

## Lesson plan reflection

While this lesson plan took many hours to write, there are still many places where I can see weaknesses and challenges.

### 1. Maintenance, sustainability, and updating this lesson's contents

It quickly became obvious that the current form of this lesson is unsustainable, completely due to the fact that it is not a 'real lesson.' If I was to keep it on GitHub in its current format, rotting away in a repository, absolutely no instructor in any capacity would see it or use it. It would be better tweaked and shared with the Carpentries' repository of official data science lessons using their preferred lesson template ("Carpentries/Lesson-Example: Example Lesson Using The Carpentries Lesson Template." n.d.).

But let's imagine that it was a real lesson in the Carpentries repository. Then what happens to it? I would become the maintainer for the lesson, and be responsible for updating when possible (as a volunteer). I would consider things like: how would the commands in R change when the `<tidytext>`, `<dplyr>`, and `<jsonlite>` packages were updated? Who else should I bring onto the maintenance of this lesson with me? How should I record or document the changes I make to this lesson – for example, would pushing new updates to GitHub suffice in accordance with Carpentries' policies? What happens if I am unable to maintain this project any longer? Assuming this lesson is a real lesson, all of these questions will need to be answered to fully understand the sustainability and maintenance of the lesson.

The lesson plan itself, as well as the code file, were specifically written to help us begin to address those questions; for example, the lesson plan mentioned which version of RStudio and `<tidytext>` was used for its development. Plus, there are references to the CRAN pages for each package mentioned so that future maintainers of these lessons can figure out what changes occurred from the time this was originally written, to when they are updating the materials.

### 2. Future expansions and continuations of this lesson

This this lesson could be changed to teach the same outcome (mining metadata headers from scientific organizations) using a different language or program, like Python and MATLAB. Those are popularly used within the STEM research community, so it may be useful to have those lessons taught to liaison librarians in those areas, so they can support their researchers and/or students. In Python, the package would be `<tidytext-py>`.

As for continuation, lesson instructors could show their colleagues or learners new resources to develop other skills in text mining. Network analysis, sentiment analysis, and topic modelling are other common basic text mining techniques, and there exist many textbooks for instructors to direct learners to.

In sum, this assignment was both a great success and struggle for me. The lesson has taken great shape, but there are many theoretical aspects of its maintenance and sustainability that need to be considered still, assuming that it is a 'real lesson' for someone to use somewhere.

Other improvements could be: using Markdown to make the comments neat and insert pictures, clearing the tone of the comments so its obvious if they are directed to the instructor or the learner, adding instructions on how to install packages, and having another file with links to other JSON and HTML metadata for students to practice on. I am both proud and with my work in this one; there is still so much to do to make it perfect.

## References

“Carpentries/Lesson-Example: Example Lesson Using The Carpentries Lesson Template.” n.d.  
Accessed March 30, 2023. <https://github.com/carpentries/lesson-example>.