a) Scholarly Communication Process

Objective: This topic introduces the concept of research lifecycle and scholarly communication discussing its history and evolution. It further looks in to the changes in the scholarly communication process with advent of web 2.0 & 3.0 tools and other ICT applications, and explores the changing role of the stakeholders in the process.

Learning Outcomes

After going through this topic the participants are expected to be able to:

- Describe the historical evolution of scholarly communication process;
- Explain the lifecycle of research in socio economic context;
- Understand the roles of different stakeholders, specially the role of librarians.

Areas of focus

- Research lifecycle
- History and evolution of scholarly communication
- Status and trends
- Role of stakeholders (Researchers/ authors, publishers, & libraries/ librarians)

Research Lifecycle

The research lifecycle diagram by the Joint Information Systems Committee (JISC) represented below shows an interconnected bicycle, the top one showing the research lifecycle, and emanating from the research process stage the data lifecycle interwoven below it.

Figure 1.1: Research Lifecycle[1]

[1] http://www.jisc.ac.uk/whatwedo/campaigns/res3/jischelp.aspx

Activity

Visit the Research Lifecycle diagram at JISC website at http://www.jisc.ac.uk/whatwedo/campaigns/res3/jischelp.aspx and identify the activities where libraries can play a major role and explain how libraries do it.

Identify the research outputs at each stage and explain how libraries can get engaged in collecting, disseminating, and preserving them

Research Life Cycle in Data Management

Data Management Consulting Group (DMConsult) of the University of Virginia Library representation of the steps in the Research Life Cycle (Fig. 1.2) is quite library centric where library services can be engaged. It focuses more on the data management aspects including metadata as well.

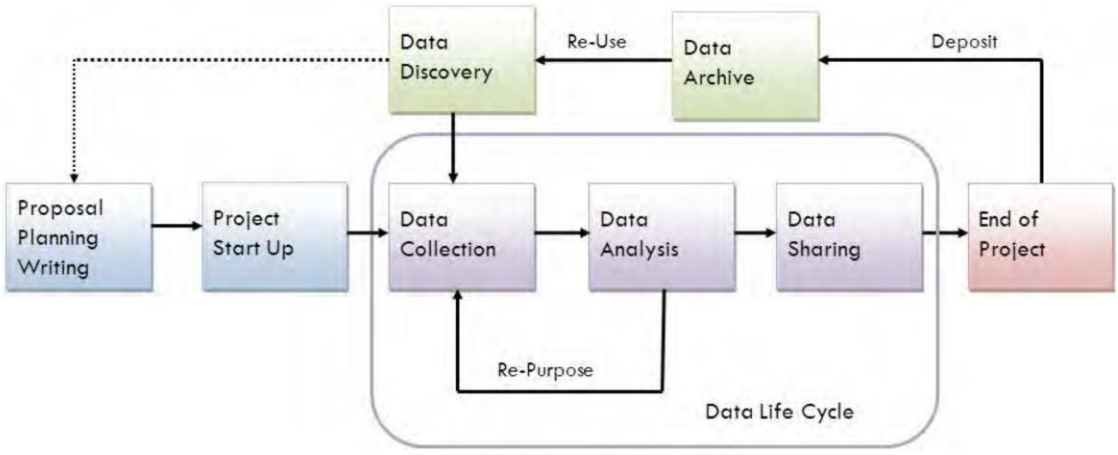

Figure 1.2: Research Lifecycle[2]

[2] http://dmconsult.library.virginia.edu/lifecycle

Other models

- Research360@Bath
- I2S2 Idealised Scientific Research Activity Lifecycle Model

Identify the research outputs at each stage and explain how libraries can get engaged in collecting, disseminating, and preserving them

Let us brainstorm on each of the components that make up the University of Virginia Data Management Research Lifecycle

- **Proposal Planning and Writing** – This step includes review of existing data sets, decision on whether to produce a new dataset (or combing existing), investigation of archiving challenges, consent and confidentiality, Identify potential users of data, cost analysis for archiving and consultation with archivists.
- **Project Start Up** – this step involves preparation of data management plan, take decisions about documentation form and content and conduct pilot test of materials and methods.
- **Data Collection** – For data collection one needs to look into the best practices. Collected data needs to be properly organized and also one needs to arrange for backups and storage. This step will also require quality assurance mechanism in place for data collection and also decision on access control and security aspects.
- **Data Analysis** – This step includes managing file versions, document analysis and file manipulations.
- **Data Sharing** – Depending on the data sharing policy decision on file formats has to be made. Consultation of archivist for advice on data storage may be required and cleaning up of redundant data needs to be looked into.
- **End of Project** - In the final step one may write paper/ article, submit report on findings and deposit data in a data archive/ repository.

History and evolution of scholarly communication

Definition of scholarly communication - "the system through which research and other scholarly writings are created, evaluated for quality, disseminated to the scholarly community, and preserved for future use.

The Scholarly Communication Lifecycle Diagram below

Figure 1.5: Scholarly Communication Process[6]

[5] http://www.arl.org/focus-areas/scholarly-communication
[6] http://ir.lib.uwo.ca/wlpres/19/

Activity: Identify the major milestones in the scholarly communication process and discuss how libraries have been adapting to these changes.

Role of Stakeholders in scholarly communication process – these include: researchers/ authors – publishers – libraries

Now, let us brainstorm on the roles of libraries in the scholarly communication process – with the advent in technologies, how has the role of libraries changed overtime?

- support scholarly community by creating institutional repositories as containers for the universe of digital materials produced through research and scholarship, not just the published record;
- help in searching relevant research data and published articles filtering and repackaging the same for better user experience;
- provide platform for self-archiving and self-publishing by scholarly community;
- take up the role of publisher through publication of e-journals and promotion and dissemination of the same;
- designing and maintaining institutional repositories for archiving research output of the institution

b) **Open access: History and development**

Objective: In this topic, the genesis of OA publishing is briefly discussed; highlights different benefits OA publishing promises, different approaches and business models of OA; and finally, this gives participants an overview of long-term preservation models available for OA and other scholarly electronic contents.

Learning Outcomes

After going through this topic, the participants are expected to be able to:

- Define and explain OA from the perspective of its historical developments;
- Distinguish between Green and Gold OA, and also understand emerging approaches to OA;
- Explain the OA advantages, and argue for promoting OA to scientific information;
- Identify business models for promoting OA; and
- Understand long-term digital preservation models available to OA knowledge resources.

Areas of focus

- Open access - definitions, Philosophy, Evolution
- Approaches to open access
- Benefits of open access
- Arguments against open access and responses
- Open access business models
- Long-term preservation models