

THE IRISH DATA AND STORY ARCHIVE – A RESOURCE FOR UNDERGRADUATE TEACHING

Ailish Hannigan
University of Limerick, Ireland
Ailish.Hannigan@ul.ie

One of the six key recommendations from the Guidelines for Assessment and Instruction in Statistics Education (<http://www.amstat.org/education/gaise/>) is the importance of the use of real data for teaching statistics. In order to engage and motivate students learning statistics, the data must be real but also the relevance of the data to the particular population of students is important. The objective of this project was to develop an Irish Data and Story Archive – a unique, currently unavailable resource for teaching statistics using data relevant to people living in Ireland. The data was sourced from academic researchers, government organizations including the Irish Central Statistics Office and the Irish Social Science Data Archive. This study reports on the piloting of this project in the University of Limerick, the datasets used and its success as a resource for an undergraduate module in introductory statistics.

Individual researchers from a range of departments in the University of Limerick were asked to provide datasets and their motivation for collecting the data. The data and the ‘story’ of the data were used for teaching undergraduate students in an introductory module in statistics in 2009. The module consisted of 160 science undergraduates covering a wide range of degrees from food science to sports science. The datasets were made available to the students via a website and were used in computer laboratory sessions for the module. One of the datasets used was from the body composition project (www.ul.ie/bodycompositionstudy) which aimed to examine the body composition of 2000 adults in the local population. This was used to motivate the sports science students to engage with statistical techniques. Other examples included data from the Irish Central Statistics Office to motivate the teaching of probability e.g. are all days of the week equally likely days to be born in Ireland? The National Farm Survey of farm households in Ireland carried out by the Agriculture and Food Development Authority was used to motivate the food science students. Qualitative feedback from the students at the end of the course was very positive with comments that the examples made “each section tangible and easier to understand”, were “relevant to real life” and “very interesting”. Agreement with the statement that the course had increased knowledge in statistics was 4.2 on a 5 point scale.

The next phase of this project is to expand the Irish Data and Story Archive to include more datasets and encourage its use in other modules within the University as well as in other third level institutions in Ireland. The ‘story’ of the data also needs developing in terms of format and presentation for example video footage of the producers of the datasets. The importance of collaborating with the producers of the datasets is vital to illustrate the relevance and application of statistics. Including a wide range of stakeholders in this project i.e. academic researchers, government organizations, market research companies, students and teachers will help achieve the long-term aim of improving statistical literacy in Ireland.