The Data Literacy Advisory Team at Virginia Tech:
Developing a Content Model for Data Literacy Instruction

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with special thanks to Carolyn Meier and Bruce Pencek

In Spring 2013, the University Libraries at Virginia Tech formed a Data Literacy Advisory Team (DLAT), an interdisciplinary library team. Tasked with developing an institutional framework for delivering research and data-related content to students, staff and faculty, DLAT began by developing a skill-focused content model that could be easily modified to engage audiences with different levels of experience. The skill-focused model allows instructors to select curated content from the modular framework and gives them the opportunity to modify and refine it according to their chosen learning outcomes and instructional needs.

Creation of DLAT

Deep-knowledge training provided via partnerships with outside groups
- Introduction to archives in preservation of digital objects
- Benefits of preservation for future use of reuse of data
- Metadata and lab continuity
- Metadata as documentation, annotation and description
- Disciplinary schema
- Open Data

Citation (with examples from RetractionWatch)
- Introduction to Intellectual Property and Copyright
- Introduction to Archives
- Issues in preservation of digital objects
- Library standards, best practices in metadata
- Data Curation Planning

Data Science as...
- Programming +
- Statistics +
- Domain Knowledge +
- Storytelling (Visualization)

Data Science Resources
- Data Science Examples
- Data Management +
- Data Science Literacy
- Data Literacy Monographs

Data Curation and Interoperability
- Data sharing and acquisition
- Metadata and quality assurance
- Preservation and access
- Data computing and analysis

Data Management and Organization
- Data conversion and interoperability
- Data sharing and acquisition
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- Preservation and access
- Data computing and analysis

The Content Model

Higher-level issues related specifically to research, data collection, analysis, publication and preservation
- Research lab continuity
- Big Data
- Intellectual Property

The Topic Model

Definitions of data related to topic
Focus on both general and practical issues
Relates basic formative practices to coursework and social, financial or other data in everyday life
- Digital Universe
- Research Lifecycle

Skill Composition of DLAT

Discipline-specific content Services provided by library/university
- First Year Program expertise
- Instructional Design expertise
- Reference, Instruction, Collections, Liaison and Discipline expertise
- Research Projects expertise
- Learning and Outreach expertise
- Data Services expertise
- Humanities, Social Sciences, GIS

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