Appendix 1: Crosswalk of Five Data Literacy Competency Lists

Grey cells indicate that that competency list had no competencies directly addressing that concept.

If competencies are numbered, they are numbered as they were by the original authors.

The list is sorted against Carlson et al 2011, as it is the most comprehensive competency list when compared with the others.

Carlson et al 2011	Qin & D'Ignazio 2010	Piorun et al 2012	Calzada Prado and Marzal Miguel 2013	Schneider 2013
Databases and Data Formats	2. Intro to databases & database programs & data attributes Data structures and models 6. Data formats 4. Fundamentals about data: forms, scales, types, levels	4. Explain the range of research data types, stages, formats, and relevant software that may need to be managed and preserved in your future research efforts	1. Understanding data	
Discovery and Acquisition of Data			2. Finding and/or obtaining data	
Data Management and Organization	9. Managing data 1. Data aggregation 2. Data collections by type/ requirements analysis 3. Understanding research/resource/ reference data collection level . Data and users 5. Organizational planning	1.Explain the need for managing/sharing; 3. Use an abbreviated data management plan or data curation profile to manage your research project data and define roles/responsibilities of research staff; research data, relevant public policies, and the lifecycle continuum for managing and preserving research data	4. Managing Data	Documentation (research environmental, temporal)/Context /From Information Management to Knowledge Management Coordination of Practice across Institution/ Negotiation Skills/Risk & Disaster Management/ Contingency/ Advocacy, Promotion, Marketing
Data Conversion and Interoperability				
Quality Assurance				

Metadata	7. Communication of data, markup languages/ metaformats 8. Describing data sets	5. Identify what descriptive data needs to be documented in a standard way via metadata to allow your research data sets to be managed and preserved	4.1 data and metadata collection and management	Metadata/ Standards Development
Data Curation and Re-use	2. Understanding data curation 3. Enabling technologies 5. Sharing data	2.Identify potential re- users, the value of your research data for re-use, and a dissemination strategy	3. Reading, interpreting and evaluating data	Data Appraisal and Retention/Value of Data/Economic Issues/Complaints and Expectation Management
Cultures of Practice	3. Data relationships to science practice		1.2 Data in society	Facilitation, Communication/ Raising Awareness
Data Preservation		6. Plan how to handle issues involved in; securely storing research data in central databases, archives and/or repositories, backing it up, and managing access to your data 8. Plan for issues related to long-term preservation, discovery, and re-use		Data Preservation/Data Security/Access Authentication/ Conditions of Use/Data Legislation
Data Analysis			5. Using data	Monitoring process/Extracting Information from Data Models (and People) Data Modeling Data Analysis and Manipulation/ Merging, Mashing, Integration
Data Visualization	4. Data presentation		5.2 Producing elements for data synthesis	
Ethics, including citation of data		7. Explain legal (ownership) and ethical considerations related to data-sharing	5.3 Ethical use of data	