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# Trust to test translation practices

## A case study of Shanghai, China

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Trust is important in public health communication to culturally and linguistically diverse (CALD) communities during pandemics. This empirical research, using quantitative data from 107 foreign nationals at a university in Shanghai, probes into how trust varied in official translation services (OTS) and non-official translation services (NOTS) during COVID-19. Statistical analysis was carried out by IBM SPSS Statistics 26 and it was found that (1) NOTS which are more frequently used are more trusted compared with OTS; (2) NOTS are uncorrelated with demographics while OTS are correlated with demographics, among which education and trust in OTS suggest a linear positive relationship (Sig. = 0.003, $\beta = 0.467$), whereas age and trust in OTS suggest a linear negative relationship (Sig. = 0.027, $\beta = -0.348$); (3) there is a positive relationship between the frequency of using services and trust, i.e., higher frequency implies higher trust. The findings of this case study can have implications for policy makers and the representatives of CALD communities.

**Keywords:** trust, CALD communities, public health communication, official and non-official translation services, translation practices

## 1. Introduction

When public health crises occur in culturally and linguistically diverse (CALD) cities, it is essential to make sure that people from different demographics have equal and timely access to public health information (O'Brien and Federici 2020, 129; Zheng 2020, 587), which furthermore has been considered a human right (Greenwood et al. 2017). As seen in COVID-19, reaching CALD communities is crucial and translation is of great importance to them. To really reach them, not only do authorities need a translation policy that finds its way into translation

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practices, but also CALD members need to trust the source information providers, as trust is central to crisis communication for all concerned stakeholders (Paton 2008; Curnin et al. 2015; Eadie and Su 2018), especially in behavior-change communication during COVID-19, which requires that information should be trusted strongly (Pym and Hu 2022, 46). Therefore, doing trust analysis in CALD communities is necessary and important.

Globalization has swept into every corner of the world and transnational migration has become a trend. In this context, China has seen an influx of foreign nationals since it initiated the Reform and Opening-up policy (Li 2017, 9). The number of foreign nationals increased from 0.59 million in 2011 to 0.85 million in 2021 according to the national census (The National Bureau of Statistics 2011, 2021), and the majority of foreign nationals in China live in the metropolises, such as Shanghai, Beijing, and Guangzhou (Farrer 2019). Among them, there are 0.19 million foreign nationals in Shanghai, which is home to about one quarter of all foreign nationals in mainland China, although foreign nationals remain a small part of the city's total population of 24.87 million (Farrer 2019; The Office of Shanghai Chronicles 2020; Shanghai Municipal Statistics Bureau 2021; The National Bureau of Statistics 2021). Undoubtedly, Shanghai possesses a CALD population and the extent to which they trusted public health communication during COVID-19 is unknown.

Existing scholarship has focused on trust issues concerning translation and interpretation in crisis times (see Tipton 2011; Cadwell 2015; Federici 2016; Federici and Cadwell 2018; Cadwell 2020). During COVID-19, O'Brien, Cadwell, and Lokot (2022) maintained that non-professional translators are in general less trusted, whereas Pym and Hu (2022) asserted that professional or official translations exert a remarkably minor role. Empirical findings on trusted sources of crisis information might be contradictory, which could be explained by the theories of trust that emphasize its contextualization, e.g., cognitive, political, social, and other orientations (Rousseau et al. 1998; Cadwell 2020). Those findings embedded in the theory of social trust suggest that social trust is dynamic and contextual (Zand 2016) and that it should be examined under the constraints of particular contexts (O'Brien, Cadwell, and Lokot 2022). To appeal to the need for more research on the effects of contexts in understanding trust (Paton 2007; Lyon, Möllering, and Saunders 2015) and to contribute to the existing literature on trust analysis in CALD communities in a Chinese context, this empirical research, embedded in the theory of social trust, interprets how foreign nationals trust official translation services (OTS) and non-official translation services (NOTS) in the context of the COVID-19 lockdown in Shanghai. More specifically, it aims to investigate: (1) how does trust differ in OTS and NOTS as to COVID-19 public health communication? (2) how do different independent variables affect or predict trust in OTS and NOTS in the multiple regression models?

## 2. Methodology

This research uses both quantitative and qualitative methodology. Quantitative data gained from a professional online survey platform (Qualtrics) is analyzed through IBM SPSS Statistics 26. Before moving forward, several terms need to be defined.

### 2.1 Definition of terms

In this research, foreign nationals are those residents living in Shanghai who come from other countries and lack proficiency in Chinese. Translation covers both written and spoken forms (also known as 'interpretation'). Translation services by Shanghai government departments and their concerned bodies are OTS. Translation services by non-government departments are NOTS. "A widely held definition of trust is: trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another" (Rousseau et al. 1998, 394–395).

### 2.2 Sample

The survey was conducted from May 1, 2022 to June 1, 2022. During this period, Shanghai had strict lockdown restrictions due to COVID-19. The survey sample consists of 107 foreign nationals (over 18) at a university in Shanghai, namely, international students, teachers, and administrative staff, together with 107 valid questionnaires ($n = 107$). Participants come from different countries, with CALD features. They were informed of the research purposes, survey contents, completion time, and voluntary participation, and were assured that their confidentiality, privacy, and rights would always be protected. A 5-point Likert scale was adopted in the survey, 1 representing the minimum value and 5 representing the maximum value. Participants gave their agreement value to each dimension and their codes were numeric values in IBM SPSS Statistics 26.

### 2.3 Ethical considerations

This survey was conducted online and a host of ethical issues, such as voluntary participation, confidentiality, and anonymity, were taken into consideration before connecting data. In doing so, it made sure that the research complies with the ethical standards of human participants and that participants' rights and privacy were protected at all times. The ethical approval for this survey was received

from the Sociaal-Maatschappelijke Ethische Commissie (SMEC) of KU Leuven, on April 14, 2022, with a dossier number G-2021–4411.

## 3. Data analysis and results

### 3.1 Reliability and validity tests

To evaluate reliability, Cronbach alpha values were calculated (Cronbach 1951). The reliability value ranges from 0 to 1 and the minimum value that is generally considered reliable and satisfactory is 0.70 (Nunnally 1975). Based on Table 1, the Cronbach's Alpha is 0.83(> 0.70) which proves that the reliability of this survey is fine.

**Table 1.** Reliability test

| Cronbach's Alpha | N of items |
|---|---|
| 0.834 | 38 |

The validity was verified by Kaiser-Meyer-Olkin (KMO) and Bartlett's Test. The value of the KMO test ranges from 0 to 1 and its value between 0.70 and 0.80 is good (Roni and Djajadikerta 2021). The Bartlett's test of Sphericity must be significant ($p < 0.0001$) representing the quality of the sample (Khalili et al. 2017). According to Table 2, the KMO value is good (0.760), with a significance of 0.000 (< 0.0001) in Bartlett's Test of Sphericity. Thus, the survey has good validity.

**Table 2.** Validity test

| KMO measure of sampling adequacy | | 0.760 |
|---|---|---|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 2299.337 |
| | df | 703 |
| | Sig. | 0.000 |

### 3.2 Demographic statistics

The numerical features of demographical variables were obtained on the basis of Figure 1. Among 107 foreign nationals, 61% of them are male and 32% of them are female. According to the age analysis, 51% of them are aged 18–25, followed by those aged 26–30 (30%), and those aged 31–40 (16%). The number of foreign nationals over 41 years of age is relatively small (3%). In terms of education, 53% of

them hold a Bachelor degree, followed by Master's degree (31%), PhD (12%), and others (7%).

Foreign nationals in this research come from more than 30 countries and they are scattered across 4 continents, including the United States ($n=11$), Germany ($n=9$), Japan ($n=6$), Australia ($n=4$), etc. As for their mother tongues, the percentage of native English speakers is 36% and non-native English speakers is 64%.

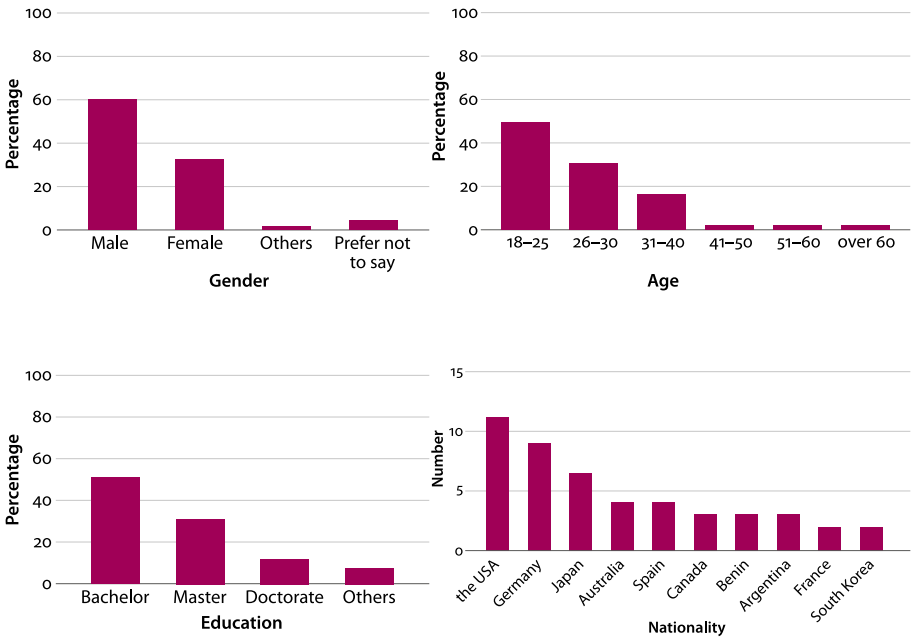


**Figure 1.** Demographic analysis

## 3.3 Information channels

With respect to sourcing COVID-19 information, such as quarantine, vaccination, and nucleic acid tests, Figure 2 shows that there are 84 out of 107 foreign nationals obtaining information via WeChat, followed by Weibo ($n=33$), the websites of the Shanghai government ($n=19$), Facebook ($n=15$), newspapers ($n=13$), and television ($n=13$). Here, WeChat is the most common way to receive pandemic information among foreign nationals. The Chinese-owned WeChat is the most popular social media platform in China (Iqbal 2022). WeChat is an instant messaging app that enables real-time communication via texts, voices, videos, etc. Sina Weibo (often simply called Weibo) is the 2nd popular social media platform

in China (Radcliffe 2018). The top 2 applications have been the most popular channels for receiving COVID-19 information among foreign nationals.

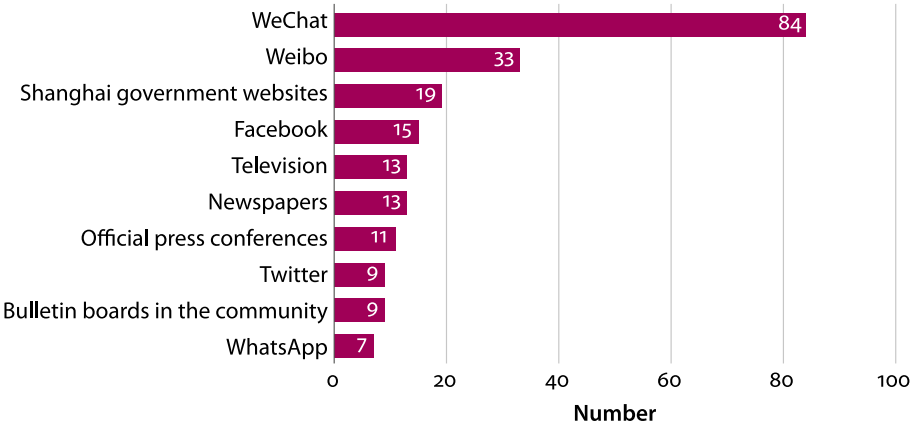


**Figure 2.** Channels for receiving COVID-19 information

## 3.4 Frequency of language barriers

Figure 3 illustrates that 84% of foreign nationals encounter language barriers in COVID-19 public health communication, of which 66% are confronted with language barriers more than half the time. This could be because the non-native English speakers are a major part of the sample and public health information in China is, on the whole, conveyed in Chinese and English (Li et al. 2020, 531). Chinese is the official language and English is still the dominant foreign language in China (Zhang 2021, 128).

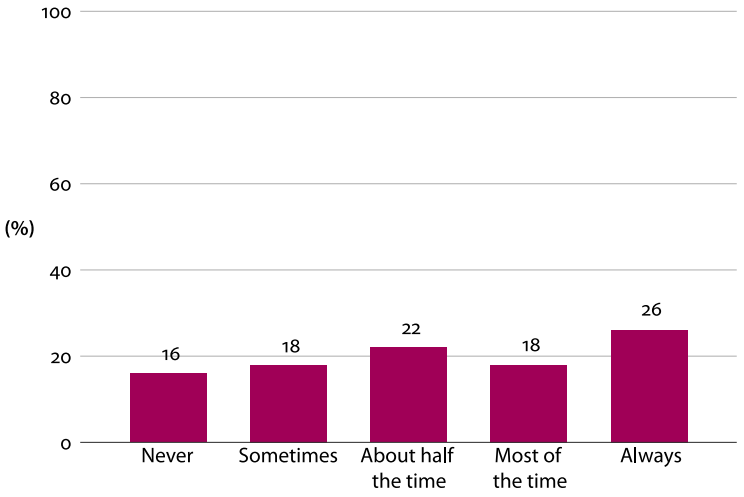


**Figure 3.** Frequency of language barriers

## 3.5 Frequency of using translation to solve language barriers

Figure 4 indicates foreign nationals' frequency of using OTS and NOTS to solve language barriers. Here, NOTS include translation services by family members, friends/colleagues, and translation apps. OTS include translation services by community workers, Shanghai Public Service Hotline 12345 (hereafter called Hotline 12345), and Shanghai Call Center 962288 (hereafter called Call Center 962288). During COVID-19, the Foreign Affairs Office of Shanghai Municipality collaborates with Hotline 12345, which provides 24-hour online consultation services for foreign nationals regarding pandemic information (e.g., vaccination, nucleic acid tests) in 7 languages: English, Japanese, Korean, French, German, Spanish, and Russian. The Foreign Affairs Office of Shanghai Municipality selects interpreters from its departments and builds volunteer teams for language services accordingly (Zou 2020). Call Center 962288, a dedicated service hotline for foreign nationals in Shanghai, is guided by the Information Office of Shanghai Municipality and the Foreign Affairs Office of Shanghai Municipality. It provides 24-hour multilingual public services for foreign nationals to solve problems such as mask booking and quarantine issues. These tasks are undertaken by foreign nationals, *Haigui* (overseas returnees), or graduates in foreign languages in China in 15 languages, including English, French, German, Japanese, Korean, Spanish, and other languages (Xu 2020).

According to Figure 4, translation apps are most used (41%), followed by friends/colleagues (24%), community workers at the university (22%), family members (16%), Hotline 12345 (14%), and Call Center 962288 (12%). With regard

to the frequency of "always" and "most of the time", translation apps (65%) and translation services by friends/colleagues (48%) are the top two most frequently used. Consequently, it can be said that NOTS, especially translation apps and translation services by friends/colleagues, were most frequently used among foreign nationals in COVID-19 public health communication. These findings are in line with the findings of Li et al. (2020, 533) who discovered that international students in China during COVID-19 relied on language brokers such as friends/relatives and translation apps to overcome language barriers.

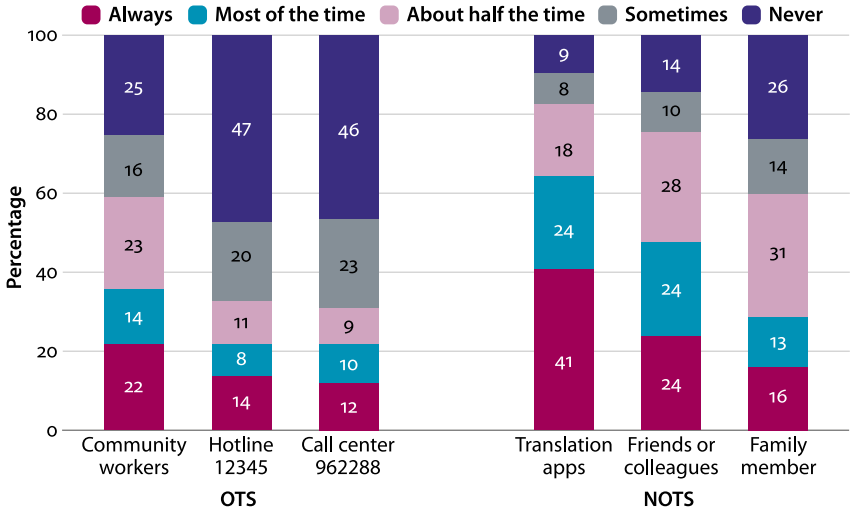


**Figure 4.** Frequency of using different translation services

According to the above analysis, Figure 5 presents the Boxplot of translation apps and translation services by friends/colleagues by age and gender. The Boxplot, also known as the box-and-whisker plot, is used to visually describe the features of the data. It is based on 5 key statistics: minimum, the lower quartile (25%), median, the upper quartile (75%), and maximum. The box width is the interquartile range (IQR) which covers the middle 50% of the data (Norris et al. 2012, 445; Constantin 2017, 22). In light of Boxplot analysis, it is necessary to exclude outliers and extreme outliers from the variables analyzed because they can determine charts' distortions (Constantin 2017, 25) and the outliers and extreme outliers in this research have no influence on the findings. Based on this, the age range of 18 to 40 and the gender including male and female were analyzed after excluding outliers and extreme outliers. The Boxplot dispersion in Figure 4 shows that male foreign nationals aged 18–25 show the highest frequency of using translation apps. Female foreign nationals aged 18–25 and 26–30, who share similar varia-

tions, show the highest frequency of seeking translation services from friends/colleagues.

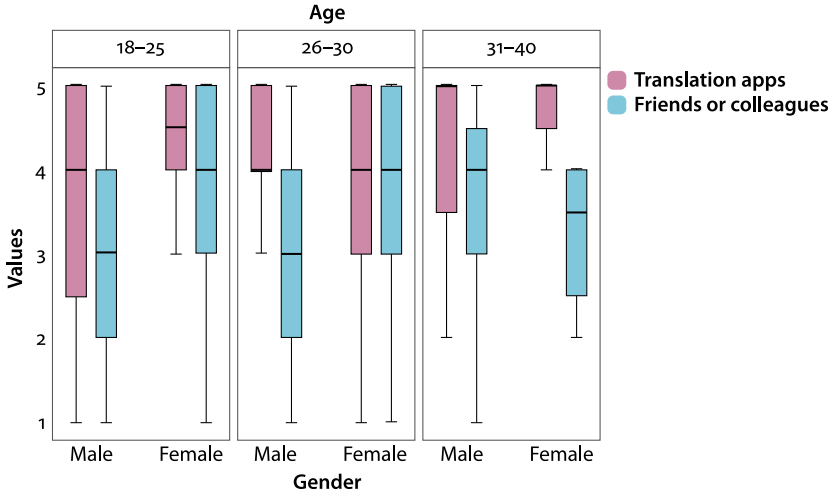


**Figure 5.** Frequency of using translation by apps and friends/colleagues

### 3.6 Trust analysis in different translation services

The mean and the standard deviation of trust statistics in OTS and NOTS are shown in Table 3. The mean values indicate the overall trend and the standard deviation represents the fluctuating status. On the basis of Table 3, translation apps and translation services by friends/colleagues are the most trusted among foreign nationals, with a same value of 4 (the maximum is 5).

**Table 3.** Descriptive statistics of different translation services

| | OTS | | | NOTS | | |
|---|---|---|---|---|---|---|
| | Community workers | Hotline 12345 | Call Center 962288 | Translation apps | Friends/ colleagues | Family members |
| Median | 3 | 3 | 3 | 4 | 4 | 3 |
| Std. Deviation | 1.28 | 1.34 | 1.26 | 1.1 | 1.15 | 1.3 |

Figure 6 then displays different variables in detail. Translation services by friends/colleagues (64%) and translation apps (62%) almost share the same proportion, which are the most trusted services, followed by family members (43%), community workers at the university (41%), Hotline 12345 (35%), and Call Center

962288 (35%). Thus, from Table 3 and Figure 6, it can be concluded that foreign nationals trusted NOTS more than OTS in COVID-19 public health communication, particularly translation services by translation apps and friends/colleagues. In this regard, the result is not consistent with the finding that machine translation is not trusted (O'Brien, Cadwell, and Lokot 2022). This counter-perspective indicates that trust is context-dependent and complex (Zand 2016; O'Brien, Cadwell, and Lokot 2022, 65) and that the empirical results of trusted sources can be contradictory, that is, crisis-affected populations present one source as both trusted and distrusted in the same setting (Cadwell 2020, 159).

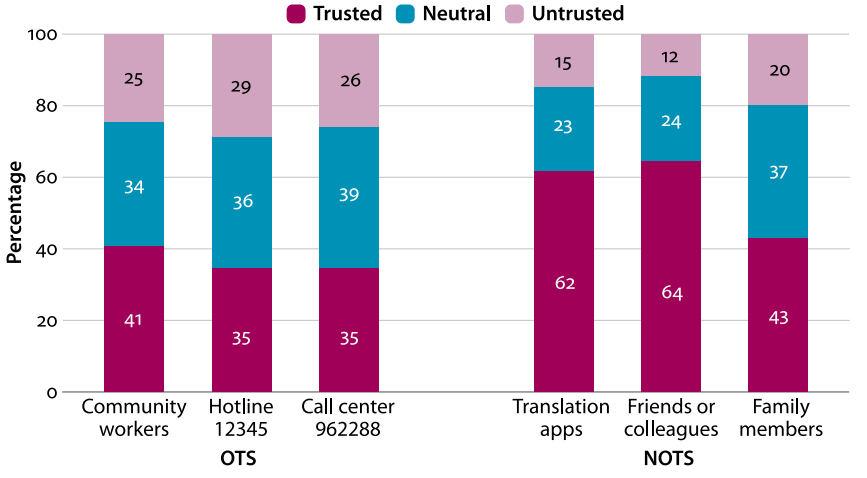


**Figure 6.** Trust in different translation services

In view of this analysis, Figure 7 displays the Boxplot of foreign nationals' trust in translation services by translation apps and friends/colleagues by age and gender. Considering Boxplot dispersion, male foreign nationals aged 18–25 show the highest trust in translation apps. Female foreign nationals aged 18–25 and 26–30, noticeably sharing similar variations, show the highest trust in translation services by friends/colleagues.

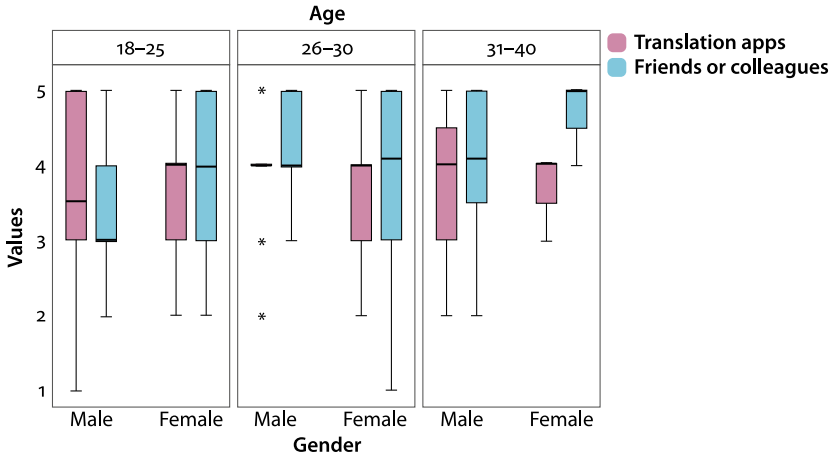


**Figure 7.** Trust in translation by apps and friends/colleagues

## 3.7 Results and analysis

Based on the above analysis, 3 major findings were identified as follows:

1. Non-official translation services (NOTS) which were more frequently used were more trusted among foreign nationals compared with official translation services (OTS).

Methodologically speaking, it is easier to discuss how trust is lost than gained (Pym and Hu 2022, 47). The reasons why OTS are less trusted than NOTS are analyzed. For one thing, "thin" trust appears when the bonds between governments and foreign nationals are weak because of their official status and reputation (Khodyakov 2007; Cadwell 2020; Karidakis et al. 2022). For another, the quality of public services is critical for people to determine whether governments can be trusted (Van de Walle and Bouckaert 2003, 891; Ye and Lyu 2020, 8). Consequently, public health services in Shanghai failed to meet the multilingual needs of foreign nationals during COVID-19 (Zheng 2020, 588), resulting in low trust, despite the fact that the Shanghai Municipal Education Commission (2021) have stated multilingualism in their translation policies (see more in *The Implementation of the Guidelines of Comprehensively Strengthening Language and Characters in the New Era in Shanghai*). Lastly, the social context of the COVID-19 lockdown and foreign nationals' psychological mindsets are taken into consideration in trust analysis. International students in Chinese universities have been exposed to psychological distress and their trust in institutions has been negatively linked with their anxiety levels during the COVID-19 lockdown (Khan et al. 2021). Participants in this research include international students, teachers, and administrative

staff, among whom the students account for the vast majority of the sample. As a result, their trust in people or institutions would be influenced by the social environment and their psychological mindsets.

2. Translation apps and translation services by friends/colleagues which were more frequently used were likewise more trusted among foreign nationals than other translation services.

Against the backdrop of the strict lockdown in Shanghai, translation apps facilitate direct dialogues between foreign nationals in the physical space and translators/interpreters in the cyber space. Translation apps in China mainly include those on WeChat and Baidu, both of which are universally acknowledged as the most convenient apps in China (Li et al. 2020, 533). WeChat Translate, from the most popular social media platform – WeChat, becomes "the newest online machine translation app" (Luo and Li 2022, 31), and Baidu Translate, from the dominant Internet search engine-Baidu, supports translation in 27 languages (He 2015), and in 200 languages at the moment according to the introduction of Baidu Translate. During COVID-19, it was found that audio translation apps promote health communication among foreign nationals (Zheng 2020, 593) and that foreign nationals emphasize the importance of translation apps for their daily communication in general and for health communication in particular (Li et al. 2020, 533).

Besides translation apps, foreign nationals frequently use translation services by friends/colleagues and have more trust in them. Studies show that higher levels of trust have been linked with increasingly intimate relations (Arlikatti, Lindell, and Prater 2007). Friends/colleagues as information mediators maintain intimate and strong bonds with foreign nationals and in this case, "thick" trust can be engendered (Khodyakov 2007; Cadwell 2020; Karidakis et al. 2022).

3. Male foreign nationals (18–25) with the highest frequency of using translation apps showed the highest trust in translation apps; female foreign nationals (18–25 and 26–30) with the highest frequency of using translation services by friends/colleagues showed the highest trust in them.

Previous studies have indicated that female users have a higher rate of social media communication than male users (Kelly et al. 2018; Leonhardt and Overå 2021), which could be responsible for female foreign nationals communicating with their friends/colleagues via social media, whereas male foreign nationals turn to translation apps regarding language barriers, especially when face-to-face communication is impossible in the physical world. Given that trust, psychologically speaking, is stable in adulthood in general (Sears and Funk 1999), the research presented here offers an explanation of the positive relationship between frequency and trust, that is, the higher frequency suggesting the higher trust.

## 4. Linear regression

### 4.1 Multiple linear regression

This section discusses how demographics affect or predict trust in OTS and NOTS. The multiple regression is used to test how each independent variable predicts the dependent variable and to understand which independent variables are important predictors for the dependent variable (Yockey 2016, 177). Here, the 4 independent variables are the duration of stay, gender, age, and education. The dependent variable is trust in OTS and NOTS separately. The use of multiple regression intends to answer the following questions:

1. when taken into consideration together, how do the 4 independent variables predict the dependent variable?
2. as for statistically significant predictors, how does each independent variable predict the dependent variable?

The first question is answered by Analysis of Variance (ANOVA) which aims to test whether the regression model, with all-included independent variables, significantly predicts the dependent variable. When Sig. < 0.05 ($p < 0.05$) in the ANOVA, the independent variables are significant predictors of the dependent variable (Yockey 2016, 185). In the ANOVA-OTS (Table 4), the regression statistic significantly differs from zero, $F(4,102) = 2.860$, Sig. = 0.027 ($p < 0.05$), which demonstrates that the 4 independent variables together significantly predict the dependent variable, and that the result could provide further support for the regression model (Roni and Djajadikerta 2021, 193). Nevertheless, in the ANOVA-NOTS (Table 4), $F(4,102) = 0.654$, Sig. = 0.626 ($p > 0.05$), which implies that the 4 independent variables together are non-significant predictors of the dependent variable. As a result, the multiple regression model of the 4 independent variables and the dependent variable (trust in OTS) is established to answer the second question in Section 4.

**Table 4.** ANOVA analysis

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| | | **Sum of squares** | **Df** | **Mean square** | **F** | **Sig.** |
| OTS | Regression | 19.207 | 4 | 4.802 | 2.86 | 0.027 |
| | Residual | 171.223 | 102 | 1.679 | | |
| | Total | 190.43 | 106 | | | |
| | Regression | 4.126 | 4 | 1.031 | 0.654 | 0.626 |

**Table 4.** *(continued)*

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| | | **Sum of squares** | **Df** | **Mean square** | **F** | **Sig.** |
| NOTS | Residual | 160.94 | 102 | 1.578 | | |
| | **Total** | **165.065** | **106** | | | |

## 4.2 Multiple regression model

Coefficients provide the essential values to show the statistical significance of each independent variable and to formulate a regression equation (Yockey 2016, 185). When Sig. < 0.05 ($p < 0.05$), the independent variable could explain a further significant proportion of the dependent variable (Acton, Fullerton, and Miller 2002, 170). Of the independent variables investigated in Table 5, the significance (p-value) of the duration of stay, gender, age, and education is 0.875, 0.696, 0.027, and 0.003, respectively. The results show that the p-values of age (Sig. = 0.027) and education (Sig. = 0.003) are less than 0.05 ($p < 0.05$), and that they are statistically significant predictors of trust in OTS. Since the p-values of the duration of stay (Sig. = 0.875) and gender (Sig. = 0.696) are more than 0.05 ($p > 0.05$), they are statistically non-significant predictors of trust in OTS. In this sense, when calculated in the multiple regression equation, age and education are included, the duration of stay and gender are excluded.

**Table 5.** Coefficients' analysis

| Coefficients | | | | | |
|---|---|---|---|---|---|
| | **Unstandardized coefficients** | | **Standardized coefficients** | **T** | **Sig.** |
| | **B** | **Std. error** | **Beta** | | |
| (Constant) | 3.134 | 0.435 | | 7.213 | 0.000 |
| duration | 0.018 | 0.113 | 0.016 | 0.158 | 0.875 |
| gender | −0.065 | 0.167 | −0.038 | −0.392 | 0.696 |
| age | −0.348 | 0.155 | −0.249 | −2.249 | 0.027 |
| education | 0.467 | 0.152 | 0.326 | 3.065 | 0.003 |

According to the multiple regression equation:

$$Y=a+\beta_1X_1+\beta_2X_2+\ldots b_nX_n$$

Y represents the predicted scores on the dependent variable; a is the intercept or constant; β stands for regression coefficient; X means the scores of the independent variable for each participant (Yockey 2016, 185–186).

The equation of age ($t$ (102) = −2.249, Sig. = 0.027) and trust in OTS is: $Y$ = 3.134+(−0.348X). It is noteworthy that the regression coefficient is negative ($\beta$ = −0.348), implying that every increase in the independent variable predicts a decrease in the dependent variable (Norris et al. 2012, 128). Hence, the relationship between age and trust in OTS suggests a linear negative relationship. In general, a younger-status score tends to correspond with higher trust and an older-status score with lower trust.

Additionally, the equation of education ($t$ (102) = 3.065, Sig. = 0.003) and trust in OTS is: $Y$ = 3.134+(0.467X). In this multiple regression equation, the regression coefficient is positive ($\beta$ = 0.467), implying that every increase in the independent variable predicts an increase in the dependent variable (Norris et al. 2012, 128). Therefore, the relationship between education and trust in OTS suggests a linear positive relationship. By and large, a higher education level tends to correspond with higher trust and a lower education level with lower trust.

### 4.3 Test of multiple regression model

In the normal P-P plot, the standardized residuals in the dataset densely clustering along the diagonal line indicate a normal distribution. The histogram also displays a bell-shaped curve, which is indicative of a normal distribution (Roni and Djajadikerta 2021, 197). It can be seen from Figure 8 that the scattered points tightly cluster along the diagonal line, and the histogram in Figure 9 follows the classic statistical bell curve. Therefore, the chosen sample follows the normal distribution, further illustrating that the established regression model is reliable.

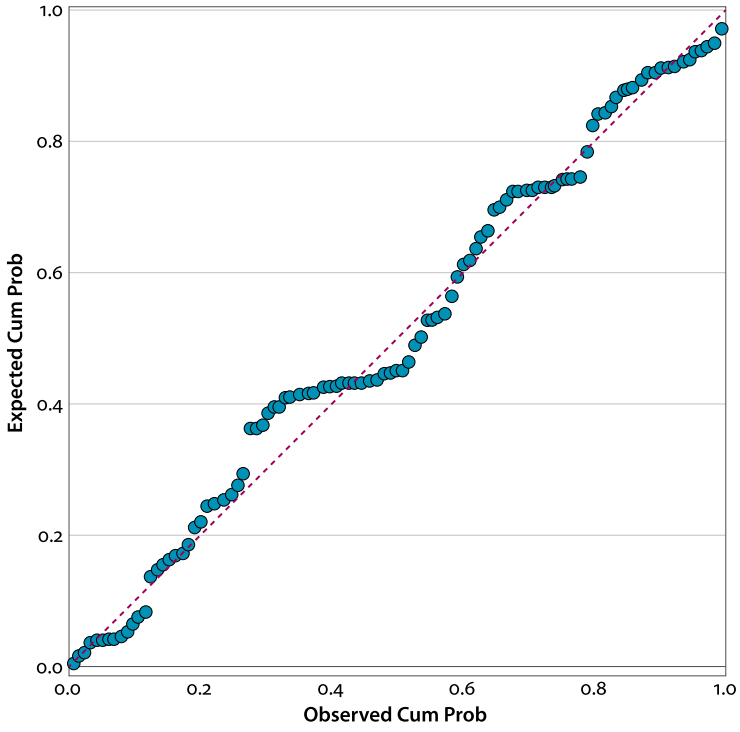


**Figure 8.** Residual P-P diagram

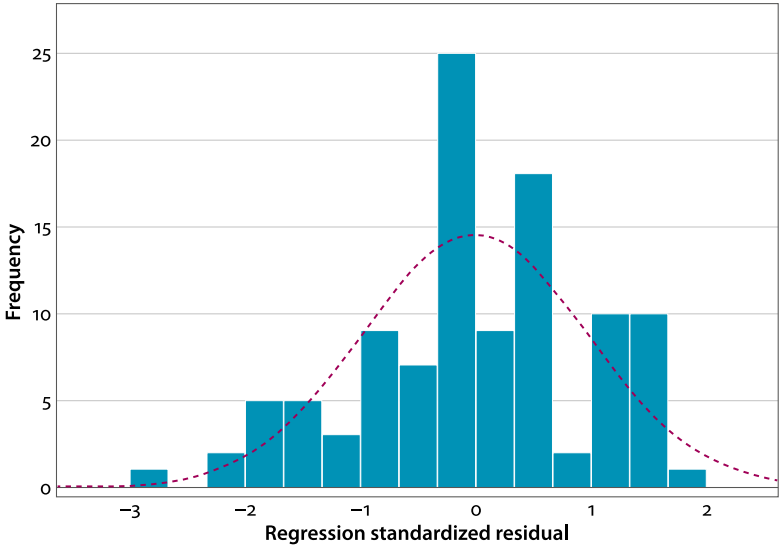


**Figure 9.** Histogram

## 5. Conclusion and implications

Based on questionnaire data, this research examines foreign nationals' trust in OTS and NOTS at a university in Shanghai during COVID-19. It has been found that NOTS (particularly translation services by translation apps and by friends/colleagues), which were more frequently used, were more trusted compared with OTS. It has also been found that demographic variables (education and age) were statistically significant predictors of trust in OTS, whereas they were statistically non-significant predictors of trust in NOTS. It further revealed that OTS were positively associated with education (Sig. = 0.003, $\beta = 0.467$) while they were negatively associated with age (Sig. = 0.027, $\beta = -0.348$). In addition, it is noteworthy that there was a positive relationship between the frequency of using translation services and trust, i.e., the higher the frequency the higher the trust.

Findings from this case study can provide policy insights for government departments more broadly and the representatives of CALD communities more specifically. First of all, it is suggested that Shanghai government departments could better meet the multilingual needs of CALD communities by improving multilingual service mechanisms, such as public health services in emergencies (see also Zheng 2020). As people's acceptance of policies and practices depends on their trust in government departments (Cvetkovich and Winter 2003; Yang and Cho 2017), it is appropriate for Shanghai government departments to "improve public service performance to enhance people's trust" (Van de Walle and Bouckaert 2003, 891; Ye and Lyu 2020, 8), and to effectively implement multilingual policies with attention to their practical effects. According to language policies in Shanghai, Shanghai government departments have issued foreign language translation policies for foreign nationals, particularly multilingual services in public areas. However, the multilingual services during major pandemics, as seen in COVID-19, are deficient (Yu and Zhang 2021; Teng 2022), which means that there are some unresolved issues relating to translation policies and practices in terms of public health communication. As a multilingual and multicultural city, Shanghai needs to be prepared to cope with multilingual needs in public health emergencies.

Secondly, it is suggested that the concerned stakeholders, such as the representatives of CALD communities, need to pay attention to the psychological well-being of foreign nationals during COVID-19, especially during times of lockdown. Existing studies have demonstrated that foreign nationals in China experience a range of psychological issues and that their mental state negatively influences their trust in institutions and people during COVID-19 (Chen et al. 2020; Khan et al. 2021; Li et al. 2020). Psychological counseling services are necessary to improve foreign nationals' mental and physical health, which will facilitate pan-

demic prevention and control on one hand and enhance mutual trust between foreign nationals and relevant bodies on the other. Moreover, a long-term trust relationship between psychological counselors and vulnerable people is necessary for their emotional well-being in the long term.

Last but not least, since trust is a crucial factor in crisis communication, it is suggested to build, maintain, and sometimes restore trust between stakeholders and CALD members, before, during, and after a crisis. Based on the above analysis, there are still some problems to be solved to promote official communication and enhance mutual trust among CALD communities in Shanghai. As for the present study, several limitations could be addressed by follow-up studies. The questionnaire survey was conducted during the COVID-19 lockdown and whether the results would be the same in a non-lockdown situation remains unknown: further surveys or interviews could answer this question. This study is also limited by the small sample size and the snowball sampling technique; follow-up research could use bigger sample sizes and mixed sampling methods. Despite these limitations, however, this research provides empirical evidence on trust research, gives insights into the relationship between trust and demographic variables, conducts quantitative and qualitative analysis on OTS and NOTS, and makes recommendations for concerned bodies such as policymakers and the representatives of CALD communities. Furthermore, it investigates foreign language translation practices and analyzes trust dynamics in a Chinese context, which lays the groundwork for later studies in this area.

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