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

Andi Ogier, Edward Lener and Rebecca K. Miller
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

Higher-level issues related specifically to research, data collection, analysis, publication and preservation

- Research lab continuity
- Big Data
- Intellectual Property

Deep-knowledge training provided via partnerships with outside groups

Discipline-specific content
Services provided by library/university

Skill Composition of DLAT

- Data Services expertise
- Reference, Instruction, Collections, Liaison and Discipline expertise
- First Year Program expertise
- Learning and Outreach expertise
- Instructional Design expertise
- Research Projects expertise

The Content Model

Advanced

Intermediate

Introductory

Defines data as 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

Ethics and Responsibility

Data Management and Organization

Data Conversion and Interoperability

Data Sharing and Acquisition

Metadata and Quality Assurance

A new concept called Data Literacy provides
- a unifying rubric
- a coherent set of underlying principles
- a new integrated approach

- Data literacy is a key to an informed citizenry
- Critical thinking and problem-solving are essential
- Data are everywhere, and we don’t know how to read them

- Data literacy requires a strong understanding of data science

- A comprehensive data literacy program
- An interdisciplinary team of experts
- A collaboratively built and evolving content model

- Data Literacy Advisory Team (DLAT)
- Developed a content model
- Modular framework
- Skill-focused model
- Curated content

- Data Literacy Skill Composition
- Data Services
- Reference, Instruction, Collections, Liaison and Discipline
- First Year Program
- Learning and Outreach
- Instructional Design
- Research Projects

- Digital Universe
- Research Lifecycle