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| RESEARCH ARTICLE

Overcoming Linguistic Inequities: Strengths and Limitations of Translation during the Pandemic

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| ABSTRACT
The confinement period imposed by the COVID-19 pandemic was an unprecedented event with severe human and social implications. Its effects further accentuated the marginalisation of migrants and minor linguistic communities, with access to essential resources, such as healthcare services and remote teaching, being considerably hampered by linguistic diversity. Communication was paramount to share information and reduce the uncertainty provoked by the enforced isolation. As a form of inter-lingual communication, translation has significantly contributed to containing the problems of multilingualism. By mediating expert-lay and peer-to-peer communication in multilingual contexts, translators and interpreters helped remove linguistic barriers. Nevertheless, language inequities as well as the inadequacy of government policies, which often overlooked the linguistic needs of vulnerable social groups, revealed that translation still awaits considerable improvements. With reference to scholarly works and large-scale examples, this paper discusses the strengths and limitations of translation in the context of the COVID-19 pandemic. It also outlines the principal areas that need further development if translation is to work as a fully effective form of communication in our multilingual and multicultural society.

| KEYWORDS

COVID-19 pandemic; translation; multilingualism; communication; linguistic inequities

| ARTICLE INFORMATION

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1. Introduction

In March 2020, the novel coronavirus (COVID-19) outbreak was officially declared a pandemic. This witnessed the beginning of an unprecedented global health crisis. Considerable changes in human life and society were registered, with commercial activities being shut down and people being forced to quarantine as a protective measure to limit the quick diffusion of the virus. The rapidly changing environment in the early months of the pandemic made it necessary to keep the population constantly informed on symptom transmission, COVID-19 protocols, and restrictive rules. In this period of fear and confusion, communication was key to divulging health-related knowledge and reducing the uncertainty (Luo, 2021) provoked by the imposed confinement.

As a form of inter-lingual communication, translation had a valuable function during the pandemic. Never before had the work of translators and interpreters been so crucial in promoting and sustaining public health. By mediating COVID-19 information across linguistic barriers, translation professionals became an important point of contact among members of the scientific communities worldwide and between medical agencies and the general public (Pendleton-Woods, 2021). Nevertheless, if, on the one hand, accurate translation was essential to limit the impact of the virus, on the other hand, it is also true that the COVID-19 emergency registered a non-uniform diffusion of information across languages (Civico, 2021) and highlighted a series of pre-existing linguistic inequities. As a result, people with limited access to the local dominant language(s) were disproportionately impacted by the effects of the pandemic and often suffered exclusion from timely information (Piller et al., 2020; Sengupta, 2022).

In this light, by making reference to previous research, this paper evaluates the strengths and shortcomings of translation in the context of the COVID-19 global crisis. The article is structured as follows: section 2 briefly reviews previous research on the issue; section 3 explains the methodology used to conduct this study; section 4 highlights the salience of translation during the pandemic; section 5 discusses multilingualism problems in the context of the COVID-19 emergency from a general standpoint and reviews a series of ineffective government language policies; section 6 probes into linguistic inequalities in the health sphere; section 7 outlines the challenges posed by distance teaching to newly arrived immigrant pupils; section 8 is a brief overview of the main limitations of machine translation; finally, section 9 proposes a number of possible solutions to the multilingualism problems caused by the pandemic. This paper concludes with the observation that improvements and measures need to be promptly implemented to enhance the effectiveness and reliability of translation.

2. Literature Review

The role of language translation in emergencies was a little explored topic in the past (Federici, 2016, p. 4). The dearth of research on the subject may be ascribed to the fact that the issue was explored in relation to crises that remained confined to specific areas and only had local repercussions (e.g., the 2010 Haiti earthquake or the 2014 Western Africa Ebola health emergency). The outbreak of an epidemic of global proportions urged, instead, the necessity of addressing the salience of multilingual communication in a broader way. This statement may seem inconsistent with the conciseness of this section. Nevertheless, if, on the one hand, the topic of multilingualism sparked increasing scholarly interest during the COVID-19 emergency, on the other hand, it is also true that the pandemic is still a relatively recent phenomenon: hence we do not have a long history of research on the issue. The main areas that have given rise to the proliferation of academic publications include volunteer-led translation actions and community engagement (Jang & Choi, 2020; Luo, 2021; Teng 2022; Wang, 2020; Zhang & Wu, 2020; Zheng, 2020), language challenges and multilingual emergency communication (Ahmad, 2020; Khan et al., 2021; Li et al., 2020; Piller et al., 2020; Zhang & Wu, 2020), government policies (Civico, 2021; Piller, 2020; Sengupta, 2022) and translation services in healthcare (Federici, 2022; Haimovich & Márquez Mora, 2020; Knuesel et al., 2020; Le Neveu et al., 2020). Considerable attention has also been devoted to the linguistic needs of the deaf and hard of hearing (Civico, 2021; Luo, 2021; McKee et al., 2020;) and the impact of technology (Almahasees et al., 2021; Civico, 2021; Way et al., 2020). Most studies address translation from a particular angle, for example from the perspective of health implications or government practices. Against this backdrop, the present paper builds on previous research to conduct a comprehensive review that assesses the effectiveness of translation in relation to the different spheres in which it was involved during the pandemic whilst evaluating the critical areas awaiting revision and improvement.

3. Methodology

To provide an understanding of the situation, different sources have been collected and analysed. The kind of material scrutinised mainly includes research papers, news articles and reviews of policy documents where language practices are discussed. These were extracted from government and institutional websites, translation blogs, academic journals, and online newspapers. Data were selected based on a double criterion: publication date and subtopic. Considering the purpose and focus of this paper, the field of investigation has been narrowed down to research published from the onset of the pandemic onward. After this pre-selection, information has been divided into different subcategories (language policies, translation initiatives, health environment, sign language users, distance teaching, translation technology), which will be deeply investigated below.

4. The role of translation during the COVID-19 emergency

Since the beginning of the pandemic, translation was needed on several fronts, from peer-to-peer to expert-lay communication. The COVID-19 global health crisis set the course of science to an exceptional level (Callaway et al., 2020). In response to the rapid spread of the virus, clinical trials were quickly launched to identify effective treatments and create vaccines that could provide a way out of the pandemic. This boosted the demand for prompt translation of research outcomes and clinical documentation. In this light, the work of medical translators was crucial in supporting researchers' works, giving health professionals accurate information on different vaccines, briefing clinical trials' participants, and disseminating findings on an international scale at a rapid speed (Commit, 2021).

Apart from being an important vehicle for knowledge among members of the scientific communities worldwide, translation was highly requested to facilitate information-sharing among the general public. Considering the global diffusion of the virus, it was vital the whole population could promptly and effectively access information. To this end, several COVID translation projects emerged all over the globe (McCulloch, 2020). Overall, it is estimated that during the pandemic COVID-19, information was made available in more than 500 languages (ibid.), with many of these translation projects being carried out thanks to the cooperation of non-profit organizations and volunteer translators (ibid.). Actions of this kind were particularly led in China, for instance in the areas of Wuhan (Wang, 2020) and Shanghai (Zheng, 2020). Another example of a translation project led at a local level is the *Covid Translate Project* (https://covidtranslate.org/about), run by volunteers with the aim of translating the documents published by the Korea Centres for Disease Control and Prevention into English and other languages. A similar initiative was managed by a researcher at Cambridge's Medical Research Council Epidemiologic Unity in collaboration with the Engage Africa

Foundation (EAF), a volunteer-led organization supporting public health actions, to make COVID-19 guidelines available in 18 of the most spoken languages across Africa (Walsh, n.d.). As the necessity of divulging pandemic-related information ranked as a high priority, a series of translation projects were run globally to make messages easily accessible in several languages. For instance, Translation Without Borders launched the *COVID-19 Community Translation Programme* to provide organizations with open access to its translation platform and community of volunteer linguists (TWB Communications, 2020a).

The pandemic also brought about a linguistic change. New words, abbreviations, acronyms, and compounds have been coined to refer to the emerging epidemic situation (Asif et al., 2021). In this regard, the Oxford English Dictionary (OED) was revised so that new descriptive entries, such as "COVID-19" could be introduced (Spoturno, 2022, p. 95). Moreover, terms which once only belonged to the medical language entered everyday conversation through their large diffusion across the media (Pendleton-Woods, 2021). This urged the creation of glossaries with translations of specialised vocabulary in several languages. For example, a group of researchers constructed a bilingual (English/Chinese) COVID-focused terminology called *COVID term*. The system covers 464 concepts divided into 10 categories with 724 Chinese terms and 887 English ones that can be easily accessed online (Ma et al., 2021). Another action in this sense was the creation of the *Glossary on the Covid-19 Pandemic*. This was designed by the Translation Bureau, a federal institution supporting the Government of Canada and includes English and French terms for 450 concepts in the fields of medicine, politics, and sociology (Translation Bureau, 2021). In a similar way, Translators Without Borders developed a glossary with 186 COVID-19-related words in 33 languages to help health workers and humanitarian organisations easily access information in their language. In particular, the glossary provides suitable translations for terms such as "physical distancing", "quarantine" and "vaccination" in idioms and cultural contexts where these have no direct equivalents (TWB Communications, 2020b).

To be fully effective, translation must also take into account the linguistic needs of different social groups (Luo, 2021). Multimodal translation (a combination of different formats including texts, pictures, audio, and videos) was crucial in accommodating the necessities of diversified audiences, in particular the deaf and hard of hearing, the undereducated and members of minority languages (ibid.). For instance, to support COVID-19 vaccine confidence in minor ethnic communities, Public Heath Scotland promoted the publication of a number of videos about vaccination in several languages (Civico, 2021, p. 12). In a similar way, in Norway, public health videos about coronavirus were shared on YouTube to reach the Somali population in the country (Cookson & Milne, 2020). Another appliance of multimodal translation is *COVID-19 Information in Indigenous, Endangered and Under-Resourced Languages*, an online archive hosted by the Endangered Language Project (Federici, 2022, p. 11) providing information about the disease in several modes.

The importance of translation during the pandemic was not merely confined to the medical field. The global health crisis brought about a sudden surge in demand for medical devices and personal protective equipment (European Commission, n.d.). As a result of international trade, large import and export flows of medical products were registered. The stipulation of agreements as well as the need to make technical manuals available in several languages entailed the collaboration of experts in the field of commercial and technical translation as well (Pendleton-Woods, 2021).

5. Multilingualism issues during the pandemic

Despite the above-discussed initiatives, as stated in the Introduction, the pandemic registered an unequal diffusion of information across languages. Evidence shows that global public health discourse was transmitted only through a small percentage of existing languages (English and/or countries' official languages), with minor linguistic communities being often denied access to punctual and accurate information (Piller, 2020; Piller et al., 2020).

In particular, the predominance of English in the circulation of global knowledge during the pandemic was a much-debated topic. Today English holds the uncontested status of global *lingua franca* (Piller et al., 2020, p. 507*)*. Since the epidemic first broke out in China, some important coronavirus information was firstly translated from Chinese into English and English was then used as the starting point for successive translations. This was, for example, the case of the *Guidance for Coronavirus Disease 2019*, the first COVID-19 guide to be translated from Chinese into English (Federici, 2022, p. 9). In a moment when the fast spread of the disease was taking thousands of human lives, the use of English as a *lingua franca* of science and medicine proved advantageous as it fostered the quick diffusion of vital information across borders.

The pandemic has nonetheless put in evidence the risks associated with using English for global communication. Apart from limiting the widespread availability of information and exposing people to an increased risk of contagion, monolingual communication sharpens "geopolitical tensions" (Piller et al., 2020, p. 508). Indeed, it has been noted how this advantages those countries where English is spoken as a primary language and which, therefore, do not have to cope with learning, teaching, and translation costs (Gazzola & Grin, 2013, pp. 99-100). Several studies demonstrate how failure to disseminate information in the community's preferred languages, styles and formats may lead to mistrust and non-compliance with governments' guidelines and directives (Federici, 2022, p. 15). This was perfectly illustrated by the 2014 Western Africa Ebola epidemic, where the efficacy

of public service announcements and health campaigns was jeopardised by the lack of adequate communication strategies (ibid.; McCulloch, 2020). From an ideological perspective, the almost exclusive reliance on *linguae francae* (i.e., the languages of the colonizers) also reinforces the belief that "healthcare is for the wealthy few" (Federici, 2022, p. 8), thus heightening ethnic and social disparities.

The inefficacies of several language policies worldwide exposed institutions' unpreparedness in handling linguistic and cultural diversity. In China, after the epidemic outbreak, the long-standing monolingual ideology, which imposed Putonghua as the only national language, gave way to the circulation of information in other dialects and languages (Li, 2020), including Mongolian, Yi, Korean and Hubei Mandarin (McCulloch, 2020). Nevertheless, since language services are not formally included in law or emergency plans, these efforts were not part of "conscious actions" but resulted from a series of hastily arranged measures (Li et al., 2020, p. 618). McCulloch (2020) reports that in South Africa the government has been heavily criticised for doing briefings predominantly in English rather than in at least two of the country's other 10 official languages. As observed by Sengupta (2022, p. 6), the United States translated important COVID-19-related material through the Federal Food and Drug Agency which made information available in several languages including Spanish, Portuguese, Simplified Chinese, Korean, Russian, Vietnamese, Tagalog, Haitian creole, Uzbek, Khmer, and Hmong. However, due to the long process of recruiting language professionals, these translations were performed with some delay (ibid.). Translations in other languages, such as Greek, Hindi and Bengali, took even longer, whereas documents for industries and educational material were only provided bilingually in English and Spanish (ibid.). The scarce consideration for multilingual groups in the US was also exemplified by the decision taken by the Trump administration to remove bilingual English-Spanish public health posters from US courtrooms (Piller, 2020, p. 15).

It was noted how the lack of language-appropriate communication strategies had considerable consequences on public health. In the US, data reported a strong correlation between COVID-19 cases and the scarce circulation of multilingual information, with ethnic minorities sharing the highest percentage of COVID-19 deaths (Sengupta, 2022, p. 7). Similar trends were registered in India. For example, in Maharashtra, an area with a large migrant worker population, public health information was mainly spread in the dominant language, Marathi (ibid.). Considering most migrants are either unschooled or have very limited competence in this language, this might explain why this was the Indian state with the highest rate of COVID-19 cases (ibid.). Likewise, in England, the lack of easily accessible translated material may have been one of the causes of a higher incidence of severe COVID-19 within Black and minority ethnicities (Civico, 2021, p. 12). It was also noted how England lagged behind the other UK nations in the provision of public information for the deaf and hard of hearing. During the pandemic, language interpreters became a constant presence in the regular briefings held by governments worldwide (ibid.; McCulloch, 2020). However, this was not the case in England, which, unlike Scotland, Wales, and Northern Ireland, was sued over a lack of sign language interpreters for its coronavirus press conferences (McCulloch, 2020; Rose, 2020).

Even in the EU multilingual communication was scanty. For example, the official website of the European Union omitted to include multilingual translations for an official document on coronavirus. This was published exclusively in English in February 2020 (Di Stefano, 2020). Even though translations in other languages were uploaded in the following days, this is startling considering that after Brexit, less than 1% of the EU population speaks English as a native language (this being mainly the Irish or British citizens residing in the EU countries) (Gazzola, 2021, pp. 131-132). Indeed, data report that only 8% of the EU residents are proficient in English, while the remaining population does not speak it at all or has a low-intermediate level (ibid.). Yet, it has been noted how English has remained the EU institutions' privileged language. In this regard, Gazzola (ibid.) observes that the official document on coronavirus released in 2020 was not the only online publication which was exclusively produced in English by the EU after Brexit. The dearth of multilingual information on the official website of an important institution such as the EU not only underscores the misassumption that everyone should be able to process information in a language other than their own, but also challenges the notion of digitalisation and globalization as 21st century phenomena.

6. Multilingualism issues in healthcare settings

Considering the COVID-19 emergency was a global health crisis, most multilingualism problems were registered in healthcare settings. The pandemic has exacerbated a series of deficiencies in the healthcare systems of several countries (Civico, 2021, p. 2) such as doctor shortage (Dill, 2021) and low bed capacity in ICUs (Sen-Crowe et al., 2020). Serious issues were especially identified in those areas where different linguistic communities and ethnic groups coexist. Even in non-pandemic times, in countries where English is spoken as a primary language, patients with insufficient English competence "experience high rates of medical errors with worse clinical outcomes than English-proficient ones and receive a lower quality of care" (Green & Nze, 2017, p. 263). Access to healthcare for foreign patients is often affected by the availability of language mediators. The 2001 Health Care Quality Survey highlighted, for example, that among non-English-speakers, only 48% of patients in need of an interpreter during a medical visit were assisted by one (Collins et al., 2002, viii).

These inefficiencies were inevitably magnified by the COVID-19 emergency. Social distancing and the necessity of minimizing viral exposure imposed the replacing of in-person interpreters for remote interpreting roles, performed via telephone or video

(Le Neveu et al., 2020), with detrimental consequences on clinical outcomes. Overall, language service use was limited by organisational issues, in particular telephone and interpreter availability (ibid., p. 408). This issue can be analysed from multiple perspectives (ibid.). From the medical personnel's standpoint, problems were mainly posed by technical difficulties and time constraints. For example, a doctor from a hospital in Manhattan reported he had to contact interpreters on his mobile phone outside patients' rooms, but this measure created a considerable hindrance in doctor-patient communication (Kaplan, 2020). As well as this, the process to access telephone interpreting services sometimes took too long. In a Brooklyn hospital, for instance, the medical staff reported the wait time to access an interpreter over the phone varied depending on the language combination (it could take up to fifteen minutes for languages such as Mandarin and even up to an hour for some Asian dialects) (ibid.). In an emergency situation in which hospitals were overcrowded with COVID-19 patients, healthcare providers were often unable to cope with the long wait time to access remote language services. Consequently, in some cases, foreign patients were denied medical assistance in their native language, which resulted in delayed diagnosis and inappropriate care (ibid.).

From the perspective of patients, even though telephone interpreting may be preferred in those circumstances requiring privacy (Le Neveu et al., 2020, p. 407), it was noted that the technical problems posed by remote technology reduced clinical communication to a minimum (ibid.). Evidence shows that communicating with patients in their native language increases compliance with therapies and health providers' directives (Luo, 2021). Against this background, the function of language mediators in healthcare settings goes beyond mere communicative purposes. Apart from removing linguistic barriers that may otherwise hinder proper care, interpreters can help develop patients' trust, thus providing psychological relief (ibid.) and reassurance when it comes to following medical instructions. Moreover, foreign patients may have specific cultural needs. For example, in some cultures, women are forbidden from discussing certain medical issues with male doctors and vice versa (GOV.UK, 2017). Similarly, in some Asian areas, women are only allowed to speak in the presence of a male family member. Failure to understand this may result in a delay in obtaining consent for specific medical treatments (Brach et al., 2019). Interpreters' assistance can be crucial in these situations (Le Neveu et al., 2020, p. 408) as they can give physicians a better understanding of patients' behaviour when cultural, social, and religious factors come into play.

From the perspective of interpreters, telephone-based interactions gave rise to a series of complications. By covering ears and mouth, protective equipment, such as masks and helmets, were a major source of communication breakdowns (ibid., Kaplan, 2020;). Other problems were due to the voice of patients with breathing issues being muffled (especially when they were coughing, for example) or drowned out by the noises of machines in ICUs (Bebinger, 2021). But apart from causing a series of technical issues, remote exchanges may also undermine relationship building. Due to the impossibility of accessing body language and establishing visual contact, interpreters also reported increased difficulties in gaining patients' trust and assessing the effectiveness of communication when mediating exchanges over the phone (ibid; Le Neveu et al., 2020, p. 407).

7. Multilingualism issues in remote education

Multilingualism issues were not limited to the health environment. In the spring of 2020, nearly 200 countries across the globe adopted remote education as a learning and teaching solution to decrease the spread of the virus (Garbe et al., 2020, p. 45). However, the quality and experience of remote schooling were not uniform among learners but largely depended on families' socioeconomic background. Children from migrant families often experienced limited access to remote education due to factors such as language skills, parental support, and web accessibility (Proietti, 2020).

From the didactic perspective, learners with limited language proficiency have specific educational and linguistic needs which cannot always be fulfilled by remote education. Remote teaching modalities prevent the application of individualised approaches that may facilitate the development of foreign pupils' linguistic abilities. Moreover, by reducing exchanges to a minimum, distance education considerably slows down the language acquisition process as learners cannot benefit from the same level of social interaction and language exposure that traditional school settings provide. Pupils with insufficient linguistic competence may also feel discouraged from initiating spontaneous conversation with teachers and classmates in a virtual environment. This is because the digital device works as an additional physical barrier to communication. Furthermore, during the pandemic-induced lockdowns, it was noted that the impact of remote education went beyond pupils' academic achievement and had a series of relational implications. In lack of appropriate support, foreign pupils often experienced isolation and marginalisation from the classroom (ibid.).

Another factor determining pupils' access to quality remote teaching is parental support. The participation of families in children's education is an important element for academic achievement in ordinary school environments (Garbe et al., 2020, p. 46). Their role has nonetheless become more apparent in the context of online education (ibid.). When it comes to migrant pupils, however, parental support is often absent or insufficient. In most cases, poor immigrant integration in the host country makes cooperation between foreign families and teachers problematic. Education providers encounter serious obstacles when trying to establish interaction with foreign pupils' families as these are often untraceable or uncooperative (Proietti, 2020). Other

factors that impact the participation of migrant parents in remote schooling include having low literacy levels and limited digital proficiency (Garbe et al., 2020 p. 46).

By incrementing the adoption of technologies, the pandemic has also highlighted unequal access to digital resources for low-income communities. In the first week of the January 2021 lockdown, only 10% of teachers in England reported their pupils were equipped with adequate devices to support their required level of education (The Sutton Trust, 2021). Not surprisingly, data show that lack of appropriate digital tools was more common among pupils of deprived schools (ibid.). Often coming from financially or socially disadvantaged families, foreign pupils were particularly affected by the digital divide in education (Proietti, 2020).

8. Limitations of Translation Technology

Digital divide problems were also accentuated by the high reliance on machine translation as a medium to spread global health information during the pandemic. In emergency situations, cooperation between translators and technology can prove extremely useful. Indeed, translation software can contribute to speeding up the translation process and, therefore, the spread of information in several languages. Translation-enabling technologies have played a critical role in crisis and relief scenarios (Anastasopoulos et al., 2020), such as the 2011 Pakistan earthquake and the 2016 Ecuador earthquake (ibid.). Nevertheless, there are a few points to consider. Above all, online translation platforms can be helpful only if users are in the condition of accessing and using them (Civico, 2021, p. 16). Digital technology is not equally distributed across the planet and, as stated above, the pandemic has played a big part in exacerbating digital divide issues. This meant that less advanced countries and people without sufficient digital skills or financial means to purchase technological devices could not access translated information. As well as this, without human intervention, translation software is unable to provide high standards of work and satisfactory levels of accuracy. In global communication, this becomes problematic for two reasons. Firstly, potential errors can have wide-ranging effects and represent a serious threat to public health. Secondly, failure to address the audience in an appropriate register and manner can undermine the reliability of information and lead to decreased compliance with government regulations. For example, the Japanese translation of "wash your hands" as provided by Google Translate is 手を洗いなさい (*te o arainasai*) (McCulloch, 2020). Despite being grammatically correct, as McCulloch (ibid.) remarks, such a rendering would be appropriate in parent-child interaction but completely out of place in the context of COVID-19 safety measures, thus negatively affecting the effectiveness of communication. Other problems are posed by the fact that MT programs are still unavailable in many languages. Until 2020, Google Translate covered 109 languages, Bing Translate supported 71 and Wikipedia contained information in 309 (ibid.). It should be noted that this data may not reflect the current situation and may be subject to change over time as new updates are introduced. What is noteworthy here is that in the midst of a pandemic, some of the most used automatic translation tools covered only a tiny proportion of the 7000 languages spoken globally, with less-resourced ones being generally left out. The above-discussed data also raise another consideration. If compared to Google Translate, Wikipedia offers a range of languages which is twice as wide. This gap may be perhaps explained by the fact that Wikipedia allows users worldwide to edit or add articles. In this way, new information can be added in any language at any time.

Overall, the above-discussed limitations in terms of quality and availability clearly show that, despite its frequent application, translation technology still awaits considerable improvements.

9. Possible measures and solutions

The above-discussed multilingualism issues demonstrate that despite the growing recognition of "non-discrimination and equality" as "fundamental human rights" (UN Office of the High Commissioner for Human Rights, 2008, p. 7), equal access to resources and information remains an ambition (Federici, 2022, p. 8). With reference to other scholarly works, this section proposes a series of possible solutions and measures that could be implemented to enhance the effectiveness of translation in emergency and non-emergency contexts alike.

One of the major factors behind the language gap registered during the pandemic is the "long-standing devaluation" of linguistic and ethnic minorities (Piller et al., 2020, p. 503). This is also reflected by the lack of enough qualified translators and interpreters working with uncommon linguistic combinations. As Federici (2022, p. 9) correctly remarks, linguists are trained in languages for which there is an ongoing market. Endangered and minoritarian languages are often left out of the language market, hence appropriate training is not generally provided. This calls for the necessity of incrementing training for less-resourced languages in the already existing language and translation courses at higher education level. The selection of languages to be covered should be guided by demolinguistic analysis of the population. Let us consider, for example, the case of Italy, one of the EU countries with the largest migratory fluxes (ANSA, 2019). Considering that a big proportion of migrants is from Central and Eastern Europe (Migrant Refugees, 2021), the integration of languages such as Albanian and Romanian in university curricula should be favoured for better migrant inclusion in the country.

9.1 Healthcare environment

As discussed above, one of the major issues put in evidence by the pandemic was the long-neglected problem of recruiting language experts in healthcare facilities (Sengupta, 2022, p. 6). The presence of interpreters in hospitals is regulated by law in several countries. For example, in the United States, Title VI of the Civil Rights Act mandates "access to language services for all health care organizations receiving federal funds" (Schenker et al., 2011, p. 712). Nevertheless, as explained above, residents with limited language competence are often denied this right. In the absence of qualified interpreters, doctor-patient communication is frequently mediated by family members or bilingual yet untrained medical staff. The practice of using ad hoc interpreters leads to an increased incidence of mistakes (Karwacka, 2014, p. 21). Moreover, having an emotional and psychological bond with patients, family members may not be completely neutral when mediating communication, thus interfering with patients' conduct and decisions (ibid.). Studies demonstrate that improved patient satisfaction and better clinical outcomes are produced when communication is entrusted to medically trained interpreters rather than relatives or bilingual health providers (Flores, 2005). Professional interpreters also ensure communication is objective and not biased by personal views and opinions. In this view, an effective response could be to increase the number of available medical interpreters working with both major and minor languages. In this way, it would be possible to assist a larger number of foreign patients whilst decreasing the wait time to access linguistic services over the phone. For this to be possible, training of language professionals in the medical area should be prioritised. Courses specifically focusing on medical language could be, for example, integrated into translation programmes at higher education level, thus giving learners an in-depth understanding of the challenges and technicalities of translation in the healthcare sector.

Another challenge may be posed by the fact that not all foreign patients in need of interpreter-mediated assistance explicitly request it (Bebinger, 2021). As stated in Section 6, especially in hospital overcrowding, doctors and nurses may not have the time to call interpreters. For this reason, another measure could be the implementation of medical staff with the specific task of managing linguistic services for migrant patients. These figures may be in charge of identifying those patients whose linguistic competence is not sufficient to talk with doctors autonomously and reach telephone interpreting services whenever necessary.

Moreover, considering the removal of face-to-face interpreting as a safety measure during the pandemic, another efficient solution could be the distribution of telemedicine technologies. This initiative was, for example, promoted by the Brigham and Women's Hospital in Boston where iPads were allocated to ease visual interactions between patients and remote workers, and amplifiers were purchased to raise the volume of patients' voice above the machines in ICUs (ibid.). Technology might also be beneficial to deaf and hard-of-hearing patients, in particular the use of captioning apps specifically designed to transcribe spoken words into written texts (McKee et al., 2020).

Other measures have been suggested to cope with the problems experienced by the deaf community. By hiding facial expressions, masking caused many challenges to those sign language users who rely on lip movements for in-person interaction (Herfurth, 2020). In this respect, different organizations advocate the provision of clear face masks in hospitals (Health Service Executive, 2021; National Association of the Deaf, n.d.; World Federation of the Deaf, 2020). It is, however, important to check that these comply with medical standards, as is the case of the Safe'N'Clear, the first FDA-approved facemask (McKee et al., 2020), and the Alpha Solway transparent mask, authorized for use in clinical settings in Scotland in December 2021 (Scottish Government, 2021). To improve healthcare delivery to the deaf and hard of hearing, the presence of sign language interpreters should become the norm in hospitals, with the option for patients to request them in advance of a visit (World Federation of the Deaf, 2020).

As explained above, problems in the healthcare environment may also arise from cultural diversity. In areas with large migrant communities, cultural competence training programmes could be put in place for people working in the health care delivery system (Brach et al., 2019; Ihara, 2004). In this way, providers may be imparted with a basic understanding of patients' cultural background. Although different types of training have been developed, it seems these are not often structured in a systematic way and tend to vary considerably in content and teaching approach (ibid.). In light of this, the view adopted in this paper is that cultural awareness training programmes should be not only standardised, but also accompanied by concomitant structural amendments (Brach et al., 2019).

9.2 Remote education

Especially in those areas with a strong migratory presence, a solution to the multilingualism problems observed in education could be the implementation of linguistic-cultural mediators in schools. Theoretically, these figures should be part of the education system of several countries. However, evidence shows this kind of support is often unavailable or inadequate (Chiofalo et al., 2019). Linguistic and intercultural mediators fulfil a series of important functions. Among other things, they provide psychological support to foreign pupils by facilitating their integration in the classroom and orienting them in the new school facilities (Sani, 2015, p. 2584). Although their role should not be confused with that of a teacher, they also complement tutoring activities by supporting foreign pupils' language acquisition process (Chiofalo et al., 2019). In this regard, it is important to

underline that, apart from guaranteeing equal education opportunities, the learning of the host country's language is a vital component of the inclusion process. In addition, linguistic mediators can help establish interaction between teachers and families, especially when problems due to cultural differences arise. Considering the pivotal role played by education in the development of individuals' identities, this paper claims that the intervention of linguistic mediators should be systemically embedded in countries' school system. This may ensure education is not hampered by linguistic diversity whilst enhancing migrant participation in society at large.

9.3 Translation Technology

Despite its increasing use in the field of translation, technology is still characterised by considerable inefficiencies. Low output quality and the limited number of available languages call for both qualitative and quantitative improvements. Steps should be taken to ensure machine-translated information can be adequately accessed by a larger number of users, including speakers of less-resourced languages. Section 8 emphasised the usefulness of technology in crisis and relief scenarios. The sensitivity of the content, however, requires high-quality standards (Anastasopoulos et al., 2020). For this reason, it might be helpful to prepare a series of translation memories and glossaries with specialised terminology for use in emergency situations. Some COVID-specific actions have been put in place shortly after the beginning of the pandemic. The *Translation Initiative for COVID-19* (ibid.), for example, aimed at building MT benchmarks in 36 languages. These included 9 major languages and 26 under-resourced ones, especially those spoken in areas such as Africa, South Asia, and South-East Asia, that were mostly affected by the pandemic (ibid.). The initiative had both a short-term goal (translating important COVID-19-related information into several languages) and a long-term one (promoting research on the use of MT in minor languages for specialised terminology) (ibid.). This model could be adapted for the creation of further translation machine benchmarks to be used in crisis scenarios in the future. The languages and content to be covered should be selected prior to the assessment of two important variables, which have been identified by Civico (2021, p. 16) for the implementation of language policies in emergencies: the kind of crisis (natural disasters, health issues, terroristic attacks, wars, etc.) and the specific linguistic and ethnic communities affected.

10. Conclusion

The main objective of this paper was to investigate the role of translation in a global emergency situation in relation to the main areas (healthcare, education, deaf community, technology) in which language services were mostly involved during the pandemic. The article highlighted that translation worked as a catalyst for information-sharing across languages. Its function proved extremely important for the dissemination of health-related knowledge within and outside the scientific community. In spite of this, the exacerbation of multilingualism problems and the inefficiencies of some language practices worldwide revealed that its full potential as a form of interlingual communication remains unexploited. The lack of qualified interpreters and language mediators in sectors such as healthcare and education as well as the technical flaws of translation software call for urgent improvements. In this view, the present study makes a twofold contribution to the existing knowledge: on the one hand, it emphasises the pivotal function fulfilled by translation professionals, which is often undervalued in today's society. On the other hand, it provides a systematic review of the critical areas requiring enhancement. It also proposes a series of measures that could be implemented to increase the usefulness and efficacy of translation, not only in emergency situations but also in ordinary contexts. The multilingualism issues highlighted in this paper may indeed serve governments and institutions to take cognizance of the imperativeness of multilingual communication and the necessity of incrementing timely and effective provision of language services in crisis management strategies. As a final word, it should be noted that the ensemble of language policies and translation initiatives used to support the arguments illustrated in this article is not exhaustive but primarily focuses on those examples that are of particular relevance to the research in question. Furthermore, this paper discusses the challenges of translation in the context of the COVID-19 crisis mainly from an organizational rather than a practical perspective. For example, it does not mention the specific problems posed by the technical translation of newly-coined medical terms across languages, particularly the under-resourced ones. As well as this, it does not consider the impact of the pandemic on the translation profession in terms of workload, incomes and job opportunities. These considerations may be the starting point of further research in the future.

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References

[1] Ahmad, R. (2020, April 14). Multilingual resources key to fighting COVID-19. *Language on the Move*. Retrieved August 12, 2022, from https://www.languageonthemove.com/multilingual-resources-key-to-fighting-covid-19/

[2] Almahasees, Z., Meqdadi, S., & Albudairi, Y. (2021). Evaluation of Google Translate in rendering English COVID-19 texts into Arabic. *Journal of Language and Linguistic Studies, 17*(4), 2065-2080. https://doi.org/10.52462/jlls.149

[3] Anastasopoulos, A., Cattelan, A., Dou, Z., Federico, M., Federman, C., Genzel, D., Guzmán, F., Hu, J., Hughes, M., Koehn, P., Lazar, R., Lewis, W., Neubig, G., Niu, M., Öktem, A., Paquin, E., Tang, G., & Tur, S. (2020). TICO-19: the Translation Initiative for COVID-19. *Arxiv*. Retrieved July 9, 2022, from https://doi.org/10.48550/arXiv.2007.01788

[4] ANSA (2019, September 30). *Italy has third-largest migrant population in Europe: report.* Retrieved August 11, 2022, from, https://www.infomigrants.net/en/post/19852/italy-has-thirdlargest-migrant-population-in-europe-report

[5] Asif, M., Zhiyong, D., Iram, A. & Nisar, M. (2021). Linguistic analysis of neologisms related to coronavirus (COVID-19). *Social Sciences & Humanities Open*, *4*(1). https://doi.org/10.1016/j.ssaho.2021.100201

[6] Bebinger, M. (2021, April 27). The Pandemic Imperilled Non-English speakers more than others. *NPR/Kaiser Health News*. Retrieved April 2, 2022, from https://lowninstitute.org/headlines/pandemic-imperiled-non-english-speakers-more-than-others/

[7] Brach, C., Hall, K.K. & Fitall, E. (2019, December 27). Cultural Competence and Patient Safety. *AHRQ's Patient Safety Network (PSNet)*. Retrieved July 29, 2022, from https://psnet.ahrq.gov/perspective/cultural-competence-and-patient-safety

[8] Callaway, E., Ledford, H., Viglione, G. Watson, T. & Witze, A. (2020, December 14). COVID and 2020: An extraordinary year for science, *Nature*. Retrieved June 17, 2022, from https://www.nature.com/immersive/d41586-020-03437-4/index.html

[9] Civico, M. (2021). Covid-19 and language barriers. Working Paper No. 21-4. *REAL Research Group Economics, policy analysis and language*. Ulster University

[10] Chiofalo, T. A., Fernández-Martínez, M. d. M., Luque-de-la-Rosa, A., & Carrión- Martínez, J. J. (2019). The Role of L2 and Cultural Mediation in the Inclusion of Immigrant Students in the Italian Schools. *Education Sciences*, *9*(4), 283. https://doi.org/10.3390/educsci9040283

[11] Collins K.S., Hughes, D. L., Doty, M. M., Ives, B. L. Edwards, J. N., & Tenney, K. (2002). Diverse communities, common concerns: Assessing health care quality for minority Americans. New York: The Commonwealth Fund.

[12] Commit (2021, May 25). *Why is language translation so crucial in clinical trials?* Retrieved August 10, 2022, from https://commit-global.com/why-is-language-translation-so-crucial-in-clinical-trials/

[13] Cookson, C. & Milne, R. (2020, April 29). Nations look into why coronavirus hits ethnic minorities so hard. *Financial Times*. Retrieved August 10, 2022, from https://www.ft.com/content/5fd6ab18-be4a-48de-b887-8478a391dd72

[14] Dill, M. (2021 June, 17). We already needed more doctors. Then the COVID-19 hit. *Association of American Medical Doctors*. Retrieved August 10, 2022, from https://www.aamc.org/news-insights/we-already-needed-more-doctors-then-covid-19-hit

[15] Di Stefano, P. (2020, February 26). Anche nelle emergenze la Commissione UE parla solo inglese. *Corriere della sera*. Retrieved August 21, 2022, from https://www.corriere.it/opinioni/20_febbraio_26/anche-emergenze-a993f9c2-58c6-11ea-8e3a-a0c8564bd6c7.shtml

[16] European Commission (n.d.). COVID-19 Clearing House for medical equipment. Retrieved August 8, 2022, from https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/emergency-support-instrument/covid-19-clearing-house-medical-equipment_en#:~:text=To%20facilitate%20the%20timely%20availability,a%20period%20of%20six%20months

[17] Federici, F. M. (2016). Introduction: A state of emergency for crisis communication. In Federici, F. M. (Ed.), *Mediating Emergencies and Conflicts. Frontline Translating and Interpreting* (pp. 1-29). Palgrave Macmillan.

[18] Federici, F. M. (2022). Translating Health Risks: Language as a Social Determinant of Health. In Federici, F. M. (ed.), *Language as a Social Determinant of Health. Translating and Interpreting COVID-19 Pandemic* (pp. 1-35) Palgrave Macmillan.

[19] Flores, G. (2005). "The impact of medical interpreter services on the quality of healthcare: a systematic review". *Medical Care Research and Review, 62*(3), pp. 255-299. https://doi.org/10.1177/1077558705275416

[20] Garbe, A., Ogurlu, U., Logan, N. & Cook, P. (2020). COVID-19 and Remote Learning: Experiences of Parents with Children during the Pandemic. *American Journal of Qualitative Research*, *4*(3), 45-65. https://doi.org/10.29333/ajqr/8471

[21] Gazzola, M. (2021). Può la traduzione automatica favorire il plurilingualismo nell'Unione Europea post-Brexit? *Italiano Digitale*, XVIII, pp. 128-135. https://doi.org/10.35948/2532-9006/2021.10588

[22] Gazzola, M. & Grin, F. (2013). Is ELF more effective and fair than translation? An evaluation of the EU's multilingual regime. *International Journal of Applied Linguistics*, *23*(1), 93-107. **https://doi.org/10.1111/ijal.12014**

[23] GOV.UK (2017, June 23). Culture, spirituality and religion: migrant health guide. Retrieved August 21, 2022, from https://www.gov.uk/guidance/culture-spirituality-and-religion

[24] Green, A. R. & Nze, C. (2017). Language-Based Inequity in Health Care: Who is the "Poor Historian"? *AMA Journal of Ethics*, *19*, 3, 263-271. https://doi.org/10.1001/journalofethics.2017.19.3.medu1-1703

[25] Haimovich, G. & Márquez Mora H. (2020 June, 9). Why it's important to use Indigenous languages in health communication. *Language on the Move*. Retrieved August 12, 2022, from https://www.languageonthemove.com/why-its-important-to-use-indigenous-languages-in-health-communication/

[26] Health Service Executive (2021). *Communicating with Deaf and Hard-of-Hearing patients in hospital and healthcare settings during COVID-19*. Retrieved August 13, 2022, from https://hselibrary.ie/has-the-covid-19-pandemic-created-greater-communication-barriers-between-healthcare-personnel-and-hearing-impaired-individuals/#gsc.tab=0

[27] Herfurth, H. (2020 August, 14). Lear how masking negatively affects those with hearing loss – and how you can help. *UAB News*. Retrieved July 29, 2022, from https://www.uab.edu/news/health/item/11499-learn-how-masking-negatively-affects-those-with-hearing-loss-and-how-you-can-help

[28] Ihara, E. (2004). Cultural Competence in Health Care: is it important for people with chronic conditions? *Health Policy Institute.* Georgetown University. Retrieved August 11, 2022, from https://hpi.georgetown.edu/cultural/

[29] Jang, I. C. & Choi, L. J. (2020). Staying connected during COVID-19: The social and communicative role of an ethnic online community of Chinese international students in South Korea. *Multilingua*, *39*(5), 541–552. https://doi.org/10.1515/multi-2020-0097

[30] Kaplan, J. (2020 March, 31). Hospitals have left many COVID-19 patients who don't speak English alone, confused, and without proper care. *ProPublica*. Retrieved March 11, 2022, from https://www.propublica.org/article/hospitals-have-left-many-covid19-patients-who-dont-speak-english-alone-confused-and-without-proper-care

[31] Karwacka, W. (2014). Quality assurance in medical translation. *The Journal of Specialised Translation*, *21*, 19-34.

[32] Khan, S., Asif, A. & Jaffery, A. E. (2021). "Language in a Time of COVID-19: Literacy Bias Ethnic Minorities Face During COVID-19 from Online Information in the UK. *Journal of Racial and Ethnic Health Disparities*, *8*, 1242-1248. https://doi.org/10.1007/s40615-020-00883-8

[33] Knuesel, S., Chuang, W., Olson, E. & Betancourt J. (2020). Language Barriers, Equity, and COVID-19: The Impact of a Novel Spanish Language Care Group. *Journal of Hospital Medicine, 16*(2), 109–111. https://doi.org/10.12788/jhm.3542

[34] Le Neveu, M., Berger, Z. & Gross, M. (2020). Lost in Translation: The Role of Interpreters on Labour and Delivery. *Health Equity*, *4*(1), 406-409. https://doi.org/10.1089/heq.2020.0016

[35] Li, J. (2020 March, 4). Coronavirus meets linguistic diversity. *Language on the Move*. Retrieved August 11, 2022, from https://www.languageonthemove.com/coronavirus-meets-linguistic-diversity/

[36] Li, Y., Rao, G., Zhang, J. & Li, J. (2020). Conceptualizing national emergency language competence. *Multilingua*, *39*(5), 617–623. https://doi.org/10.1515/multi-2020-0111

[37] Luo, X. (2021). Translation in the time of COVID-19. *Asia Pacific Translation and Intercultural Studies*, *8*(1). Retrieved March 16, 2022, from https://doi.org/10.1080/23306343.2021.1903183

[38] Ma, H., Shen, L., Sun, H., Xu, Z., Hou, L., Wu, S., Fang, A., Li, J. & Qian, Q. (2021). COVID term: a bilingual terminology for COVID-19. *BMC Medical Informatics and Decision Making*, *21*, 231. https://doi.org/10.1186/s12911-021-01593-9

[39] McCulloch, G. (2020 May, 31). Covid-19 is History's Biggest Translation Challenge. *Wired*. Retrieved April 6, 2022, from https://www.wired.com/story/covid-language-translation-problem/

[40] McKee, M., Moran C., & Zazove, P. (2020). Overcoming Additional Barriers to Care for Deaf and Hard of Hearing Patients during COVID-19. *JAMA Otolaryngology Head Neck Surgery, 146*(9), 781–782. https://doi.org/10.1001/jamaoto.2020.1705

[41] Migrant Refugees (2021, November). *Migration Profile. ITALY*. Retrieved August 11, 2022, from https://migrants-refugees.va/country-profile/italy/

[42] National Association of the Deaf (n.d.). *Covid-19: Deaf and Hard of Hearing Communication Access Recommendations for the Hospital*. Retrieved August 13, 2022, from https://www.nad.org/covid19-communication-access-recs-for-hospital/

[43] Pendleton-Woods, L. (2021 March, 11). The Importance of Medical Translation during the Pandemic. *Ubiqus*. Retrieved April 22, 2022, from https://www.ubiqus.com/en-us/services-translation/the-importance-of-medical-translation-during-the-pandemic/

[44] Piller, I. (2020). COVID-19 forces us to take linguistic diversity seriously. In Boomgaarden, G. (ed.), *12 perspectives on the pandemic: International social science thought leaders reflect on Covid-19* (pp. 12–17). Berlin and New York: De Gruyter.

[45] Piller, I., Zhang, J., & Li, J. (2020). Linguistic diversity in a time of crisis: Language challenges of the COVID-19 pandemic. *Multilingua*, *39*(5), 503-515. https://doi.org/10.1515/multi-2020-0136

[46] Proietti, S. (2020 April, 22). Didattica a distanza e alunni stranieri: le problematiche. *Piuculture*. Retrieved July 29, 2022, from https://www.piuculture.it/2020/04/alunni-stranieri-dad/

[47] Rose, B. (2020 April, 28). Coronavirus: Lack of sign language interpreters leads to legal case against government. *BBC News*. Retrieved July 29, 2022, from https://www.bbc.com/news/disability-52323854

[48] Sani, S. (2015). The Role of Intercultural Mediation in the Integration of Foreign Students. *Procedia – Social and Behavioural Sciences*, *191*, 2582-2584. https://doi.org/10.1016/j.sbspro.2015.04.285

[49] Schenker, Y., Pérez-Stable E. J., Nickleach, D. & Karliner, L. S. (2011). "Patterns of Interpreter Use for Hospitalized Patients with Limited English Proficiency", *Journal of General Internal Medicine*, *26*(7), 712–717. https://doi.org/10.1007/s11606-010-1619-z

[50] Scottish Government (2021, December 01). Transparent Face Mask introduced to NHS Scotland. Retrieved August 12, 2022, from https://www.gov.scot/news/transparent-face-masks-introduced-to-nhs-scotland/

[51] Sen-Crowe, B., Sutherland, M., McKenney, M. & Elkbuli, A. (2020). A Closer Look Into Global Hospital Beds Capacity and Resource Shortages During the COVID-19 pandemic. *Journal of Surgical Research*, *260*, 56-63. https://doi.org/10.1016/j.jss.2020.11.062

[52] Sengupta, P. (2022). Language, communication, and the COVID-19 pandemic: criticality of multi-lingual education. *International Journal of Multilingualism*. https://doi.org/10.1080/14790718.2021.2021918

[53] Spoturno, M. L. (2022). Translating the COVID-19 Pandemic Across Languages and Cultures: The Case of Argentina. In Federici F. M. (ed.) *Language as a Social Determinant of Health. Translating and Interpreting COVID-19 Pandemic* (pp. 93-117) Palgrave Macmillan.

[54] Teng, Y. (2022). Citizens Translators' 'Imagined Community' Engagement in Crisis Communication. In Federici, F. M. (ed.) *Language as a Social Determinant of Health. Translating and Interpreting the COVID-19 Pandemic* (pp. 293-316). Palgrave Macmillan.

[55] The Sutton Trust (2021, January 11). *Remote Learning: The Digital Divide. Briefing Note*. Retrieved August 10, 2022, from https://www.suttontrust.com/our-research/remote-learning-the-digital-divide/

[56] Translation Bureau (2021, April 1). *Glossary on the COVID-19 pandemic*. Government of Canada. Retrieved August 8, 2022, from https://www.btb.termiumplus.gc.ca/publications/covid19-eng.html

[57] TWB Communications (2020a, April 8). *TWB tackles COVID-19 "infodemic"* Retrieved August 10, 2022, from https://translatorswithoutborders.org/twb-tackles-covid-19-infodemic-april/

[58] TWB Communications (2020b, June 8). *"Stay away from me" TWB creates COVID-19 glossary for 186 terms in 33 languages.* Retrieved August 13, 2022, from https://translatorswithoutborders.org/twb-creates-covid-19-glossary/

[59] UN Office of the High Commissioner for Human Rights (OHCHR). (2008, June). *The right to health*. *Fact sheet No. 31*. Retrieved August 20, 2022, from https://www.refworld.org/docid/48625a742.html

[60] Walsh, L. (n.d.). Found in Translation. *University of Cambridge*. Retrieved August 10, 2022, from https://www.cam.ac.uk/stories/Translations-for-Africa

[61] Wang, P. (2020). Translation in the COVID-19 health emergency in Wuhan: A crisis manager's perspective. *The Journal of Internationalization and Localization, 6*(2), 86–107. https://doi.org/10.1075/jial.00014.wan

[62] Way, A., Haque, R., Xie, G. Gaspari, F., Popovic, M. & Poncelas, A. (2020 May, 1). Facilitating Access to Multilingual COVID-19 Information via Neural Machine Translation. *Arxiv*. Retrieved August 20, 2022, from https://arxiv.org/abs/2005.00283

[63] World Federation of the Deaf (2020, August 31). *Statement on Accessible Communication for Deaf and Hard of Hearing People during COVID-19 Pandemic*. Retrieved August 20, 2022, from https://wfdeaf.org/news/statement-on-accessible-communication-during-covid-19-pandemic/

[64] Zhang, J. & Wu, Y. (2020). Providing multilingual logistics communication in COVID-19 disaster relief. *Multilingua, 39*(5), 517–528. https://doi.org/10.1515/multi-2020-0110

Zheng, Y. (2020). Mobilizing foreign language students for multilingual crisis translation in Shanghai. *Multilingua*, 39(5), 587–595. https://doi.org/10.1515/multi-2020-0095