speak Spanish anymore*", their Spanish confidence has simultaneously declined. Thus, this might also indicate a form of subtractive bilingualism (Nguyen,

2022), whereby increased proficiency in the L2 coincides with L1 attrition. The interview data further support treating subtractive bilingualism as an explicit and consistent finding rather than a theoretical possibility. Across nearly all participants, rising English confidence co-occurs with reported L1 decline, for example, participant 1, participant 3, participant 4, participant 9, and participant 10 all display this pattern. Thus, the learning and development of English through sudden immersion leads to a loss of perceived proficiency and security in the students' L1(s).

On the other hand, linguistic insecurity is defined by Levasseur et al (2023) as “the perceived gap between linguistic uses in a language and the prescriptive norm in that language, i.e., what constitutes good speech” (Levasseur et al, 2023, p.2). Participant 9 reported being “*very self-conscious of the way I say some words*” when communicating in English, suggesting heightened insecurity in relation to perceived deviations from standard norms. This expands on Levasseur et al (2023) findings by indicating insecurity is exacerbated in contexts where speakers anticipate judgment based on prescriptive expectations of “correct” English usage.

The interviews also reveal how linguistic security is not only an outcome, but a condition that determines whether participants can access their languages at all. Participant 5 and Participant 8 both report that low anxiety and reduced fear of judgment, specifically within their family or home domains, make language access more automatic and fluent. Participant 9 went through a period of near-total communication shutdown because she could neither speak her L1 (due to the lack of a linguistic community) nor her L2 (due to insufficient proficiency). This constitutes a temporary but severe case of how the affective filter interacts with domain loss. Participant 10 notices an accent developing in Swahili. Participant 4 finds that English academic terminology has no Estonian equivalents, causing her language to “freeze”. Participant 1 has to switch to English mid-sentence when Lithuanian words fail her. These findings directly address that immersion doesn't just redistribute domains, it can even eliminate access to language altogether.

4.3 Unexpected findings

Although, as the initial hypothesis predicted, general findings suggested that participants' L1s had become less dominant, while English became more domain-specific, one participant appears to diverge from this pattern. Participant 8 reported getting “*better [at Spanish] because now I'm taking classes, which I didn't do before. I spoke a lot of Spanish with my family, but never at school. Another thing is that I would go back to Spain much more often than, so I would speak Spanish with my grandparents. I was kind of forced*”. This suggests that the formalization of L1 use through institutional contexts may support increased proficiency and engagement, rather than limiting use to naturally occurring domains.

In contrast to earlier, obligation-driven exposure, current engagement with Spanish appears more voluntary. The shift is associated with more willingness to engage in the L1, which may indicate a rise in linguistic security. The finding contradicts the broader trend observed across participants and may be explained by the individual's specific language background. Participant 8 claims that they have “*never studied in Spanish*”, further noting that “*it hasn't always been my main language*”, suggesting a more variable history of L1 development in comparison to other participants.

Furthermore, specific domains examined in the survey reveal contradictory findings. In relation to self-directed speech, responses ranged across the full spectrum from exclusive L1-use to exclusive English use. A similar trend is observed in activities such as counting and calculating, singing alone, and swearing. These variations suggest that these domains are highly individualized and not easily generalizable, reflecting personal preference rather than consistent linguistic behaviour across participants.

Moreover, the survey included an open-ended question prompting participants to reflect on the nuances of communication amongst their different languages. Approximately one third of the respondents addressed affective language use in their responses. Participant 1 notes that they *“find it easier, or less cringy, to express emotions in English”*. Similarly, participant 3 stated that they *“can express more emotion in Spanish, however, because I feel more emotionally detached from English, it is easier for me to talk about personal things in English”*. Participant 7 further claimed that *“speaking about feelings feels much more comfortable in English.”* The emphasis on the emotional and affective dimensions of language highlight how the effects of shifting linguistic environments are not limited to domain-specific allocation, but further extend to the broader language choice process. Overall, participants indicated varying patterns of affective embodiment and emotional grounding across languages, typically associating stronger emotional expression and domains to their L1, while English functions as a more psychologically distanced “buffer language”.

Ultimately, it was surprising to find that 8 participants mentioned Japanese as a language they, to some extent, employed in their daily life, even though none of the interviewed students listed it as their L1. This discovery illustrates the way the Japanese language influenced the setting, as the student body was not indifferent to the country in which the school was set.

Finally, several participants frame their L1 not primarily in terms of competence or domain use, but as a marker of their identity that exists independently of proficiency. Participant 2 explicitly argues that frequency of use does not determine mother tongue status:

“I did wonder about whether a mother tongue has to have a certain amount of use for it to be named as your mother tongue, but I don’t think it’s the case. [...] The level of use doesn’t necessarily relate to it being my mother tongue. I think in my heart, even if I don’t speak Sinhala properly anymore, it will intrinsically stay my mother tongue.”

Participant 7 and Participant 4 similarly tie their L1 directly to cultural identity and belonging. These interviews show that linguistic security and domain allocation are not only shaped by immersion, but filtered through the symbolic value participants assign to their L1. Such claims support Nguyen’s, who argued that “native proficiency ties into cultural understanding and respect for that culture” (Nguyen, 2022, p.5), thus demonstrating that the practice of the L1 goes further than functionality and communication, instead possessing additional emotional and cultural value.

4.4 Limitations and their potential impacts on the results

The limitations previously identified impacted results in several ways. The relatively small sample size, restricted to students from a single international boarding school, and the limited time frame of the study constrain the generalizability of the findings. Hence, results, particularly the English dominance in academic domains, cannot be generalized, as they might reflect the specific linguistic environment instead of the broader trend across international schools. Moreover, the limited sample may have prevented the identification of less common patterns.

Additional methodological challenges, such as the observer paradox and potential confirmation bias, may have influenced participants' responses. Given that some participants and the research share a personal relationship, there is a possibility that participants provided "expected" responses instead of fully honest ones. This may have led to the repetition of narratives aligned with the study's focus, especially linguistic shifts, while more contradictory experiences may have been downplayed.

Furthermore, the online survey, which was completed without supervision, sometimes suggests rushed submissions, which in turn reduces accuracy. In addition, some participants who could have been eligible for follow-up interviews submitted incomplete answers, which rendered their data unsuitable for further qualitative analysis, and restricted the extent and the depth of the analysis.

Finally, as the researcher is also a student in the school community being observed, subjective interpretation bias might have influenced the analysis. Due to the familiarity with the context, there might have been a case of prioritising the expected patterns, such as English dominance, while alternative interpretations might have been overlooked. In order to minimize said effects, responses were regularly discussed with a third party, which allowed for the integration of alternative perspectives and reduced the impact of individual biases.

CONCLUSION

5.1 Summary of key findings

This study investigated how shifting from an L1-dominant home environment to an English school environment reshapes linguistic security and domain allocation among bilingual students aged 16–19 at an international boarding school in Japan. Four key findings emerge from the analysis.

First, domain allocation shifted markedly toward English across academic and social contexts. However, there is a notable divergence between school-related domains and home-related domains. While English predominates in school-based communication, L1 use persists within family and home domains, although there is lower overall frequency. Therefore, daily interactions are dominated by English, while some specific private ones are reserved for the L1.

Second, linguistic insecurity in participants' L1 was most pronounced among those who lack a supportive speech community. The absence of such a community appears to exacerbate declines in L1 linguistic security. However, participants demonstrate awareness of this shift, and in some cases adopt strategies in order to maintain their mother tongue(s). It is also important to note that linguistic security remains context-dependent.

Third, participant 8 diverges from the overall trend, reporting an increase in their L1 linguistic security due to the institutionalized exposure that was previously unavailable. Additional findings indicate that certain domains, such as self-directed speech, counting, or swearing, are highly individualized and show variation across participants. Finally, participants frequently associate stronger emotional expression and domains with their L1.

Lastly, the school environment is not a neutral backdrop, but it actively produces the conditions for the language shifts described in the results. It removes formal L1 instruction (participant 5, participant 9), provides no L1 speech community for some students (participant 1, participant 2), conducts all academic activity in English, and structures daily life entirely around English-medium interaction. Participant 10 explicitly calls for the school to do more to support L1 maintenance. This institutional dimension also directly addresses the effects of the language shift, and its variations amongst the student body.

5.2 Contributions and implications

This study contributes to the growing body of literature on bilingualism in educational contexts by addressing a previously unexplored intersection: the combined impact of domain allocation shifts and linguistic security among adolescent bilinguals in an international boarding school. The findings suggest that linguistic insecurity grows particularly among students who do not have access to a supportive speech community.

These results have potential implications for educational practices, as schools might consider creating opportunities for L1 use or addressing linguistic insecurity through some form of language support. More broadly, international boarding schools could benefit from policies that encourage peer networks or community spaces where minority languages are represented, limiting linguistic isolation. This measure could help reduce anxiety and linguistic insecurity, as to support the balanced development of bilingual students.

5.3 Suggestions for future research

Future research in this direction is encouraged, as several variables could be modified and observed. A larger sample size, or the expansion to multiple schools, would allow for a comprehensive analysis of broader trends. Similarly, a longitudinal study could provide deeper insight into long-term effects in both domain allocation and linguistic security.

Different types of educational institutions should also be considered, such as non-boarding international schools, universities, or local institutions that provide an English education. Additionally, future studies could focus on particular L1 groups to examine the potential variations across different linguistic

backgrounds. Moreover, expanding the participant pool to include both younger teenagers and older adults, might further help identify the similarities and differences in bilingual development across separate age groups.

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APPENDIX

7.1 Survey questions

7.1.1 General background section

1. What is/are your first language(s)? What languages did you speak back home?
2. How long have you been learning English and why?
3. What language(s) do you use now that you live in Japan? (List all that apply, even if you are learning them currently)
4. How would you evaluate your competence in these languages? (Mother tongue, fluent, intermediate, beginner)
5. What differences do you experience with speaking these languages over your mother tongue?

7.1.2 Domains for language use section

Please indicate which languages you use in different domains of your life. First answer how frequently you communicate in this domain (select one of the letters: D = daily, W = a few times a week, M = a few times a month, Y = a few times a year, N = Never) and then indicate by means of a percentage the extent to which each language is involved. For example, if you talk about politics a few times a week, please select "W," and if you do it mainly in English, much less in your first language and almost never in a different one, indicate this by means of three percentages (e.g. 70%, 25% and 5%). The numbers must add up to 100%. E.g.: If I speak Spanish, English and Japanese to discuss religion daily, I will write D Spanish 50%, English 35%, Japanese 15%

1. At school (in general)
2. Class (in general)
3. Class (any class where you speak a language other than English)
4. Sports
5. People in your house (housemates)
6. Close friends, classmates, other students
7. Immediate family (with whom you speak regularly)
8. Distant family (with whom you don't speak as often)

9. Evening/day out
10. Shopping, leisure (in general)
11. Leisure (specific activities indicated by each participant. E.g.: sports practiced outside the school, going out to Ueda / Saku / Tokyo... etc.)
12. Holidays/trips
13. Administrative matters
14. Health
15. Politics
16. Religion
17. Love and affection
18. Social media, online friends (if applicable)
19. Other domains (listed by the participant)

7.1.3 Activities for language use

Please indicate which languages you use for various activities. First give the frequency with which you talk about each of the topics indicated below (select one of the letters: D = daily, W = a few times a week, M = a few times a month, Y = a few times a year, N = Never) and then indicate by means of a percentage the extent to which each language is involved. For example, if you listen to podcasts a few times a week, please select “W,” and if you do it mainly in English, much less in your first language and almost never in a different one, indicate this by means of three percentages (e.g. 70%, 25% and 5%). The numbers must add up to 100%. E.g.: If I speak Spanish, English and Japanese to write letters daily, I will write D Spanish 50%, English 35%, Japanese 15%

1. Writing (at school for regular classes)
2. Writing (at school in any language class other than English)
3. Writing e-mails
4. Note-taking
5. Attending school clubs
6. Attending other circles (e.g.: Shinano Oiwake volunteering center, competitions)
7. Speaking colloquially
8. Counting, calculating
9. Expressing one's feelings
10. Singing alone
11. Singing in other settings (school events, practice, etc.)
12. Praying
13. Swearing
14. Speaking to oneself
15. Speaking to others (specified by each participant)
16. Listening (music, podcasts, audiobooks, youtube videos etc)
17. Other activities: if applicable
18. Any questions / comments / concerns about the survey? (optional)

7.2 Interview questions

The questions asked during the interviews were the following:

1. In what language(s) did you communicate before coming to this boarding school, and in what way have you shifted from that position, linguistically speaking?
2. Are there any other students on campus that share your mother tongue?
3. Can you describe with whom you communicate in your L1 here and why this is important for you? Can you give an example when you speak your L1 with the persons you have mentioned before?
4. What changes have you observed in your L1 language competence since moving to Japan and starting school here?
5. How confident do you now feel in your first language(s)? And in English?
6. Can you give an example when you feel most/least confident in the L1 and/or English?