

## REPORT ON APPS FOR TRAINING IN OFFICIAL STATISTICS AND MOTIVATIONAL CASE STUDY STATISTICS VIDEOS FOR LEARNING STATISTICS

The three web apps for Official Statistics are now on the ISLP website where they can be easily accessed:

<https://iase-web.org/islp/Resources.php?p=Apps>

This is located on the website of the ISLP (International Statistical Literacy project) based in Finland. Due to the changes in IT arrangements with John Shanks, Greg Trounson, our local IT person, cannot obtain updated usage data beyond 2022.

The three Apps were developed in this Dept. Neville Davies with a web developer, Dominic Mattigneti, also from the RSS Education Unit then at Plymouth University, and Sharleen Forbes spent three months in Dunedin four years ago using our IT resources and facilities. Funding came from Victoria University in Wellington, the Campbell Fund of the New Zealand Statistics Association, and free accommodation for the three visitors over the summer was provided in Dunedin. The apps are interactive and free to use with concept discussion, references, assessment and self-learning testing.

Below is a summary of usage supplied by Greg from 1 November 2017 to the end of 2022.

<b>Measuring Price Change</b>	<b>18939 hits</b>
<b>Comparing Populations</b>	<b>15569 hits</b>
<b>Graph It in Excel</b>	<b>20023 hits</b>

### By country

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US, United States: 10380  
NZ, New Zealand: 1681  
IN, India: 1594  
GB, United Kingdom: 1427  
PH, Philippines: 1346  
AU, Australia: 1065  
CN, China: 938  
CA, Canada: 910  
FR, France: 542  
ZA, South Africa: 453  
RU, Russian Federation: 438  
DE, Germany: 432  
MY, Malaysia: 366  
SG, Singapore: 250  
MD, Moldova, Republic of: 245  
PK, Pakistan: 240  
IE, Ireland: 231  
NL, Netherlands: 205

KR, Korea, Republic of: 189  
NG, Nigeria: 188  
FI, Finland: 178  
ID, Indonesia: 166  
TH, Thailand: 159  
EU, Europe: 158  
SE, Sweden: 157  
NO, Norway: 152  
IT, Italy: 149  
HK, Hong Kong: 148  
JP, Japan: 144  
BR, Brazil: 142  
ES, Spain: 129  
KE, Kenya: 118  
VN, Vietnam: 113  
AE, United Arab Emirates: 113  
TR, Turkey: 107  
MX, Mexico: 100

The twenty motivational "Statistics in Research" videos are at:

<https://www.stats.otago.ac.nz/research/Statistics-in-Research/>

This is still located on our Department of Mathematics and Statistics website. Below is a table of visitors each month to the Statistics Videos page since its inception in April 2011, now totalling 118,012 visits. This counts visits from unique off-campus addresses in any given month, so can be regarded as a measure of how many people are using this site.

Below is a list of hits by country over the past six months, for places with more than 10 hits. This is extracted from public records about what countries host which Internet addresses, which can be falsified, so should not be considered 100% accurate but nonetheless a reasonable indicator.

By Country

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US, United States: 1419  
CN, China: 394  
NZ, New Zealand: 217  
RU, Russian Federation: 147  
FR, France: 136  
Unknown: 82  
KR, Korea, Republic of: 80  
GB, United Kingdom: 54  
CA, Canada: 54  
AU, Australia: 48  
MD, Moldova, Republic of: 39  
IR, Iran, Islamic Republic of: 38  
DE, Germany: 30  
IE, Ireland: 25

JP, Japan: 22  
FI, Finland: 22  
IN, India: 21  
GH, Ghana: 21  
KE, Kenya: 20  
NL, Netherlands: 19  
CZ, Czech Republic: 18  
ZA, South Africa: 15  
TZ, Tanzania, United Republic of: 13  
PL, Poland: 12  
UG, Uganda: 11

The original GenStat code has been replaced by R code. Lessons have been converted to R code. All data produced by the researchers has been presented in EXCEL which means the analyses can still if necessary be imported easily into other statistical software. Staff from departments with their students taught statistics as a service in our Department note that statistics in research publications in their own subject areas indicate wide and increasing use of R code. They have therefore requested we introduce the teaching of R in our classes. Evidence is summarised in **Lai et al. Evaluating the popularity of R in ecology. *Ecosphere*, 10(1), Article e02567.** We had a **University of Otago CALT grant** to fund this development which allowed us to employ a final year statistics honours student to make the changes over the summer. I then presented an **invited refereed joint (Harraway, Schofield & Allen) paper at the ICOTS 11 conference, Argentina, in 2022.**

A further motivational video is soon to be recorded and edited in the University Media Production Unit by a Scientist from the local product authentication company, Oritain, analysing product authentication with an example. I recently presented a paper in China now published in **Forensic Science International** about the origin of Ginseng samples being sold in the markets in Chicago and San Francisco competing with ginseng grown by the Wisconsin Farmers who funded the collection and processing of the data in the Chemistry Department at the University of Otago under the direction of Dr Barry Peake who collected the data when on leave in Wisconsin. The profiles of the Asian Ginseng are different to the profiles of the Wisconsin ginseng.

The Apps for Official Statistics and the Statistics in Research videos are being used as resources by the Indian Statistics Education Centre (ISEC) in Kolkata to assist a foreign aid project for India which takes workers in Governments in developing countries to India for statistics training.

They have also been made available to the United Nations Statistics education unit in Geneva who are developing their own modules for training United Nations Staff.

John Harraway