Developing a Data Management Plan for a Corporate Laboratory: Using a Case Study Method for Teaching

Eric M. Kuzma
Simmons College

Follow this and additional works at: https://escholarship.umassmed.edu/escience_symposium
Part of the Scholarly Communication Commons

This work is licensed under a Creative Commons Attribution-Noncommercial-Share Alike 3.0 License.

https://escholarship.umassmed.edu/escience_symposium/2015/posters/2

This material is brought to you by eScholarship@UMMS. It has been accepted for inclusion in University of Massachusetts and New England Area Librarian e-Science Symposium by an authorized administrator of eScholarship@UMMS. For more information, please contact Lisa.Palmer@umassmed.edu.
Abstract
This poster looks at the importance of developing a Data Management Plan (DMP) in the biological sciences. Grant applications increasingly require applicants to attach a DMP to their research proposals to outline the creation, storage, and dissemination of research data and information. One way to understand and assess a corporation’s current DMP is to use the case study method, and this poster will walk through a DMP using this research method. This particular case study looks at the industrial scientific research process and how data is created, named, and stored, with attention to record keeping deficiencies and prospects. It also looks at the issues surrounding animal experimentation.

Why the Case Study Method?
• A case study is a qualitative research method that takes an in-depth look at a particular individual, group, or scenario. The information drawn from the study is then woven into a narrative, representing a realistic scenario that can be deconstructed and analyzed within a classroom setting.
• The scenario will contain an unresolved issue or a conflict. The case study is deliberately ambiguous in order to encourage questions and a lively classroom debate. The instructor should act as a moderator rather than lead the discussion.

Data Life Cycle

How to Conduct Science Interviews Without a Science Background
You do not need to have a deep knowledge of the subject going into the interview. It is a good idea to prepare a basic foundational knowledge of the subject. Do not try and show off all you know – or just learned.
1. Creating a list of open-ended questions is a great way to start a conversation. Open-ended questions give the interviewee the leeway to discuss, in detail, the information you require. You get the information you need without having to lean all the technical facts in the question in the first place.
2. Do not rush. Silence is good. All parties can use those moments to gather their thoughts. Do not rush. Silence is good. All parties can use those moments to gather their thoughts.
3. In addition to being nice, relax! Anxiety and nerves are contagious! In addition to being nice, relax! Anxiety and nerves are contagious!
4. Follow-up questions are OK. Make sure you thoroughly understand the answers as they are explained to you. (http://www.theguardian.com/science/2014/apr/03/tips-conducting-interviews-scientific-science-writing-prize)

Conclusions: Case Study Teaching Points

Linking and Finding Data:
The use of lab notebooks continues to be the standard means of recording experiment data points. That information is then transferred to an Excel file and uploaded to the server. The Informatics Lead then reviews the document and uploads it to its respective departmental subfolder according to month of the experiment. There are two issues here. There is no alternative backup to a paper lab notebook. Also, errors can be introduced when copying information from the lab notebook to the Excel file. Using an electronic lab notebook would eliminate that unnecessary step and reduce the chance of a transcription error. This electronic data can be backed up and secured. Test and non-test data should be kept in separate files. Naming conventions should be uniform across all departments.

Complexities Surrounding Industrial Laboratories
The first layer of complexity is that companies are not required to share proprietary data. The issue becomes more complex when funding for a project comes from both grants and corporate sources. These issues can be resolved during the grant application process. For example, the NIH may recognize that there may be circumstances where the other funder requests that public data sharing be restricted. An approved proposal can work out the details between the two funding parties. One can also put in disclosure delays with the timeframe to be agreed upon by all parties.

References

Figures

Module 7: Plans for Archiving and Preservation of Data
1. Data should be stored on-site as a backup

Eric M. Kuzma
School of Library and Information Science