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Sarah Hopkyns  
*Zayed University*

Melanie van den Hoven

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Sarah Hopkyns\* and Melanie van den Hoven

# Linguistic diversity and inclusion in Abu Dhabi's linguistic landscape during the COVID-19 period

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**Abstract:** In Abu Dhabi, multilingualism amongst its highly diverse population is typical. However, with Arabic as the official language and English as the lingua franca, the population's other languages are subordinate on public signage. Those proficient in English or Arabic have more access to information than those who are not. While effective communication is important in ordinary times, it is especially vital during a crisis. This study looks at COVID-19 signage in two Abu Dhabi live-work contexts: A beachside community and an industrial site. The study takes an ethnographic approach to linguistic landscaping in which a corpus of 326 top-down and bottom-up signs are investigated in terms of languages used, spacing, prominence and location, as well as intended audience and sociolinguistic implications. Key findings revealed that bottom-up handmade COVID-19 signage was mainly monolingual (English only) and municipality-produced warnings were predominately bilingual (Arabic and English). Despite the multilingual composition of both contexts, only one third language (Korean) appeared on COVID-19 signage. The findings shed light on existing inequalities in linguistically diverse contexts, and the need to ensure access to information for all at a street level. The article concludes with practical suggestions for greater linguistic inclusion in the COVID-19 period and beyond.

**Keywords:** COVID-19 signage; crisis communication; diversity and inclusion; linguistic landscaping; multilingualism; United Arab Emirates

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\*Corresponding author: Sarah Hopkyns, College of Education, Zayed University, Abu Dhabi, United Arab Emirates, E-mail: sarah.hopkyns@zu.ac.ae. <https://orcid.org/0000-0003-0152-4108>

Melanie van den Hoven, Nawah Energy Company, Abu Dhabi, United Arab Emirates. <https://orcid.org/0000-0002-9846-6188>

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# 1 Introduction

Modern Standard Arabic (MSA) is the official language of the United Arab Emirates (UAE) and English is both the lingua franca and a medium of instruction at all levels of education. However, as Piller (2018: 15) points out, such labels “hide more than they reveal”. There are over 100 other languages spoken in the nation (UAE Fact Sheet 2019) and there are also many dialects within the diglossic language of Arabic itself. The UAE is a linguistically diverse nation due to having a foreign resident population of approximately 90% (The World Bank 2015). Both skilled and unskilled workers from abroad continue to be needed to fulfill the nation’s ambitious oil-wealth-fueled development plan. Transnational residents are drawn to the UAE for comparatively higher salaries and attractive packages. Despite such linguistic diversity, Modern Standard Arabic (MSA) and English are by far the most visible languages in society as reflected in their side-by-side presence on public signage, in education, official channels and technology (Hopkyns et al. 2020). Such a situation results in those with proficiency in English and Arabic having more access to information than those without.

Both globally and locally, notable attention has been given to embracing diversity and promoting tolerance in recent times. The term *inclusion*, which can be defined as “access for all” (Stadler-Heer 2019), has become a global buzzword as seen on *unity in diversity* billboards and hiring practice documents, for example. The UAE announced at the 2018 World Tolerance Summit that 2019 would be named the *Year of Tolerance* with the objective of establishing “values of tolerance, communication and coexistence” in society (The Year of Tolerance 2019). A series of events and initiatives have taken place in the nation as part of the Year of Tolerance. Such events include hosting the Special Olympics in March 2019 and the building of the Bridge of Tolerance in Dubai. In addition, Pope Francis’ visit in February 2019 was the first time a religious leader from a faith other than Islam held a congregation in the UAE. Such events were accompanied by the Year of Tolerance logo of the Ghaf tree, which symbolizes stability, gatherings and diversity (The Year of Tolerance 2019). While linguistic equality has not been at the forefront of the Year of Tolerance initiative, the emphasis on communication as part of its objective implies an indirect commitment to linguistic diversity and inclusion.

The 2020 COVID-19 pandemic has brought with it a set of fresh challenges with regard to goals of tolerance and inclusion in the areas of health, economy and society worldwide. On March 11th, 2020, the World Health Organization (WHO) announced that the COVID-19 crisis had moved into the category of a pandemic. Shortly after this, governments across the globe were forced to respond. Most

countries declared nationwide lockdowns and an abrupt halt to mobility within and across borders. Economies were affected and people were recategorized into *essential worker* and *remote worker* status. By early November 2020, there were over 50 million cases worldwide and over 1 million deaths (Worldometers.info 2020). With 141,000 cases and 514 deaths, the UAE ranked 40th worldwide with far fewer cases than countries such as the USA, India and Brazil, but with more cases than many other nations (Worldometers.info 2020).

In times of crisis, priorities often shift from ideal values to survival mode, where instinctual and momentary decisions are made with the resources available. In public spaces which host many language speakers, English monolingualism is often the preferred or “default choice in a moment of crisis” (Hopkyns 2020a). With the unexpected COVID-19 pandemic, efforts made to promote tolerance and inclusion have been disrupted, and rather existing societal and linguistic inequalities are highlighted (Hopkyns 2020a).

Although there is a growing body of research on linguistic landscaping (LL) during ordinary times in the UAE (Karolak 2020; Piller 2018) and other Arabian Gulf countries such as Bahrain (Gomaa 2017) and Oman (Buckingham 2015), there has yet to be a study in the region on the analysis of public signage as it relates to crisis communication. This study aims to bridge this gap by presenting findings on crisis communication as seen on signage in two quite different Abu Dhabi contexts: A beach residential community and an industrial power plant worksite. The contexts were chosen in part due to the researchers' access to these sites during lockdown and also due to the culturally and linguistically diverse composition of the residents and workers in each area. In times of crisis, the importance of linguistic inclusion multiplies as lives are at risk if communication barriers exist. In light of the foregoing factors, this paper is guided by the following research questions:

RQ1: How are languages and semiotic resources used in COVID-19 warning signs?

RQ2: How do COVID-19 signs reflect the UAE's goal of tolerance and inclusion?

This article begins by exploring existing social and linguistic inequalities in the UAE's highly diverse population and how such inequalities are exacerbated in crisis communication. The article then moves on to look at the method of linguistic landscaping as a way of assessing the visibility of languages and the sociolinguistic power dynamics they reveal. The study, involving linguistic landscaping of COVID-19 signs, is then introduced. Findings are analysed before suggesting ways in which signage could be more inclusive.

## 2 Social and linguistic inequalities exacerbated by a crisis

Social stratification or *ethnocracy* (Piller 2018) is prominent in UAE society with certain groups being treated differently according to country of origin and linguistic background (Hopkyns 2020b; Piller 2018). As Kanna et al. (2020: 60) point out, “nationality determines salary in some sectors” with “pay by passport” (Ewers and Dicce 2016: 2462) being part of the business landscape. This can result in important advantages for those with citizenship or with Western passports and disadvantages for those without. As Karolak (2020) explains, although the UAE is a cosmopolitan country with a transient population, it is also a “highly hierarchical society” (p. 2). Sheikhs and their families followed by Emirati nationals are at the top of the social hierarchy. Professional migrants occupy middle ground and the large unskilled and low-skilled migrant population from South and Southeast Asia are at the lowest level of social hierarchy (Davidson 2005; Kapiszewski 2001). Although a longer-term ten-year ‘golden visa’ has been introduced for certain groups of expatriates such as medical doctors and PhD holders (Reynolds et al. 2020), options for assimilation and citizenship are not open to most foreign residents in the UAE, meaning that time in the country is usually temporary. Migrant professionals, who often live in the UAE with their families, tend to have a comfortable existence with annual flights, school fees and health care coverage which gives them a feeling of localized privilege (Walsh 2010). For working class migrants, the experience as transnational workers is less desirable. In labor camps, migrant workers often share a room with around 20 others (Kathiravelu 2012), and they are not permitted to bring families (Khondker 2010). They also face the pressure of continuously needing to send remittances back home.

In parallel with social hierarchies, access to information in one’s first language is also skewed toward advantaging Arabic and English speakers. By UAE law, Arabic and English must appear on public signage and even restaurant menus, however English often dominates signage with some signs appearing only in English (Hopkyns 2020a; Karolak 2020; Piller 2018). An example of this was given by Hopkyns (2021) when analysing signage in the UAE, where a coffee shop ironically named ‘Local’ appeared only in English. As the coffee shop’s theme was particularly minimalist and trendy, perhaps this was a stylistic choice to keep the sign simple. Nevertheless, it serves as an example of how the government guidance for bilingual signs is not always followed, with English often being the sole language of choice. The dominance of English over Arabic and particularly third languages was also found in Piller’s (2018) study of signage in the UAE and Karolak’s (2020) linguistic landscaping study of the Souk Naif area of Dubai. Similarly, in the Gulf

context of Oman, Gomaa (2017) observed that priority is given to bilingual Arabic-English signage with a marked absence of third languages. Findings in previous studies, therefore, reveal a marginal presence of third languages which is in sharp contrast with society's multilingual population.

During the COVID-19 pandemic, effective communication and linguistic inclusivity become especially vital as communicating health and safety procedures affects lives. As Uekusa (2019) states, "linguistic minorities confront unique disaster vulnerability partly due to linguicism – language-based discrimination at multiple levels" (p. 1). In crisis communication, quick decisions need to be made and often monolingual messages are the default choice due to a sense of urgency. The result can be lack of access for linguistic minorities. Previous studies in disaster or crisis contexts have revealed that linguistic minorities (in terms of power rather than number, in some cases) are unable to access safety warnings in their first language, which can affect their ability to avoid harm. Uekusa (2019), when interviewing linguistic minorities in Canterbury, New Zealand and Miyagi, Japan after the two 2011 severe earthquakes, found that access to information in a language other than the dominant one was limited. Furthermore, when the Category 5 *Hurricane Katrina* hit New Orleans and surrounding areas in 2005, almost all storm warnings were broadcasted in English which disadvantaged Spanish speaking Latinos, many of whom did not evacuate the area (Petri 2009). During the current COVID-19 crisis, *disaster linguicism* (Uekusa 2019) or a *linguademic* (Phyak 2020) has also been revealed in many multilingual contexts. Chen (2020) found that in Taiwan, "there were hardly any top-down public health messages in indigenous languages over the course of the pandemic" (p. 9) and such linguistic exclusion also applied to migrant workers. In Qatar, while government COVID-19 communication efforts were generally commendable, certain migrant languages such as Indonesian and Amharic were hardly used or "ignored altogether" (Ahmad and Hillman 2020).

To combat disaster linguicism, bottom-up approaches are often taken by community members. For example, in the context of Inner Mongolia, traditional fiddle songs were adapted with the aid of multicultural resources to spread awareness of safety measures needed to face the pandemic (Bai 2020). In Qatar, social media influencers and religious leaders communicated orally in minority languages over the radio and loudspeakers from vans (Ahmad and Hillman 2020). In South Korea, Chinese university students used the social media site *Fenhan* to support each other when surrounded by mainly monolingual Korean health messages (Jang and Choi 2020). Indigenous television as well as non-profit organizations (NGOs) communicated COVID-19 warnings in various indigenous languages in Nepal (Phyak 2020). However, as Jang and Choi (2020) point out, such bottom-up support is only possible in linguistic minority groups which have strong

infrastructures. Although social media is generally very popular with Asian migrants (Dennis et al. 2019), many low-skilled migrant workers in the UAE have limited access to this channel of communication due to cost and restriction of usage in work contexts. While most migrant workers do own mobile phones, the cheapest monthly data package in the UAE is around 50 Dirhams (13 US dollars) due to a monopoly of one telecommunications company. With limited data, communication with family members takes priority. In addition, access to free WiFi is not always readily available in public spaces, and mobile phone use is not permitted during working hours in many cases. Such considerations make it especially important to give attention to linguistic minorities who do not have adequate resources, leverage or social capital during the COVID-19 crisis (Jang and Choi 2020). While in the UAE and neighboring Gulf states such as Qatar, top-down government communication relating to the COVID-19 pandemic is suitably multilingual and inclusive, with guidelines and announcements appearing in Arabic, English, Hindi, Tagalog, French and many more languages (Ahmad 2020; Ahmad and Hillman 2020; Hopkyns 2020a), it is often messages in public spaces such as street signs which are most immediate and visible to large sectors of society in the UAE.

### 3 Linguistic landscaping and power relations

Linguistic landscaping (LL) is a rapidly expanding branch of sociolinguistics (Blommaert 2013: 2) which can be defined as ‘the study of the visible representation of multiple languages in a globalized world’ (Pütz and Mundt 2019: 1). Traditionally, LL has involved the quantitative method of counting signs and counting languages used on these signs. However, in recent times, purely quantitative studies are rare. Rather, richer data can result from a mixed-method multimodal analysis of the number of languages used, order and representation of languages, motivation for language choices and discourse surrounding a representative selection of signs. This has been named the ‘critical turn’ (Barni and Bagna 2015) in LL where semiotic landscapes are the focus rather than only individual languages. Here, attention is paid to the position, size, space, images, readership and sociolinguistic implications of messages (Shohamy 2019). Ben-Rafael et al. (2006) categorize visual representation of signage into top-down (text dispersed from an official source) and bottom-up (created by shop owners, private businesses, advertisements, graffiti etc.). Blommaert (2013) explains that signs may be permanent (road signs, shop signs etc.), event-related (posters or temporary signs such as handmade COVID-19 warnings) and noise (readable objects in the landscape left by accident, such as a note falling out of someone’s pocket). Power attributed to

top-down signs is often greater than power connected to bottom-up signs (Ben-Rafael et al. 2006). However, all signs affect the linguistic landscape of an area and include and exclude certain social groups.

Linguistic landscaping can tell us a lot about how languages are used and about the power certain languages have over others. As Blommaert (2018) points out, “Every sign tells a story about who produced it, and about who is selected to consume it” (p. 44). Especially, locally produced impromptu messages are indeed authentic “signs of the time” (Kalman 2020). Such signs act as sociolinguistic evidence of power dynamics existing between languages and their speakers. While multilingualism and translanguaging practice (Canagarajah 2013) are recognized as ordinary and commonplace in highly diverse contexts (Dovchin and Lee 2019), such a reality is seldom reflected on signage. The dominance of official languages and English-only signage in countries where there are speakers of many languages may reflect internalized assumptions about English as a global language as well as monolingual ideologies. In the UAE, Karolak (2020) describes the dominance of Arabic and English, as “impersonal bilingualism” (p. 23), whereby their power in public spaces contributes to erasing third languages. Such dominance has implications on accessibility of information as well as the identities of minority language speakers.

## 4 The study

This study takes an ethnographic approach to linguistic landscaping. As Cook (2011) states, ethnography involves the researcher seeking to “relate language use to its physical and social environment, and the affordances this environment provides” (p. 437). The interpretivist paradigm is adopted to explore disaster communication on public signage in two Abu Dhabi contexts: A beach community and an industrial power plant. The contexts were chosen due to the access we had to these sites during the COVID-19 lockdown. The contexts also represent two contrasting Abu Dhabi scenes but with similarities in that they both have multilingual workers and residents which is typical of this highly diverse Emirate.

We were stationed in our respective home/work sites from mid-March until August 2020 as part of a country-wide lockdown followed by strict travel restrictions and curfews. As restrictions eased, greater movement within the Emirate of Abu Dhabi was possible, but travel remained difficult between Emirates and internationally. To travel between Emirates and abroad, negative COVID-19 tests continue to be needed as well as a two-week quarantine period for overseas travel. From looking forward to a spring and summer of international travel including

presenting at the American Association for Applied Linguistics (AAAL) conference in Denver and the American Educational Research Association (AERA) conference in San Francisco, as well as spring break in the UK and France, our worlds suddenly shrank as all international travel and professional development events were abruptly cancelled. Instead, we worked remotely in our respective residences. On the one hand, this was an intense and difficult time due to social isolation and high levels of anxiety. On the other hand, as researchers, such concentrated time in our enclosed areas sharpened our awareness of details often missed when occupied with travel and commuting. Stationed in our live-work zones, we then adopted the roles of participant observers (Spradley 1980) as both community members and researchers.

The study investigated two areas of Abu Dhabi which we will refer to as Context A and Context B. Context A is the beach community where Sarah was located during the COVID-19 lockdown period. Context B is an industrial area near the Abu Dhabi desert town of Ruwais, which borders Saudi Arabia. An industrial power plant is located in this area and it is Melanie's workplace and residence due to her role as intercultural advisor at the plant. The two contexts have similarities in that they were our live-work locations during the lockdown period which meant we had direct access to these areas on a daily basis. They are also both characterized by multicultural and linguistically diverse speech communities. Further details about Context A and Context B can be seen in the following sections.

#### **4.1 Context A: Sarah's remote workplace beachside community**

The first area explored in the study was an Abu Dhabi residential beach community and retail area. The context can be divided into two main zones; the main street and the beach front. As a resident of the community, I had access to both zones. I lived and worked remotely in this community during spring 2020 when the COVID-19 pandemic began. As a response to the onset of the COVID-19 crisis, my university swiftly moved all classes online in late March and required remote teaching.

The beach community is home to multilingual residents from a wide range of countries including the UAE, UK, USA, Canada, Australia, Germany, France, Sweden, Russia, Lebanon and Turkey, to mention only a few. Many families are multilingual and have dual nationalities, including my own (UK/Canada). Recently, nationalities which had not previously been drawn to the UAE are arriving for work opportunities. For example, the number of Koreans living in the UAE has grown to 13,000 residents (Amed 2019). In such cases, accompanying

family members sometimes have only basic English. With most expatriate households being double-income, live-in nannies, who are usually from the Philippines, are also part of this community.

This context is also the workplace of global south laborers from countries such as Pakistan, Bangladesh, India and Nepal. They have been classified as *essential workers* during the COVID-19 era as they are working on building maintenance, construction, service and retail. While many neighborhoods in the UAE are separated according to income and social status (Karolak 2020; Piller 2018), due to ongoing construction in the beach community, all sectors of society accessed the same main street which made this context particularly interesting and important to study. While the construction workers' accommodation is set up in the outskirts of the city, as is typical in the UAE (Karolak 2020), buses of workers arrived in the community in the early hours and did not depart until late at night. The COVID-19 health warning signage along the main street of the community was therefore relevant not only for residents but for all who frequented the area. Equally, the beach front COVID-19 health warnings were seen by domestic workers and building maintenance workers, as well as multilingual residents. While the majority of the community's residents have high English proficiency, the low-skilled migrants working on construction may come to the UAE illiterate or semi-literate in English due to the script being different from their first languages (Karolak 2020).

## 4.2 Context B: Melanie's industrial workplace and accommodations

The second area under study also consists of two distinct but related geographical zones: the residential community of Ruwais City and an associated residential workers area. Both areas are in the Western region of Abu Dhabi Emirate, within a three-hour drive from Abu Dhabi City. Once a fishing village, Ruwais has undergone significant transformation since the 1970s. Currently, Ruwais is a company town hosting 25,000 diverse workers, who are mostly employed in a prominent oil and gas company and other ancillary petrochemical industries (Dennehy 2018). This western region of the Abu Dhabi Emirate hosts a desalination company, a solar power plant and a nuclear power plant. The nuclear power plant, for instance, boosts a higher-than-average percentage of Emiratis working alongside over fifty other nationalities (Hassan et al. 2020), including Koreans who fulfill a strategic partnership with Korean construction and nuclear power companies (Seo 2018). Ruwais is an under-researched area but strategically important due to the petrochemical and energy industries driving the economic success of the UAE. Because the area hosts a unique constellation of linguistically diverse populations

living and working together, it is an ideal base to research the ways in which tolerance and inclusion is evident in the linguistic landscape of COVID-19 signage. In addition, research in industrialized sectors, such as Ruwais is important given the intense scrutiny of safety-related behaviours of employees and their supervisors (Al-Mazrouei et al. 2019).

From March to August 2020, a top-down response from the municipality of Ruwais to the pandemic was swift and decisive. The municipality, aligned with the direction from the oil and gas company, enforced sequestering and other social restrictions. During this phase, newspaper deliveries stopped but doorstep food deliveries were enabled with social distancing measures in place. While these and other measures followed government mandates for Abu Dhabi city, other stricter measures were put in place on the 6th of April 2020 to protect the diverse pool of *Essential Workers* living and working in the area (Ruwais Covid-19 Updates 2020). The restrictions were inconvenient but not contested, perhaps because they were explained as a part of a necessary and swift response to protect the well-being of the workers who deliver the energy needs of the country.

During this period, my employee roles changed to *essential worker* from late March through April and in May to August, I joined a broader pool of *remote Workers* in Ruwais. For the former months, I was stationed in company accommodation and working as normal as a member of a limited workforce. Top-down communication flowed through company emails and posters which directed employees of new behaviours and their rationales. For the latter months, I lived and worked in my company accommodation in Ruwais and received top-down updates through social media mainly in English and Arabic. With newspapers no longer incoming, public signage reinforced changing expectations *in situ*. Multilingual co-workers in the area also relied on signage more than in ordinary times due to the restrictions on other forms of communication.

### 4.3 Data collection and analysis

A corpus of 326 digital images of public signs were collected from the combined contexts. To collect a representative but manageable sample of data, we chose two small zones within our respective contexts and completed circular journeys in each zone. As we walked, we photographed every sign including permanent signs and COVID-19 signs. This took place during the height of the lockdown period (April 2020). At this time, UAE citizens and residents were asked to stay home but were permitted to exercise and grocery shop during daylight hours if necessary. At the end of the journeys we each had a digital corpus of the signs photographed and ready for analysis. Signs were divided into three main categories:

- Permanent signs unrelated to COVID-19 (shop names, opening hours, road signs, fire assembly points, building names, etc.),
- Top-down COVID-19 safety warnings (produced by the municipality or organizations),
- Bottom-up COVID-19 safety warnings (produced by shop keepers, residents, building managers and subcontractors).

In addition to languages used on signs, we looked at size, spacing, order and symbols used. We also analysed the social context surrounding the signs such as who may have created the signs and who the intended and actual audience may be. Such analysis allowed us to gain valuable insights into power dynamics and issues of inclusion/exclusion.

## 5 Findings

### 5.1 Context A: Abu Dhabi beach community and construction area

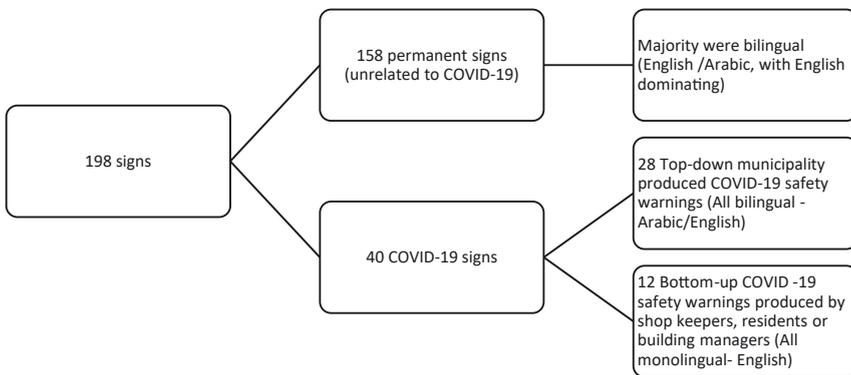
The linguistic landscape along the main street of the beach community was analysed by photographing all signage on a circular walk along the main street and back via the beach front. Figure 1 shows the main street (Zone 1) which is the longest of the straight lines beginning at the canal and ending with the Waitrose supermarket. The beachfront (Zone 2) can also be seen in Figure 1.



Figure 1: The beach community context.

The street has six blocks of apartments, some of which face the beach, with others facing the street. Each apartment block has several retail outlets and facilities such as a health clinic, pharmacy, restaurants, exercise studios, sport shops, hair salons, bakeries, coffee shops, corner stores and a Waitrose supermarket at the end. Some of these shops remained open 24 hours a day during lockdown, such as the supermarket. Others were open for take away and delivery services, and others were forced to close their doors for the unforeseeable future. Businesses which closed included a ‘hot yoga’ studio, which could not have been more incompatible with the COVID-19 crisis and a children’s dance studio. The construction site remained active even during the height of the lockdown period.

A corpus of 198 digital images of public signs was collected along the beach community walk, with 40 (20%) of these being COVID-19-related (Figure 2).



**Figure 2:** Signs in Context A.

From the 158 permanent signs (unrelated to COVID-19), the majority were bilingual (Arabic and English), with English dominating mostly (Figure 2). Only two signs contained words from a third language: a German bakery and an Italian restaurant (Figure 3). The German bakery’s name is *Brot* (‘Bread’ in German) and the Italian restaurant’s name is *Andiamo* (‘Let’s go’ or ‘Hurry up’ in Italian). Rather than the use of third languages on these signs being an act of linguistic inclusion for German and Italian-speaking residents, as Haarmann (1986) notes when referring to the use of English in the Japanese context, using another language in this case is meant to “stimulate the readers’ feelings and to create a pleasant mood of cosmopolitanism” (p. 110). In this sense, the German and Italian words conjure a notion of authenticity which is a common goal of restaurants serving food from one country.



**Figure 3:** Third languages other than English and Arabic on restaurant signs.

None of the 40 COVID-19 signs in Context A contained languages other than English and Arabic. From the 40 COVID-19 health warning signs, 28 were top-down municipality-produced. Some of these appeared in shop windows, as ground stickers, in elevators and at bank machines. In compliance with rules and regulations, these signs were bilingual, as seen in Figure 4. In addition to Arabic and English, semiotic resources such as images made the signs more easily understood for those unable to read either language. The sign in Figure 4, which was produced by Abu Dhabi's neighbouring municipality of Dubai, includes images such as a face mask, gloves, social distancing and washing hands.

Similarly, a bilingual Abu Dhabi municipality-produced floor sticker can be seen in Figure 5. This sign was repeated every few meters (seen 16 times), and it also appears in other areas of the city. The English message *Do your part. Stay apart* rhymes and is easy to remember. Equally, the Arabic version repeats the similar-sounding words 'خال/خالك' (*khali/khalik* – meaning 'keep /stay'). The transliteration of the message is *khali masafa, khalik masoul* (Keep distance. Stay responsible). Both versions of the message are therefore catchy and memorable in their own ways. Arabic comes first, followed by English. This represents the fact Arabic holds power as the official language despite most residents speaking other languages. Unlike the sign in Figure 4, no images are used, which assumes readers are familiar with either Arabic or English. In the case of migrant workers who may have limited literacy in English or Arabic, this sign would be ineffective and inaccessible as crisis communication.

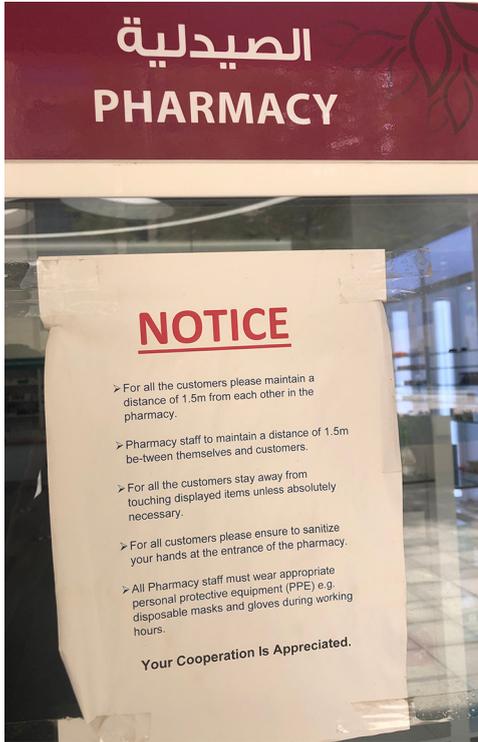


**Figure 4:** A top-down bilingual COVID-19 sign with images.



**Figure 5:** A top-down bilingual COVID-19 floor sign.

There were 12 handmade or make-shift bottom-up COVID-19 warnings. They were all monolingual (only English). In Figure 6, a contrast can be seen between a bilingual permanent sign (Pharmacy) and a monolingual handmade COVID-19



**Figure 6:** A monolingual handmade COVID-19 notice.

sign (Notice). The monolingual sign contains a long list of safety warnings which would be difficult for a customer to read if not proficient in English. A pharmacy such as this is visited by all those spending their days in the area, including global south migrants with only basic English skills.

In Figure 7, there are multiple handmade monolingual COVID-19 warning signs competing with each other. However, this storefront differs from the pharmacy in Figure 6 as it is an up-market bike shop. The customers are perhaps assumed to be expatriate residents as it is unusual to see Emiratis riding bikes in public places partly due to their national dress of *kandoras* (long white robe for men) and *abayas* (long black robe for women). Perhaps this is a reason for the lack of Arabic on the shop's signage. Equally, this is not a shop likely to be frequented by construction workers due to the unaffordability of the brand name bikes sold. Karolak (2020) also found that in the context of Dubai, English monolingual signs were especially common for 'posh' shops or areas which held little purpose or attraction for low-income workers. Nevertheless, the cluster of monolingual signs in Figure 7 does not reflect the linguistically diverse nature of the neighborhood.



**Figure 7:** A cluster of monolingual handmade COVID-19 warnings.

A further example of a homemade monolingual COVID-19 sign can be seen in Figure 8. While this *stay safe, stay home* message written in the sand is not visible from the community's main street, it is clearly seen from beach-facing balconies and the beach walk café (Zone 2 in this context). For this sign, a decision was made, perhaps by the management team, to use only English. This choice could have been made due to limited space on the beach. It may have been thought impractical to write the message in several languages due to the size of the letters. However, the space which could have been used for another version of the message (e.g. Arabic), was instead given to a set of symbols including a house, heart and the sun cross (circle with cross inside) meaning eternity or the spiritual whole.

Many children in the community made homemade signs representing optimism, hope and emotional support during the lockdown period. Such signs were sometimes a simple rainbow or heart but sometimes messages were written. Figure 9 shows a typical sign with two rainbows and the messages *I love you* and *everything will be alright* seen on an apartment door on the circular walk opposite the beach. It is interesting to note that these messages were always in English regardless of the languages spoken at home. For example, a Korean brother and sister created the signs in Figure 9.

To summarize, when walking in both the street and beachside zones of this context, it is clear that those proficient in English are at an advantage in terms of accessing COVID-19 related signs. Such an English-dominated linguistic landscape jars with the multilingual composition of the community residents and essential workers spending their days in this area of Abu Dhabi. It should be



**Figure 8:** COVID-19 warning sign written in the sand (Image captured by Genevieve Leclerc [from her balcony] but was visible from the beach walk).



**Figure 9:** Monolingual handmade messages of support.

recognized, however, that as a researcher I did not have access to the construction site itself which was separated from the main street by a temporary wooden barrier. It is therefore not possible to know if signs within the construction site itself contained languages other than English and Arabic. It is also important to note that although the UAE is often characterized as an “uncaring place” (Kathiravelu 2012:103) for migrant workers due to its highly stratified society, “informal networks of care” (Kathiravelu 2012:103) are prevalent in worker communities through faith-based charities, NGOs and social networks. Such social networks, which often develop during long bus journeys to worksites and back, may be a way in which safety warnings are communicated amongst workers. Construction site managers may also be tasked with producing appropriate signage within work sites. However, Kathiravelu (2012) points out that despite such solidarities, “ambivalences of care networks” (p. 115) also exist amongst migrant workers due to “limited access to mobility and technology (such as mobile phones) and their legal status also affects their accessibility to social capital and networks” (p. 115). What is clear from the exploration of both zones in Context A is that bilingual (English and Arabic) and monolingual (only English) signage dominate, effectively serving to exclude those without proficiency in either language, but especially English.

## 5.2 Context B: industrial work-live area in the Western region of Abu Dhabi

Within Context B, the linguistic landscape of two zones were analysed. Zone 1 was the power plant and accommodation area. Zone 2 was the workers’ housing area and downtown Ruwais. The zones represent two distinct experiences of live-where-you-work arrangements. A collective corpus of 128 photographs of signage was obtained during two separate journeys (Figure 10).



**Figure 10:** Context B Zone 1 – the power plant and accommodation area. Zone 2 – the workers’ housing area and downtown Ruwais.

Both zones support diverse working group populations for petrochemical and other energy sectors. However, the signage varied in terms of amount and type. For instance, the first journey in Zone 1 featured more safety-related cautions and warnings while the second journey in Zone 2 was marked by a paucity of signage overall. As such, the two journeys within this context offer vital insights into the proliferation of temporary COVID-19 signs as well as ethnographic insights into the languages used in different top-down and bottom-up signs in an industrialized context. Figure 11 provides an overview of the signs collected.

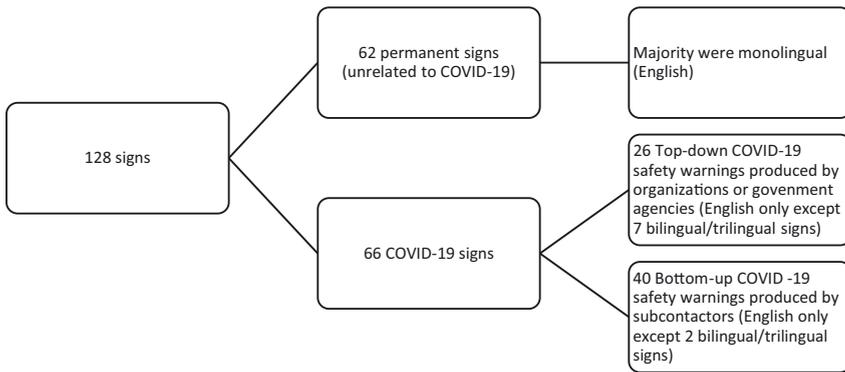


Figure 11: Signs in Context B.

As seen in Figure 11, from the corpus of 128 digital images of public signs collected during the two journeys, 66 (51.5%) were COVID-19-related and 62 (48.5%) were permanent non-COVID signs. The majority of the latter group were English only. The same was true for the former group as amongst the 66 COVID-19 signs, only nine used a second or third language. The third language used in this context was Korean, due to the presence of Korean contractor work groups here. Examples of trilingual signage can be seen in Figure 12, which shows a pre-existing bottom-up fire safety sign in a medical testing facility, and Figure 13 which shows a



Figure 12: A bottom-up fire emergency sign in English, Korean and Arabic.



**Figure 13:** A bottom-up COVID-19 sign in Arabic, English and Korean.

bottom-up COVID-19 sign in a cafeteria. We can see in both cases English is used as the operational language, but the signs show a sensitivity to the linguistic needs of a multicultural workforce. In Figure 12, the order of languages is telling, with English first, Korean next and Arabic last. While there are regulations mandating English and Arabic on fire signage, the order of English, Korean and then Arabic reveals assumptions about the status of language users in this workplace setting. The use of images also emphasizes the importance of clear communication of safety messages for the well-being of the main linguistic groups.

In Figure 13, the use of black and yellow match the regulated colours by the Abu Dhabi Occupational Safety and Health (OSHAD) Code of Practice where yellow symbolizes possibility of bodily harm. The yellow and black trim evokes a message of a particular kind of industrial hazard: pedestrian crossings. In this arrangement, Arabic is on the top, English to the left and Korean to the right. The use of icons also shows a tacit understanding of the workplace as a gendered one. It raises questions as to whether an unintended message is present which advocates that spaces between men and women should also be equally maintained when between men. It could also be interpreted as a message reflecting the dominance of the 2 to 1 ratio of men to women in this industrial setting.

Bilingual signs (English and Arabic or English and Korean) were not as common as English-only signs, but they were more common than trilingual signs. An example of a bottom-up bilingual permanent sign can be seen in Figure 14 which uses English and Korean to explain a requirement for entering a medical testing area. This sign uses a curious arrangement of upper-case and lower-case letters to instruct workers to remove their shoes and put on the communal slippers which are provided in the area. It is somewhat ironic that slippers could be touched and shared by others but there were many signs encouraging the use of hand sanitizers. The language on the sign shows the politeness markers of *please* and *thank you* which matches the register in Korean of customary formal and polite register on public signage. It is interesting to note that despite bilingual English and Korean

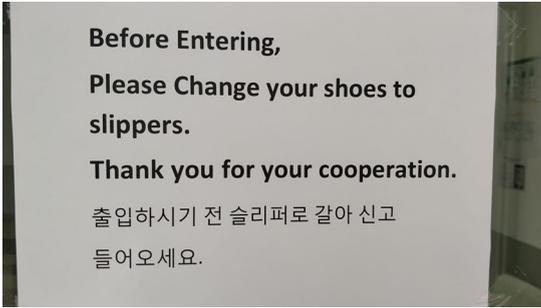


Figure 14: A bottom-up dress code sign in English and Korean.

permanent signage in this area, there was no bilingual English and Korean COVID-19 signage in this medical testing facility. Instead English-only messaging was used.

Figure 15 is a relatively rare example of a COVID-19 sign which integrates the UAE's two dominant languages in the same space, as was seen in the Context A, Figure 4 sign. This top-down sign appeared in the lobby of a Ruwais residential



Figure 15: A top-down organizational COVID-19 sign in Arabic and English (company logo removed).

building at the outset of the pandemic. This sign is unique in the corpus for showing Arabic as the dominant language. The choice of wording is driven by Arabic as well as the design. For example, this sign uses right side justification for the text and numbering which is normal for Arabic but not for English. In addition, it shows unusual choices for English expressions, such as “hand rub” and “rotational rubbing”.

A more common way of presenting bilingual COVID-19 safety warnings can be seen in Figure 16, where the languages appear separately on side-by-side posters. Unlike the industrial signs, which use a prescribed range of primary colours, these municipality signs (Figure 16) feature a contemporary shade of orange associated with the brand of Ruwais. While the Arabic sign on the left features some English text, the English version is exclusively in English.



Figure 16: Two top-down municipality COVID-19 signs – Arabic and English side-by-side.

As mentioned previously, although trilingual and bilingual COVID-19 signs were present (9 out of 66), monolingual COVID-19 signs dominated. Figure 17 shows a bottom-up COVID-19 sign which was prevalent in the corpus. This sign appears on every other seat on a bus which can seat 45 passengers. It serves as a safety warning to bus passengers to maintain social distancing, thereby restricting passenger capacity to 22. The sign maker was likely employed by the subcontracted transport company, and a choice was made to use only English together with the ‘do not’ symbol represented by the red circle with a line through it. This decision could have been made with the usual bus passengers in mind. Such passengers include non-Arabic speaking newly hired workers without cars. Emiratis and many other

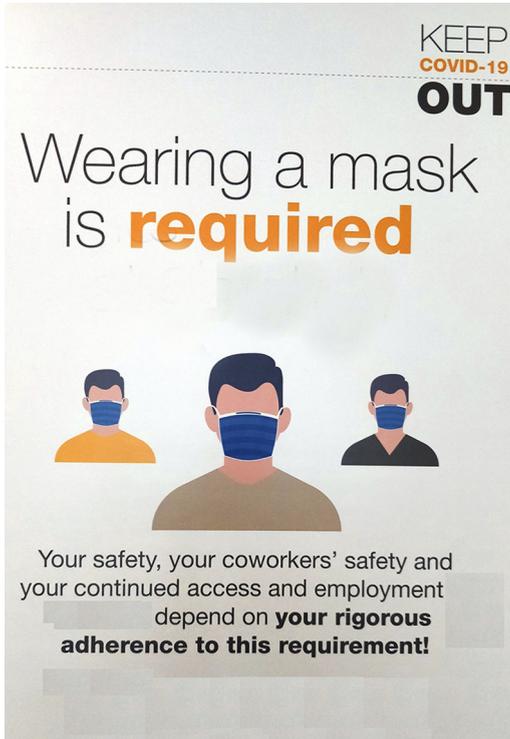


**Figure 17:** A bottom-up COVID-19 sign in English only.

long-established workers tend to drive their own cars. However, lack of languages other than English jars with goals of linguistic inclusion in multilingual spaces.

A further example of a reoccurring English monolingual COVID-19 sign can be seen in Figure 18. With the purpose of enforcing the company policy of wearing masks as part of the new dress code, this sign was large and imposing as it was as tall as a human body. It appeared in several locations in the first zone, such as near elevators and main hallways of the main administrative building and other facility buildings. Despite the organization's multicultural and multilingual workforce, only English appears on the sign.

To summarize, the bilingual and trilingual signs in this industrial context are few. In trilingual signs, only Korean is used as a third language. Despite corporate and government websites showing awareness of other languages (e.g. Chinese, Hindi, Urdu and Persian), only Korean makes its appearance as a third language on bottom-up signs here. Korean then emerges as a new linguistic influence arising from recent economic cooperation via strategic partnerships in nuclear energy and military (Seo 2018). Korean is also the language affiliated with numerous joint venture entries in the construction, technology and energy sectors. However,



**Figure 18:** A top-down organizational sign in English only (company logo removed).

despite the presence of Korean on many permanent signs, the majority of COVID-19 signs in this context are in English only, reinforcing expectations that English is a suitable and default language for crisis communication.

## 6 Discussion: inclusivity in crisis communication

Language on signs may seem ordinary, mundane and commonplace. However, as Piller (2016) points out, “language choice on such mundane texts is important because it is not only an expression of what is ‘normal’ – conforms to the norm – but also shapes our expectations of normalcy” (p. 17). From the findings in both the beach community and the industrial site, we can see that despite the multilingual composition of the residents and workers, linguistic diversity is not visible on public signs. This is especially noticeable on COVID-19 related signs which were mainly English-only if bottom-up and bilingual (English-Arabic) if government produced. The presence of only one third language (Korean) was found in the

industrial setting, and only token words from third languages (German and Italian) were seen in the beach community setting. The scarcity of languages other than the nation's two dominant languages, Arabic and English, on public signage especially during the COVID-19 crisis is cause for concern in terms of accessibility and safety.

In the beach community (Context A), the monopoly of monolingual and bilingual signage could be explained by sign-makers directing the messages at those who were deemed as 'belonging there'. Construction workers who were brought to the site by bus arranged by the developer and then brought back to their living quarters may have been seen as 'not belonging' or as community 'outsiders'. The construction workers' linguistic needs, therefore, may have been disregarded due to assumptions they would access health messages elsewhere, such as on the construction site or in work camps. The relatively few COVID-19 signs in Context A in comparison to Context B could be due to the composition of intended readers in each context. While intended readers of signage in the beach community excluded construction workers, the more socially-isolated and security-controlled Context B relied more fully on signage to communicate safety warnings, to the extent that over 50% of the signs were COVID-19 related. Here, we see the concept of belonging directly affecting linguistic landscapes.

In terms of inclusion goals, it should be noted that on many fronts, important steps toward tolerance and inclusion have been taken in the UAE prior to the COVID-19 crisis (as outlined at the start of this article), and action is also currently being taken in the midst of the crisis. In spring 2020, government-directed and community-led volunteer initiatives took place whereby care packages were delivered to those in need. For example, on a single day in April, "five tonnes of supplies were delivered to 750 people by the Kerala Muslim Cultural Center of Abu Dhabi" (Badam 2020). People in need, Badam (2020) explains, included low-income workers who had lost their jobs and were sharing accommodations with around 20 other workers, some of whom tested positive. After getting calls or WhatsApp messages from people in need, volunteers at cultural centers alerted the embassy, which then alerted health authorities. Aid workers reported on frequent crying and fear for the future in the residences they visited but they were able to offer reassurance due to the UAE governments' firm commitment to tackling the pandemic by frequent testing and providing timely treatment (Badam 2020). In this sense, some inclusion goals unrelated to linguistics are admirably being met.

Regarding linguistic inclusion goals, concerns over linguistic minorities not always having adequate access to COVID-19 health warnings have been discussed on community Facebook pages as well as in national newspapers (Hopkyns 2020a), and some community efforts have been made to help bridge communication gaps. For example, Indian expatriate teenager, Suchetha Satish, composed

COVID-awareness songs in 21 Indian languages including Malayalam, Hindi, Bengali, Tamil and Assamese (Indian Expat Teen 2020). The songs urge people to social distance, wear masks and wash hands. While such efforts are praise-worthy, it is questionable as to whether these songs are easily accessible to their intended audience due to limitations on technology use and long working hours, as previously mentioned.

Although inclusion efforts are being made through informal “networks of care” (Kathiravelu 2012), public signage is arguably the most immediate, trustworthy and visible way of communicating safety warnings. For COVID-19 signage, it is clear from the study findings that there is a marked gap between inclusion goals and the reality on the ground. Although linguistic inclusion is stressed in local frameworks for safety signage, the recommendations are not always followed, especially when bottom-up signs are produced with a sense of urgency. For example, in the Abu Dhabi Occupational Safety and Health (OSHAD) Code of Practice (2016), it is explicitly stated that, “signage shall be in a language that is appropriate to the majority of the workplace, including Arabic and English” (p. 7). Elsewhere in the document it is reinforced that signage should be clearly understood and serve the communicative needs of workers in the Abu Dhabi Emirate (p. 8). While linguistic tolerance and inclusion are outlined in such policy documents, during the COVID-19 crisis the sudden proliferation of safety signage shows that crisis communication relies on English as the main language. Such a situation is reminiscent of Uekusa’s (2019) description of ‘Disaster Linguicism’ whereby linguistic minorities do not have adequate access to safety warnings in their first language, due to the dominance of English and the official language of a country. While it is often assumed that the status of English as a global language equates with all transnational workers having a level of proficiency, this is not always the case. Theodoropoulou (2020) found that construction workers in Qatar did not speak Arabic or English, but rather used a mix of many other languages to ensure safety on the work site.

In both study contexts access and understanding of COVID-19 safety signs is important. For the beach community/construction site zone, it is a high-density living space for residents, and the area’s construction workers are particularly vulnerable due to living in shared accommodation. For workers in the industrial area, clarity of safety messages is vital year-round due to the high-risk work environment, but especially so during the pandemic. For migrant workers with low socioeconomic status, the importance of linguistic inclusion amplifies due to restricted access to other modes of communication as well as lack of resources and supportive infrastructures amongst certain groups.

The implications of the findings are not only relevant to the UAE context. Lack of linguistic inclusion on COVID-19 public signage has also been found in other

multilingual settings such as London (Zhu 2020) and Sydney (Grey 2020). Furthermore, in Taiwan, ‘voices of indigenous people have largely been excluded from top-down efforts and strategies in public health communications’ (Chen 2020: 5). Kanna et al. (2020) point out, that social and linguistic inequalities in Gulf nations are often portrayed as *exceptionalism* with the image of Gulf cities being “frighteningly fantasy, avant-garde in terms of consumerism and slavery-like exploitation, a society without freedom and without middle classes, divided up into a rich leisure class and an army of quasi slaves” (p. 5). Such exceptionalist representations dismiss complexities and imply that what happens in the Gulf is unconnected with what happens in other global contexts (Kanna et al. 2020: 6). Rather than class divisions and sociolinguistic injustices being unique to the Gulf, social stratification and English-centric communication in multilingual settings is common globally (Piller et al. 2020). For example, Lorente (2018: 17) points out that in Singapore, social hierarchies based on nationality and language are firmly entrenched with differentiations made between “foreign talent” (Western expatriates) and “foreign workers” (South East Asians working in construction or as maids, for example). The latter are often described as “servants of globalization” (Parrenas 2001), and treated accordingly. Such social inequalities affect access to information in ordinary times as well as in times of crisis.

## 7 Conclusion

While implementing fully inclusive multilingual communication during the height of a crisis may be challenging, the dominance of monolingual COVID-19 make-shift signs and the resultant exclusion of certain sectors of society point toward the need to “include the reality of linguistic diversity into our normal procedures and processes, including disaster preparation” (Piller 2020). As most sociolinguistic research in the UAE focuses on the language choices and experiences of Emiratis, transnational linguistic experiences are under-researched, especially those from less privileged groups (Piller 2018). In addition, as Ahmad and Hillman (2020) point out, there has been relatively little research conducted on “crisis sociolinguistics” (Piller 2020) but such research is of vital importance especially as the pandemic moves into its second year.

Going forward, linguistic landscaping can act as an eye-opener for future action regarding the national goals of tolerance and inclusion. As an opportunity arises to shape a desirable ‘new normal’, drawing attention to the gap between inclusion goals and inequalities on the ground is crucial. Practical ways to increase the visibility of existing third languages such as Korean as well as minority languages on COVID-19 signage involves raising awareness of the importance of

linguistic inclusion for long-term changes. In the UAE, where English dominates education through English Medium Instruction (EMI) policies as well as public spaces, such awareness is especially important. Recently, issues surrounding linguistic inclusion on signage have been discussed in local newspapers such as *The National*. For example, in December 2020, Applied Linguistics professor Stephan May was interviewed on the importance of minority and heritage languages being visible in public spheres. May (as cited in McVeigh 2020) endeavored to engage a wider public in recognizing that different languages can co-exist in one political space. Greater inclusion of minority languages on signage would contribute toward this goal, especially in times of crisis. Facilitating discussion of neighborhood signage is one way to draw attention to the languages that are visible in public spaces. Project work documenting signage could take place in physical or virtual classrooms with the objectives of language learning, language awareness and social critique.

A further way of students and community members taking social responsibility could come from a translation drive aimed at producing multilingual COVID-19 signage. Calls for volunteer translators could be made as well as using snowball sampling methods (friends asking friends) to expand the number of people willing to help. Using popular free language learning apps such as ‘Drops’, which is available in languages such as Hindi and Tagalog, could involve a wider range of community members with the translation of signs. Rather than adding the UAE’s most commonly spoken third, fourth and fifth languages indiscriminately to all signage, a desired inclusive model would involve ethnographic observations and analysis of social contexts in order to tailor signage to the dominant speech communities within specific areas. As the study revealed, different contexts have different linguistic needs. Although foreign residents mainly reside in the UAE on a temporary basis, the flow of movement in and out is constant which means that there are consistently high numbers of workers at any given time. The constant presence of foreign residents justifies greater inclusion of languages other than English and Arabic for access to information, care and a sense of belonging. Multilingual signage should not only refer to basic safety protocols such as handwashing and maintaining social distance, but accessible signs relating to emotional well-being are also important. An example of the latter could simply be the name of a helpline with a number to call. Such steps would ensure optimal access of information at a street level and validate the linguistic identities of diverse groups. Ultimately, raising consciousness about beliefs, behaviours, cultures, structures and systems that sustain inequalities can encourage the rejection of apolitical stances with regard to social inequalities relating to the COVID-19 period and beyond.

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