Data Scaffolding: A Pragmatic Approach to Structuring a Literature Review Spreadsheet to Maximize Information, Facilitate Review, and Support Analysis

Kristine Ogden1, Robert Hansen1, Stacy Rattana2, Nancy Neil1

1 Lifecycle Sciences Group, ICON Clinical Research, San Francisco, CA
2 Lifecycle Sciences Group, ICON Clinical Research, Chicago, IL

Introduction

We describe an approach to structuring a literature review spreadsheet that maximizes information and facilitates review and analysis.

Methods

We describe a process of creating "data scaffolding" that is critical to transforming a literature review spreadsheet into an efficient, usable tool for managing data and conducting analyses.

Results

Using our approach for creating "data scaffolding" we described several ideas for adding key structural components to a spreadsheet to support literature review tasks. We also describe a simple process for connecting a spreadsheet to a bibliographic database.

Conclusion

Creating a "data scaffolding" approach to literature review can be an efficient way to structure and manage data in a spreadsheet.

Objective

Clinical literature reviews, especially systematic reviews, require the management and analysis of large amounts of bibliographic data. Although the methodology for performing reviews varies, most require the management of citation data and the performance of complex analyses. Although some researchers have developed and leveraged bibliographic databases, most require the use of off-the-shelf bibliographic databases and spreadsheet tools to support literature reviews. We describe ideas for adding key structural components to a spreadsheet to support literature reviews and the proliferation of rigorous, formalized, systematic reviews.

Approach

Spreadsheet Functions that Support Literature Review Spreadsheets

- Filter function
- Search function
- VBA code
- Conditional formatting

In addition to simply storing citation data, a spreadsheet can be set up to support literature review tasks. We describe ideas for adding key structural components to a spreadsheet to support literature reviews and summarize citations; and ways of leveraging built-in spreadsheet features to improve data manipulation and analysis.

Conclusions

There are several key trade-offs in designing a spreadsheet tool that meets the requirements of literature reviewers. We describe spreadsheet features that may be utilized to categorize and organize data. By using these features, users can greatly improve spreadsheet navigation, but they can only do so if they are familiar with these features.

Additional Resources

- "Data Scaffolding: A Pragmatic Approach to Structuring a Literature Review Spreadsheet to Maximize Information, Facilitate Review, and Support Analysis" by Kristine Ogden, Robert Hansen, Stacy Rattana, and Nancy Neil.
- "Data Scaffolding: A Pragmatic Approach to Structuring a Literature Review Spreadsheet to Maximize Information, Facilitate Review, and Support Analysis" by Kristine Ogden, Robert Hansen, Stacy Rattana, and Nancy Neil.
- "Data Scaffolding: A Pragmatic Approach to Structuring a Literature Review Spreadsheet to Maximize Information, Facilitate Review, and Support Analysis" by Kristine Ogden, Robert Hansen, Stacy Rattana, and Nancy Neil.
- "Data Scaffolding: A Pragmatic Approach to Structuring a Literature Review Spreadsheet to Maximize Information, Facilitate Review, and Support Analysis" by Kristine Ogden, Robert Hansen, Stacy Rattana, and Nancy Neil.
- "Data Scaffolding: A Pragmatic Approach to Structuring a Literature Review Spreadsheet to Maximize Information, Facilitate Review, and Support Analysis" by Kristine Ogden, Robert Hansen, Stacy Rattana, and Nancy Neil.

Table 1: Basic Data Layout Guidelines for a Literature Review Spreadsheet

<table>
<thead>
<tr>
<th>Section</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Why? The spreadsheet must be structured to support the task.</td>
</tr>
<tr>
<td>B</td>
<td>What? The spreadsheet must be structured to support the task.</td>
</tr>
<tr>
<td>C</td>
<td>When? The spreadsheet must be structured to support the task.</td>
</tr>
<tr>
<td>D</td>
<td>Where? The spreadsheet must be structured to support the task.</td>
</tr>
<tr>
<td>E</td>
<td>How? The spreadsheet must be structured to support the task.</td>
</tr>
</tbody>
</table>

Table 2: Features That May Be Leveraged for Data Scaffolding with Literature Review Spreadsheets

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>For example, data scaffolding fields included flag criteria and data elements to flag specific data points.</td>
<td></td>
</tr>
<tr>
<td>Also, it is possible to add data scaffolding fields to flag specific data points.</td>
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<tr>
<td>The spreadsheet must be structured to support the task.</td>
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Figure 1: Successes of Data Scaffolding with Literature Review Spreadsheets

- Data scaffolding applied to a spreadsheet to support literature review
- Data scaffolding applied to a spreadsheet to support literature review
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Figure 2: Challenges of Data Scaffolding with Literature Review Spreadsheets

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Figure 3: Successes of Data Scaffolding with Literature Review Spreadsheets

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Figure 4: Challenges of Data Scaffolding with Literature Review Spreadsheets

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Figure 5: Successes of Data Scaffolding with Literature Review Spreadsheets

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Figure 6: Challenges of Data Scaffolding with Literature Review Spreadsheets

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