Editor's Notes

I am pleased to be able to present this special double issue of the IASSIST Quarterly (IQ issues Vol. 28-2 and 28-3). We have eight articles on the subject of "data literacy". This subject has been the focus of many IASSIST efforts and the enhancement of data literacy is the daily work of many IASSIST members. These members are making a great contribution to the building of competences for evaluation of information. Furthermore, I am glad to announce that these articles have been collected by some very active chairpersons: Louise Corti from the UK Data Archive at the University of Essex and Wendy Watkins from the Library Data Centre at the Carleton University Library. The work of compiling articles for the IASSIST Quarterly is not always the isolated effort of the IQ-editor. Others are very much welcome to do special issues like this one. Great thanks to Louise and Wendy.

Karsten Boye Rasmussen, June 2005

Guest Editor's Notes

This special issue of IQ brings together a collection of papers centred on the important topic of literacy as it relates to data. As we shall see from the contributors, a number of terms are often used: data literacy, information literacy, statistical literacy, quantitative reasoning. These concepts are different, yet they intertwine. But they all point to one key element: the importance of acquiring skills for evaluating 'information.' Literacy means having the knowledge, skills and experience to tackle the interpretation of research findings and confront data from an informed and critical persuasion.

The eight contributions presented here arise out of IASSIST annual conferences held over the past two years. The introduction of data in the classroom and the teaching of statistical literacy has become a growing concern for data librarians, and this area now features as an increasingly popular theme at successive IASSIST events. In 2004, at the Madison Wisconsin conference, a session on Developing Statistical Literacy: Think Globally, Work Locally was held while in 2003 in Ottawa, two sessions were devoted to Advancing Research and Data Literacy: Empowering Users and Understanding the Strength of Numbers: Statistical Literacy.

Data librarians are at the front line - students hungry for data cannot completely rely on their own departments for guidance in more complex data or analytic matters. We have all experienced the flurry of queries at dissertation time, that go well beyond the basic question of How do I download this dataset or open this codebook? Frighteningly basic questions plague our help desks on a daily basis: Help, I have downloaded data but have no clue what to do next. What is SPSS? What is the difference between a variable and value? I have 468 cross tabs, all which have a p-value of .5 - what does this mean? Data librarians have a role to play in helping facilitate the use of real data in the classroom, and to help support faculty to improve data and statistical literacy. But, for the data librarian, how and where does such accumulation of knowledge and skills take place?

All the papers here describe particular ways in which the challenges of improving statistical literacy have been addressed at an institutional or regional level. They provide useful and appealing case studies that have been trialed to help educate new students and lecturers, supervisors, mentors and data support staff who do not feel entirely competent in working with numeric data.

In the first paper, Milo Schield considers, specifically, the challenges of teaching data and statistical to students, and how data librarians can play a role in this education. He discusses the meaning and interaction of the terms information, data and statistical literacy and how they all engender critical thinking skills. Karen Hunt goes on to raise the key challenge, highlighted in all the papers, of how to help students develop information literacy skills. She discusses her own experiences, as the University of Winnipeg Information Literacy Coordinator, of attempting to help integrate data literacy into the subject curriculum through collaboration with teachers. What are the best practices for developing data literacy and what aspects can be applied from the information literacy field? Again, the importance of training for data librarians in how to both promote and teach data literacy arises as a pivotal matter.

The next two papers move on from Karen Hunt's local initiative to examine broader issues concerning the training of staff within libraries and data libraries to be better equipped to service data requests and support users requests. Wendy Watkins discusses the creation of a national peer-to-peer training programme for data librarians in Canada, that came about as a result of the Canadian's Data Liberation Initiative (DLI) in 1996. The initiative opened a new channel of access to Statistics Canada's quantitative and spatial data files, for which a national support infrastructure was not already established. Her paper elucidates the strategies through which a core set of competencies was established throughout data library services in Canada. She points to the challenges of initiating a large-scale training programme, starting from a small base of seasoned data librarians, but goes on to highlight the success of regional networking and the rapid escalation of an enthusiastic data community.

Anne Gray's paper follows on with another Canadian example in which she examines the relevance of data and statistical literacy for librarians. She argues that librarians benefit from having a healthy interest in data and statistics so they can provide greater assistance to users. The paper provides us with a couple of interesting case studies showing ways of evaluating statistically-oriented publications from a methodological and analytical perspective. How do we recognise and judge quality of content? Anne Gray usefully points us to Canadian and US standards for documenting the quality of government statistical publications.

The next paper by Susan Czarnocki and Anastassia Khouri offers us a detailed account of how the McGill Libraries Electronic Data Resources Service (EDRS) was set up and how it is currently run. The service is part of a grouping of library services that provide access and support for various kinds of digital information in the form of maps, electronic data and digital government information. Staff with specialisations in particular kinds of data resources work to support for all research and instructional activities. The paper describes examples of approaches taken with respect to supporting use of data in undergraduate curricula and for graduate students.

Daniel Edelstein and Kristi Thompson describe the work of the Data and Statistical Services (DSS) unit in the library at Princeton, in providing both consulting on statistical methods and software support for data library users. The staff provide a practical, problem-oriented and intuitive approach that helps individual social science students feel more confident about taking on statistical analysis for their research projects. The paper argues that well-resourced data professionals can work proactively and collaboratively with faculty to enhance the statistical skills of undergraduate students.

The last two papers consider actual examples of teaching sometimes conceptually difficult statistical topics in context. Context can mean embedding the learning old techniques in real-life applied social problems, building on social theory, or by situating the confrontation and manipulation of data in a friendly user interface, with simple metadata to hand.

Louise Corti provides a behind the scenes look at a project undertaken to increase the use of real data sources in the classroom, and in a more ambitious sense, to help improve the data and statistical literacy of those studying social sciences, from school students age 16-19 to postgraduates. In a collaborative effort of a national data archive with teachers, the project created a set of free teaching and learning data and statistics-oriented resources based on the study of crime in society. Learning strategies were adopted that encourage the teaching of research methods and statistics within a substantive context. An online set of resources was created with data exploration available though the online data browsing system, Nesstar. The paper addresses both the positive and challenges that arose from running the project. In a similar way, Aaron Shrimplin's and Jen-chien Yu's piece provides a case study of using another brand of innovative web-based tools for data presentation and exploration, SDA. Through close collaboration with faculty, the local initiative showed both students and teaching staff at Miami University how data and data analysis could be accessible to them.

Shrimplin and Corti's papers both describe projects and activities that offer 'data confrontation' through the use of tailored datasets delivered through user-friendly web interfaces, but while situated in substantive reasoning. Students are enticed and lecturers quickly appreciate the benefits that complimentary e-learning approaches can offer their own typically linear teaching pathways.

These papers in this Special Issue offer us useful practical ideas about how to help students with handling, manipulation and interpretation of data. The ideas described point to collaboration as the key to achieving informed and intuitive appreciation and use of data. Starting locally by supporting faculty is a great way to test out some of practical strategies described here.

Other benefits of promoting and improving ways of utilising data in the classroom are also apparent. Improved data literacy hopefully means greater usage of our richly-stocked national data stores. And, upping our user figures can be seen as a welcome added benefit.

All of the authors featuring are or have been dedicated IASSIST members. We all recognise that IASSIST has a significant role to play in helping nurture new generations of data service providers who can help build a persistent culture of statistically-literate students, researchers and professionals. And may this wave of commitment to and enthusiasm for the cause of statistical literacy thrive!'!'

Louise Corti and Wendy Watkins, May 2005