Engaging Students with Research Data Management

The Modular Approach

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• What is RDM?
• Teaching RDM at Cambridge
• Example module(s)
• Activity: Create your own workshop
• Group feedback
• Strategies for engagement
Managing and sharing the data produced by research

Required by many funders (& good practice)

Links to library skill set

!Data means different things to different people!
Research Data Facility:

- Programme of events and training
- Data repository
- Funder guidance
- Consultancy services
- Advocacy and outreach
Modular approach
Modular approach

Icons via Iconfinder (Alfredo via CC-BY)
• Data backup
• File sharing
• Data organisation
• Sharing your data
• Funder policies
• Data management plans
Data Organisation

Science, Technology and Engineering (STEM)
Organising your data
How do you organise your data?
How do you organise your data?

Vincent Gaggioli
How do you organise your data?

Vincent Gaggioli
Which one is better and why?

A
- 25July
- Documents
- Field notes
- Field notes2
- From desktop
- From John
- Important
- Other
- PhD
- Talks
- Interviews.xlsx
- Meeting notes.docx
- My talk.pptx
- Paper submission.docx
- PhD revised FINAL.docx
- PhD revised FINAL2.docx
- PhD revised.docx
- Presentation FINAL.pptx

B
- Book chapter
- Conferences
- Downloaded publications
- Field notes
- Financial documents
- Interview data
- PhD thesis
- Photos
- Presentations
- Reports
- Supervisor meetings
- Training

Slido.com: #2088
Be consistent
Be meaningful to you and your colleagues
Enable you to find files easily

Would you be able to easily get hold of your own files?
Develop a structure

Image (used with permission): http://www.vukovicnikola.info/folder-structure-for-research/
Physical samples
How do you organise physical samples?
# Management of physical samples

<table>
<thead>
<tr>
<th>Name of the sample</th>
<th>date in lab book</th>
<th>Samples left (if multiple samples)</th>
<th>Sample size</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fibroblasts protein extract</td>
<td>23/03/2014</td>
<td>1 ~40ul</td>
<td></td>
<td>Concentration: 0.6mg/ml</td>
</tr>
<tr>
<td>Fibroblasts protein extract</td>
<td>05/04/2014</td>
<td>7 ~40ul</td>
<td></td>
<td>Concentration: 0.65mg/ml</td>
</tr>
<tr>
<td>Fibroblast protein extract for mass spec</td>
<td>19/08/2014</td>
<td>4 ~50ul</td>
<td></td>
<td>Difficulties measuring concentration</td>
</tr>
<tr>
<td>Fibroblast RNA extract</td>
<td>20/09/2014</td>
<td>12 ~10ul</td>
<td></td>
<td>Concentration: 80ng/ul</td>
</tr>
<tr>
<td>Fibroblast RNA extract</td>
<td>23/09/2014</td>
<td>2 ~10 ul</td>
<td></td>
<td>Concentration: 100ng/ul; excellent prep</td>
</tr>
<tr>
<td>Anti-actin antibody</td>
<td>N/A</td>
<td>18 ~5ul</td>
<td></td>
<td>Abcam: ab8227</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>LOT: GR47300</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Concentration: 0.6mg/ml</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Rabbit polyclonal IgG</td>
</tr>
</tbody>
</table>

Marta Teperek, PhD physical sample organisation
Create maps of your samples
  • can be simple Excel spreadsheets
  • and keep them up to date!

Reference your samples:
  • dates in notebooks
  • supplier’s name/code

Add any relevant notes
File naming strategies
Do file naming conventions matter?

Image (used with permission):  http://10pm.com/
Do file naming conventions matter?

In 3 years time would you know what these are?
TILS Document Naming Convention

Document naming for the TILS Division should follow this convention:

GDL_TILSDocNaming_V1_20090612.docx

- A prefix shows the document type
- The document title describes the content
- The version number
- The date in the format yyyymmdd

http://www.data.cam.ac.uk/files/gdl_tilsdocnaming_v1_20090612.pdf
File naming conventions

http://www.data.cam.ac.uk/files/gdl_tilsdocnaming_v1_20090612.pdf
How to Organise Information

Humanities, Arts and Social Sciences (HASS)
Organising your data
Which one is better and why?

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Allow you to find files easily

Would you be able to easily get hold of your own files?
Mendeley

Zotero

Training is available via departmental libraries
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http://www.data.cam.ac.uk/files/gdl_tilsdocnaming_v1_20090612.pdf
Describing your information
Create a small Lego model – use all the bricks

Write a description of your model (NOT step by step instructions)
Swap your instructions with another group

Can you recreate their model?

Activity designed by Eleanor Barker, Joyce Heckman and Kirsten Lamb
End of the module
Things to note

- Same basic structure
- Changes in terminology
- Tailored examples
- Different activities for different disciplines
- Length of module
Activity: Create your own workshop
You have been asked to develop an RDM workshop for the audience in your packs.

How will you use the elements available to create a bespoke workshop?
• Talk to your audience about their needs
• Make the workshop meaningful
• Attainable level of learning
• Make learning a group activity
• Allow your audience to be an active participant in shaping the workshop
• Make it fun!

!One size DOES NOT fit all!
Questions?
Thank you!