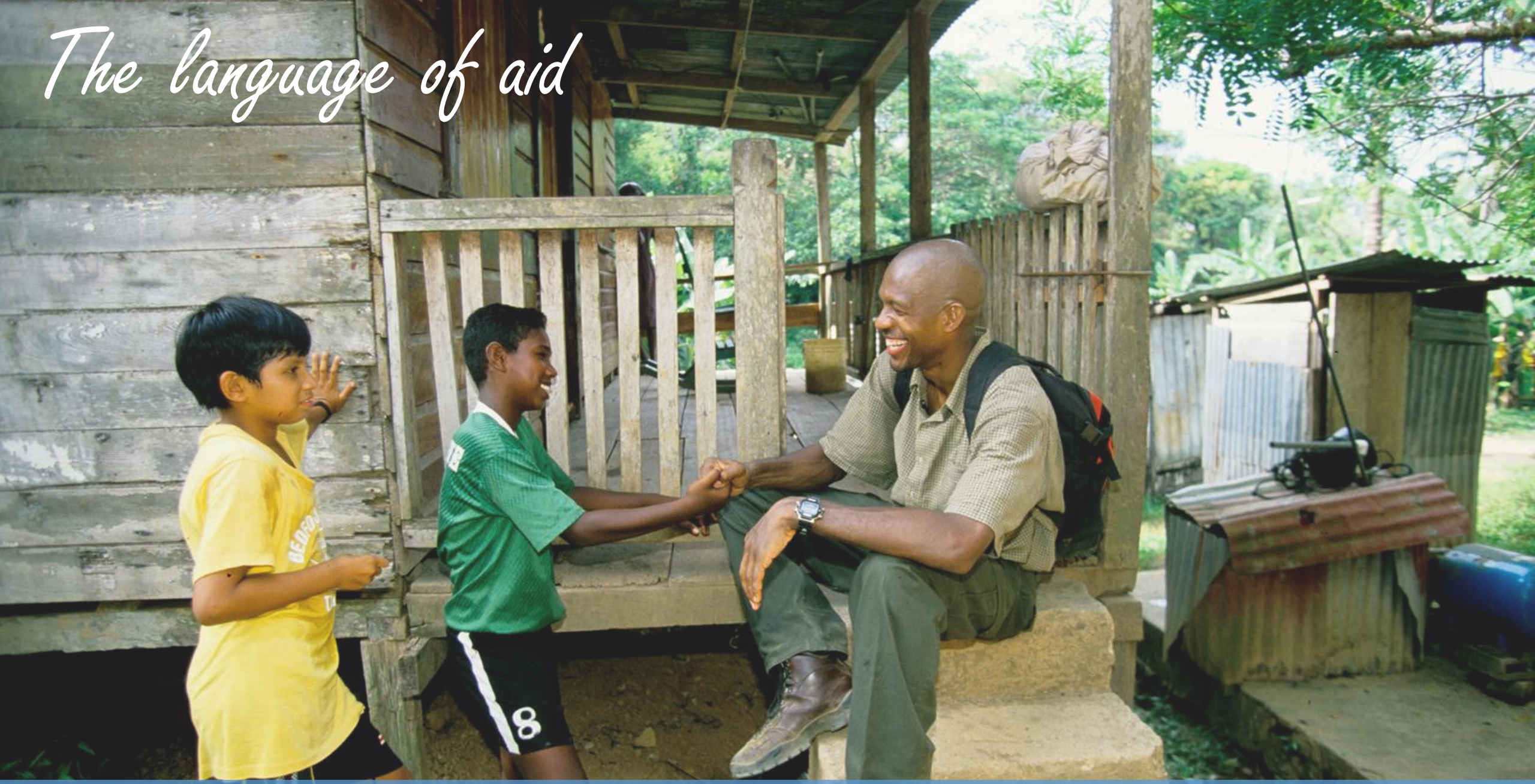
# The language of aid



*The most important foreign languages for English-speaking job seekers in global development and humanitarian relief*

*By Ma. Eliza J. Villarino, June 2016*

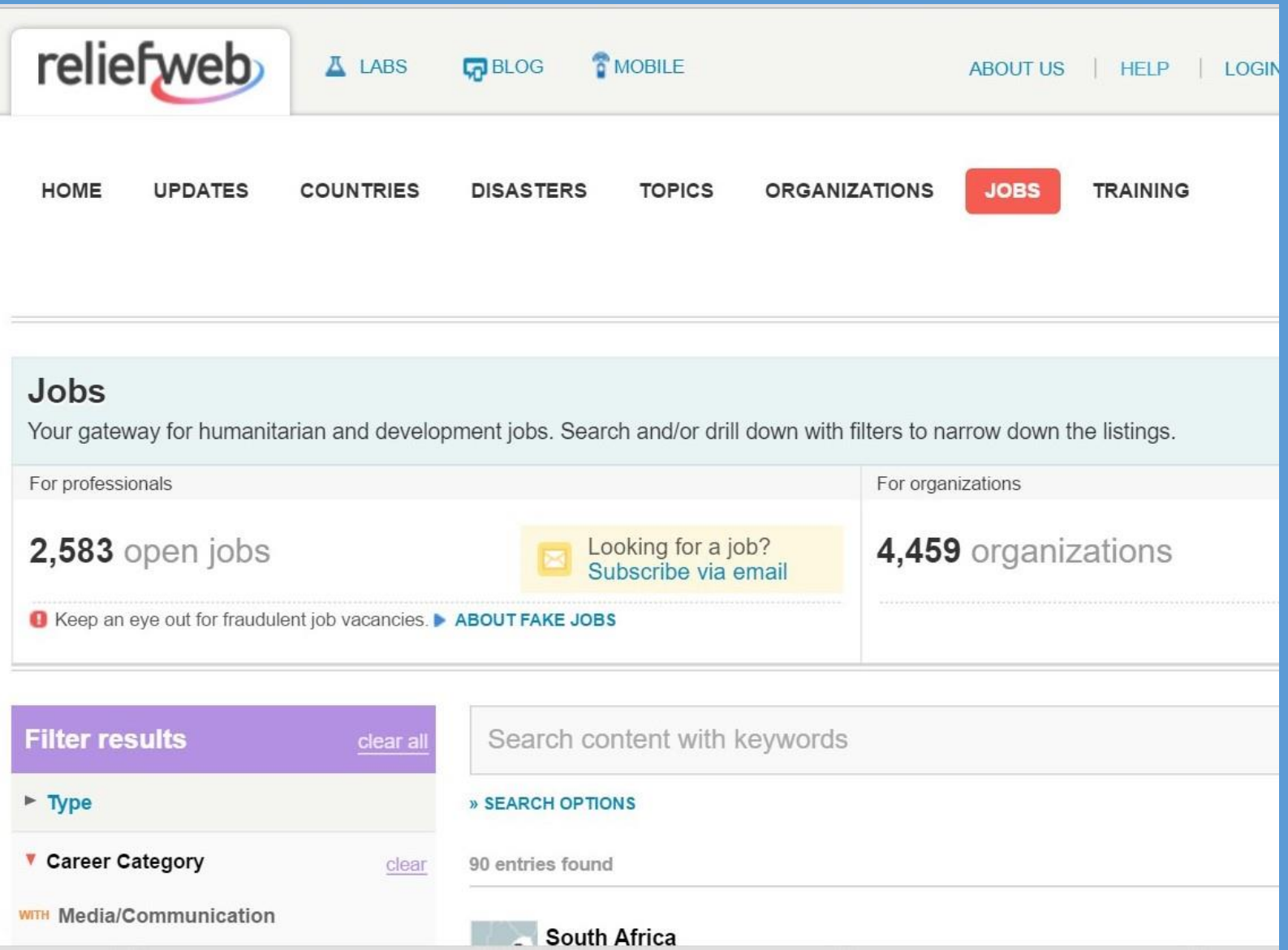
# Background


Employers in the aid industry often look for candidates with foreign language skills

Question for job seekers:
Which foreign language to invest time in learning

Question for universities:
Where to focus language training on

# Where to find data




Reliefweb:

- 2,000+ open jobs at any given time
- Publicly available
- Job ads from 2011 can be extracted via API

# How to measure demand

- Focused on job ads that are (1) written in English and (2) indicating the position is located in English-speaking donor countries (US, UK, Canada, Australia and Ireland)
- Based on the proportion of job ads seeking English-speakers with certain foreign language skills (French, Arabic, Spanish, Russian, Chinese, Portuguese and “local” languages)

# Collecting and cleaning data

```r
library(jsonlite)
library(plyr)
library(stringr)
library(gdata)

rwjobsraw1 <- fromJSON("http://api.reliefweb.int/v1/jobs?offset=0&limit=1000&preset=analysis&
filter[field]=date.created&filter[value][from]=2015-05-01T00:00:00%2B00:00&filter[value][to]=
2015-05-31T00:00:00%2B00:00&&fields[include][]title&fields[include][]=body&fields[include][]=
theme.name&fields[include][]=country.name&fields[include][]=type.name&fields[include][]=exper
ience.name&fields[include][]=career_categories.name&fields[include][]=date.created&fields[inc
lude][]=id&fields[include][]=source.name&fields[include][]=source.type.name")

#### Assign data set to "rwjobs1" and review column names
rwjobs1 <- rwjobsraw1$data$fields
colnames(rwjobs1)
View(rwjobs1)

#### Unlist nested lists
rwjobs1$theme <- llply(rwjobs1$theme, unlist)
rwjobs1$type <- llply(rwjobs1$type, unlist)
rwjobs1$experience <- llply(rwjobs1$experience, unlist)
rwjobs1$career_categories <- llply(rwjobs1$career_categories, unlist)
rwjobs1$country <- llply(rwjobs1$country, unlist)
rwjobs1$date <- llply(rwjobs1$date, unlist)
rwjobs1$source <- llply(rwjobs1$source, unlist)

#### Clean dataset by removing unneccesary characters and splitting strings
rwjobs1$source <- gsub("\\c\\(", "", rwjobs1$source)
rwjobs1$source <- gsub("\"", "", rwjobs1$source)
rwjobs1$source <- gsub("\\)", "", rwjobs1$source)
source_split <- strsplit(rwjobs1$source, split = ",")
select_el <- function(x, index) {x[index]}
org_name <- lapply(source_split, select_el, index = 1)
org_type <- lapply(source_split, select_el, index = 2)
rwjobs1$organization <- as.character(org_name)
rwjobs1$organization_type <- as.character(org_type)
rwjobs1$source <- NULL
```

Chunk 1 R Markdown

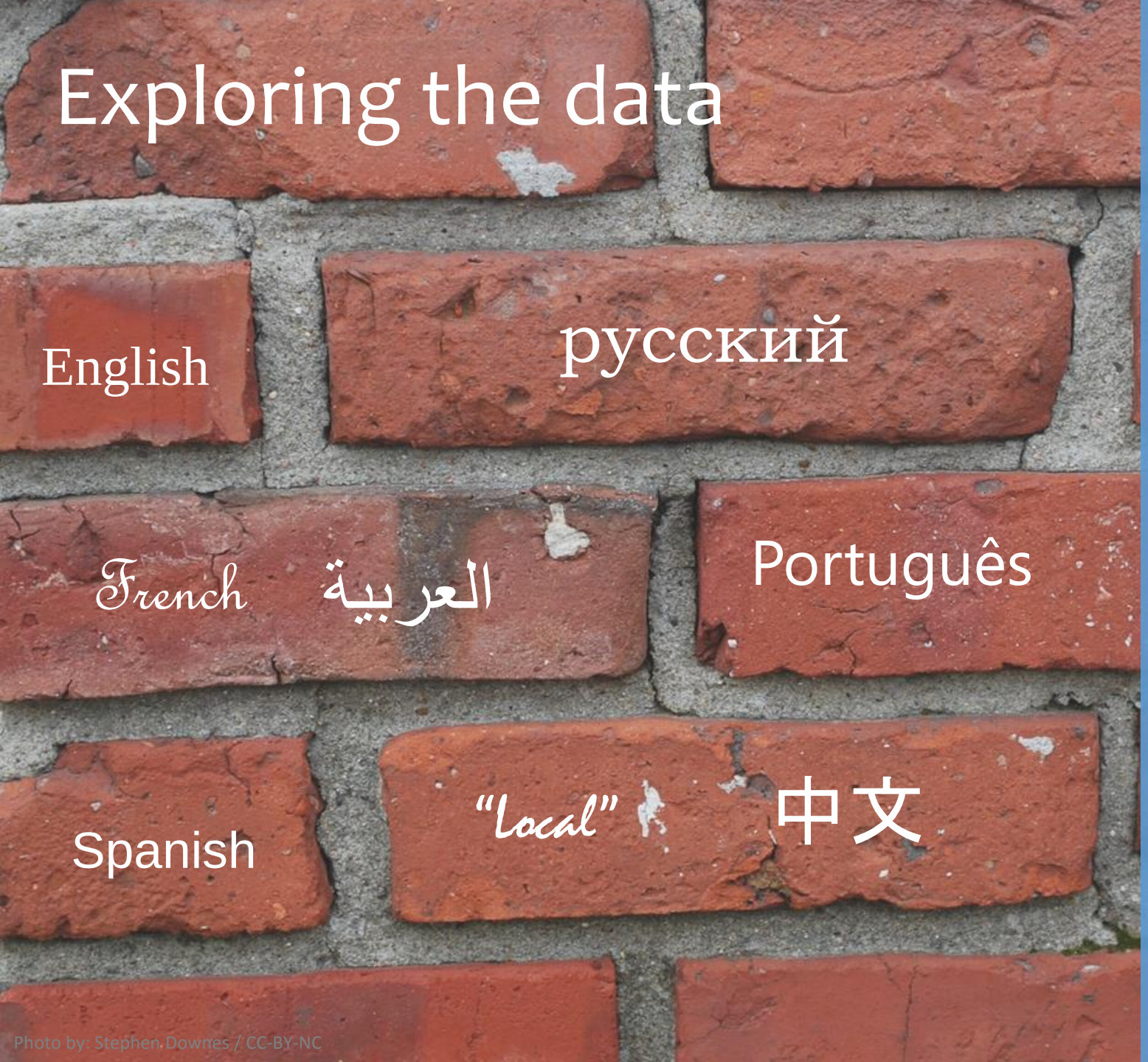
**102,343**

unique data entries or

**job ads** posted from

March 2011 to June 15, 2016.

# Exploring the data



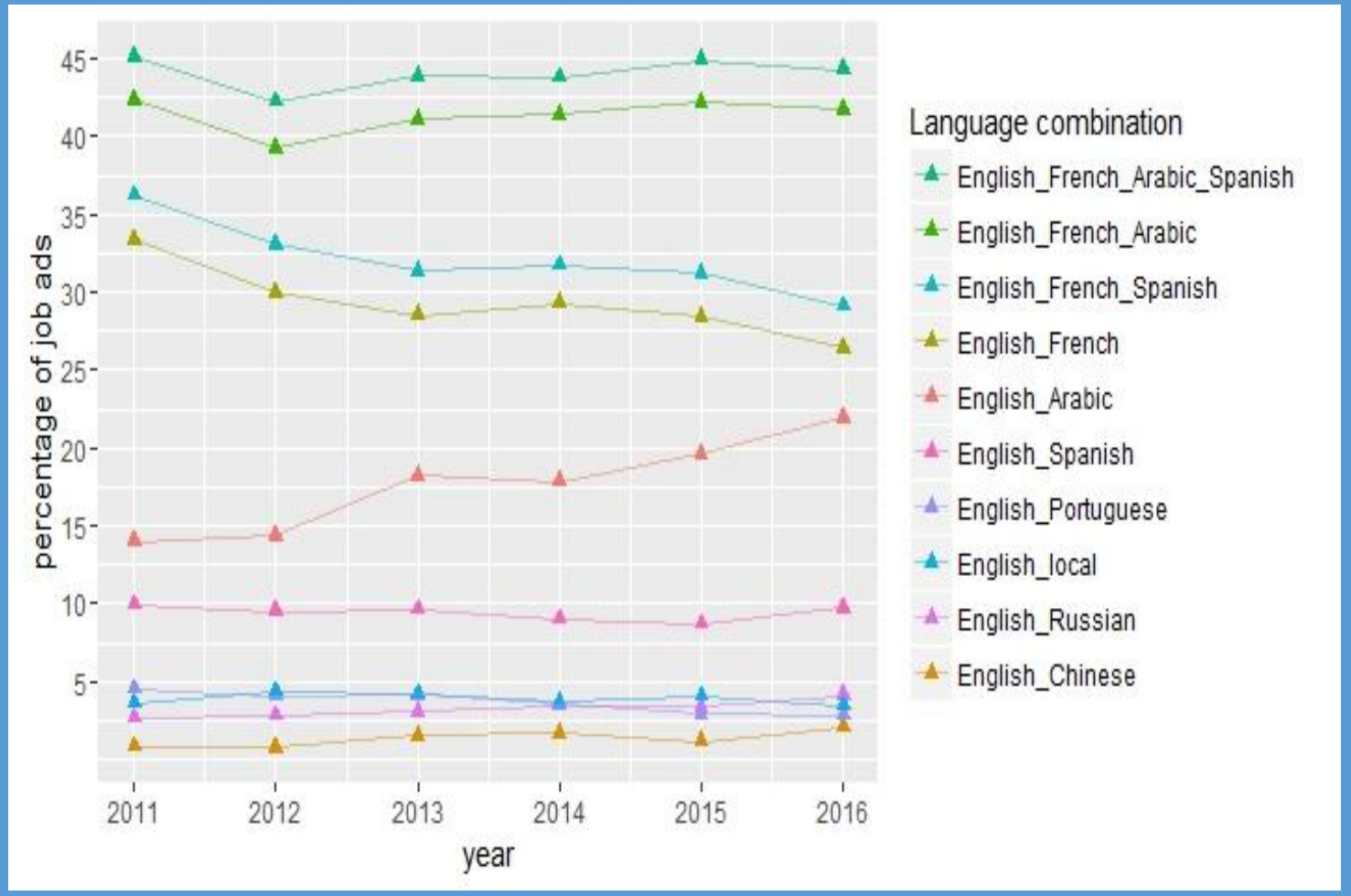



- Counted and added up mentions of English and foreign languages in the ads, then divided the sums by the number of total job ads (74,137 after filtering based on the criteria)
- Filtered the data by year to see annual patterns in the demand

# Annual demand trends

| year | English-French | English-Arabic | English-Spanish | English-Russian | English-Chinese |
|---|---|---|---|---|---|
| 2011 | 33.4 | 14.00 | 9.95 | 2.68 | 0.81 |
| 2012 | 29.95 | 14.39 | 9.51 | 2.81 | 0.71 |
| 2013 | 28.54 | 18.24 | 9.65 | 3.05 | 1.53 |
| 2014 | 29.31 | 17.86 | 9.03 | 3.48 | 1.66 |
| 2015 | 28.41 | 19.64 | 8.71 | 3.37 | 1.15 |
| 2016 | 26.47 | 21.96 | 9.74 | 4.09 | 2.05 |

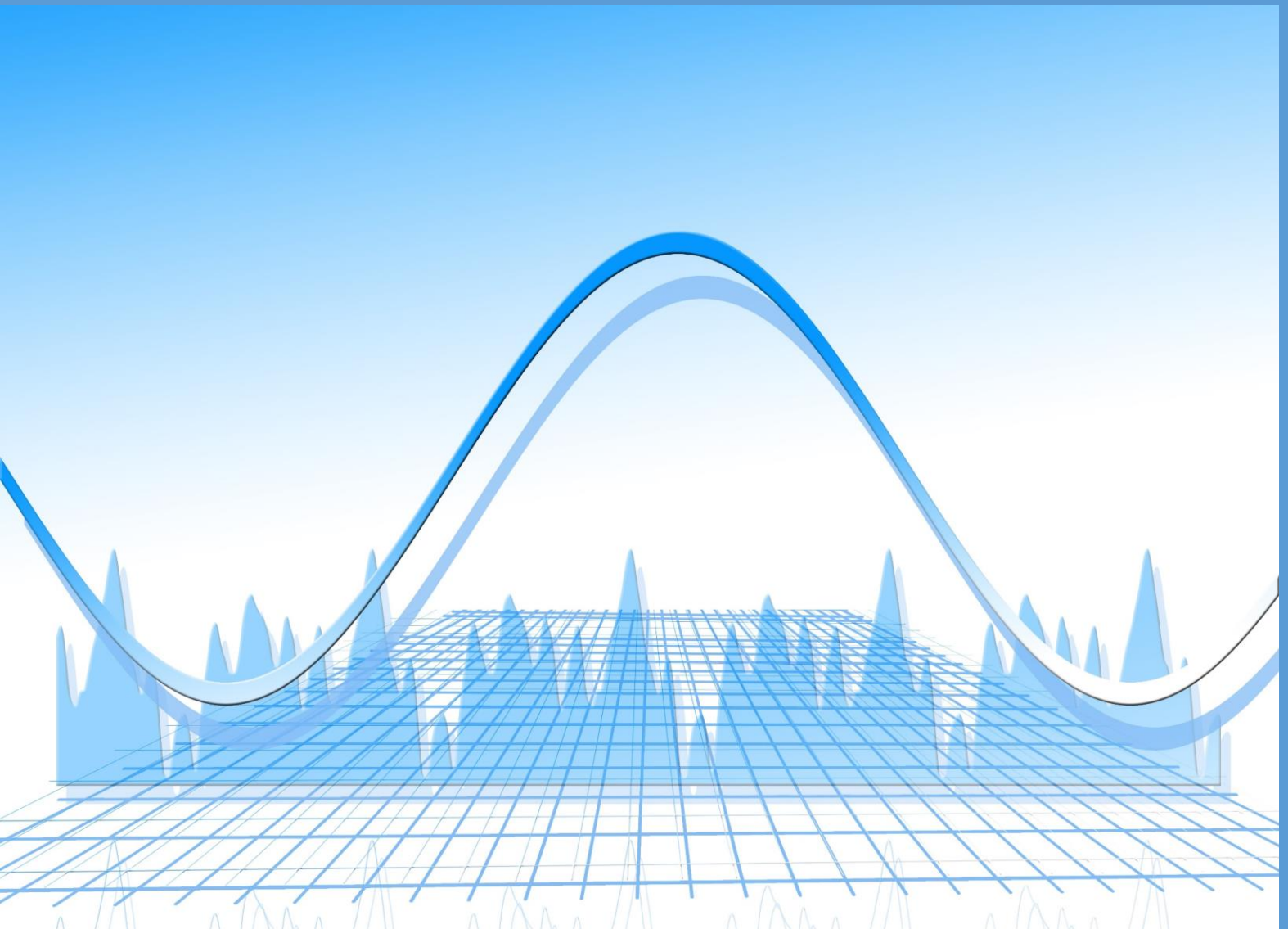
| | English-Portuguese | English-local | English-French-Arabic | English-French-Spanish | English-French-Arabic-Spanish |
|---|---|---|---|---|---|
| 2011 | 4.51 | 3.6 | 42.39 | 36.23 | 45.15 |
| 2012 | 4.11 | 4.37 | 39.25 | 33.07 | 42.29 |
| 2013 | 4.12 | 4.21 | 41.13 | 31.4 | 43.88 |
| 2014 | 3.54 | 3.69 | 41.42 | 31.74 | 43.81 |
| 2015 | 2.92 | 4.06 | 42.24 | 31.18 | 44.93 |
| 2016 | 2.83 | 3.43 | 41.72 | 29.12 | 44.31 |



# Observations

- Highest demand: English-French speakers; least demand: English-Chinese speakers
- About 4 in 10 jobs seek English-French-Arabic speakers
- Over the last 5 years: declining demand for English-French speakers; increasing demand English-Arabic job candidates
- A steady demand for English speakers who know Spanish, Russian, Portuguese, Chinese and local languages

# Analyzing data



Performed:

- One-sample t-tests (hypothesis testing of the assumptions about the demand for foreign language skills)
- Two-sample z-test between the demand for Portuguese and that for local languages
- Linear regression to see whether foreign aid affects the demand for English-French and English-Arabic speakers

# Results

- Significant relationship between foreign aid (commitments or disbursements) and the demand for English-French job candidates
- Greater significance of the relationship between foreign aid commitments and the demand for English-French job candidates than the relationship between foreign aid disbursements and such a demand
- No significant relationship between foreign aid and the demand for English-Arabic speakers apparently

# Takeaways

| English speakers who know… | Sought by (in 2016) |
|---|---|
| French | ~ 1 in 4 jobs |
| Arabic | ~ 1 in 5 jobs |
| Spanish | ~ 1 in 10 jobs |
| Russian | ~ 4 in 100 jobs |
| Local languages | ~ 3 in 100 jobs |
| Portuguese | ~ 3 in 100 jobs |
| Chinese | ~ 2 in 100 jobs |

Demand for English-Arabic speakers is catching up with that for English-French speakers

Foreign aid affects trends in the demand for English-French speakers but not the patterns in the demand for English-Arabic speakers

# Recommendations

- For aid industry job seekers, invest in learning French
- If already fluent in French, consider learning Arabic
- For universities with academic programs focused on global development and humanitarian relief:
  - Concentrate language training on French and Arabic
  - If without language training component, this study provides a good case for starting such a program or partnering with language learning centers