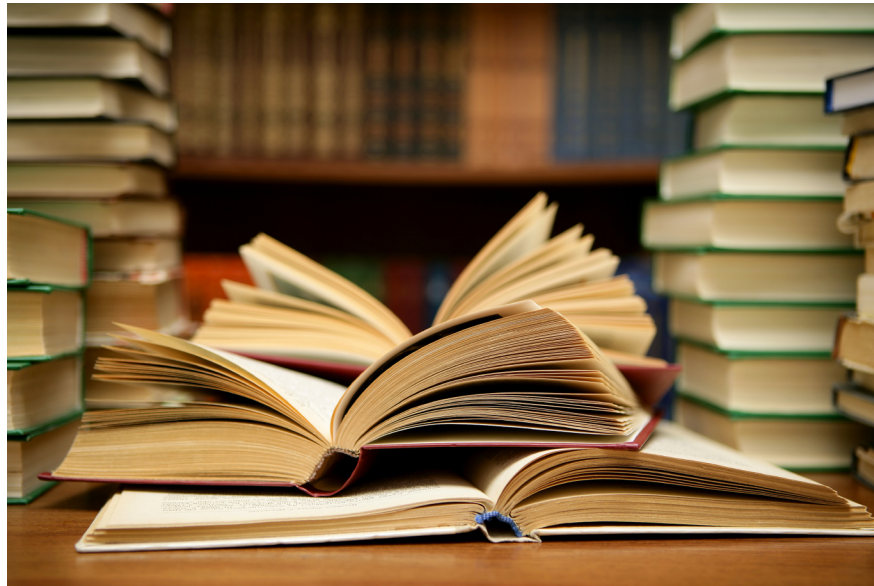


Introduction to the Zotero Reference Manager

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In functional terms, a reference manager is a program that allows you to collect, organize, and cite reference materials (e.g., books, journal articles, websites). It has become an invaluable tool for anyone engaged in modern academic writing. Through my career I've used a variety of reference managers, and their functionality is an integral part of my work flow which involves reading academic material, collaborating with other authors, and writing across a variety of platforms such as [LaTeX](#), [Authorea](#), and [Libre Office](#).

Selection Criteria

Based on this experience and my preference for [open-source](#) software, I've come to place high importance on the following functionality/characteristics when selecting a reference manager.

1. **Portability** so it works across a variety of writing platforms and operating systems
2. **Local and cloud storage** for working off-line and synchronization across devices
3. **Multiple import options** that include adding items by object identifier, RIS, and BibTeX
4. **Shared libraries** for collaborating with other writers
5. **Cross-folder assignment** that allows references to be included in multiple folders
6. **Document upload** for attaching pertinent files and notes to references
7. **Open source code** so the community can audit the program and develop additional functionality
8. **Good faith operations** that exclude collecting and selling the personal information of users
9. **Reasonable price** preferably a [freemium](#) price strategy that allows paid or free versions
10. **Intuitiveness** because the software should work for the user, not the other way around

Most of the major reference managers check the boxes on 1-6 quite well, although some do particular tasks better than others. It's the addition of 7-10 that makes [Zotero](#) an outstanding reference manager from my perspective. Zotero is a community developed, open-source platform that offers both free and paid levels. The free level comes with all the functionality of the paid, just with restricted cloud storage. Your reference collections and user information are as private as you choose them to be. As a professional platform, some choose to make their information publicly visible, but that's up to you. Regardless, the platform does not scrape and sell your personal information. The interface is quite intuitive for a platform with extensive functionality. And because the code is open source, you can find a wide variety of add-ons to customize the way Zotero works for you.

Putting Zotero to Work

This section covers the basic functions of the Zotero reference manager. This assumes that you have [downloaded a desktop interface](#) and [created a free account](#). I suggest selecting the **Standard** installation when prompted. Once you have created an account, be sure to sign in to your desktop interface so your entries sync to the cloud. Desktop Zotero will function just fine without being logged in; but you risk data loss in the event of a crash. Syncing can be done by opening your desktop interface, navigating to **Edit -> Preferences -> Sync**, and logging in to your account. While downloading the desktop, it's also useful to [install the Zotero Connector](#) onto your web browser. This will be necessary for automatically importing references, a process I will describe later.

Integrating Zotero into MS Word or Libre Writer

The ultimate function of a reference manager is to add citations to your papers. The most straightforward way to do this is by integrating Zotero with your preferred writing editor. If you are prompted to do

so during installation, then accept the integration request. If not prompted, open Zotero and navigate to **Tools** -> **Add-ons**. You will see something similar to Fig 1.

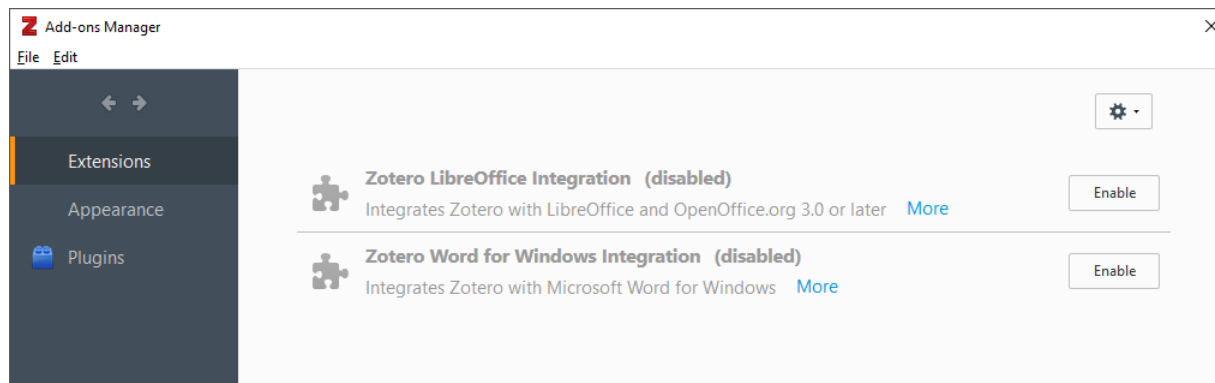


Figure 1: Enable Zotero Integration

Enable integration for any installed writing editor with which you intend to use Zotero. You will be prompted to restart Zotero at this point. Once you have done so, you will see something similar to this the next time you open MS Word (Fig. 2) or Libre Writer (Fig. 3).

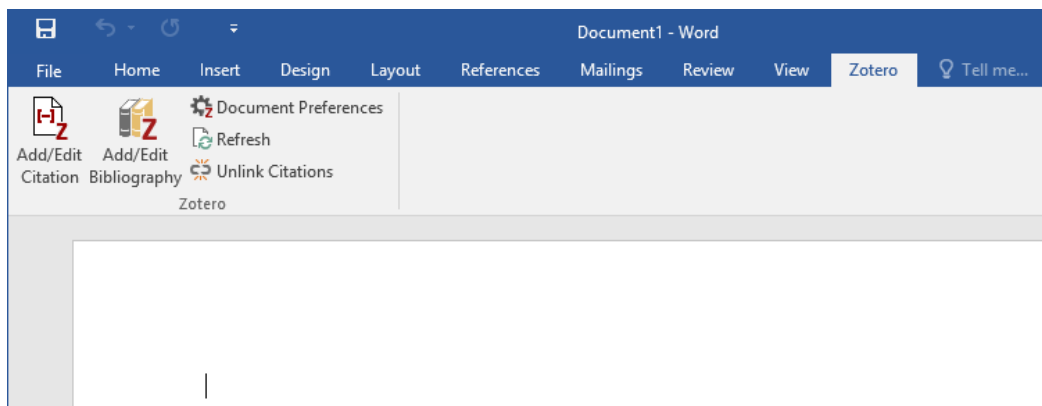


Figure 2: Integration in MS Word

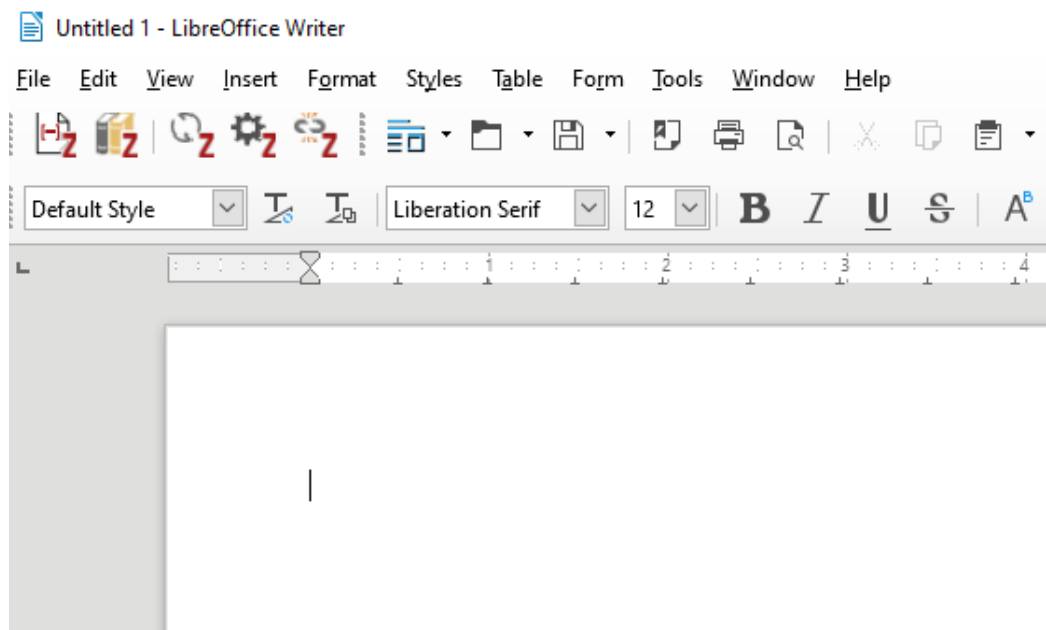


Figure 3: Integration in Libre Writer

Once you've begun a document, open **Zotero Document Preferences** from the editor's toolbar and select your preferred citation style as pictured in Fig. 4. Libre Writer users will find similar icons to those pictured here.

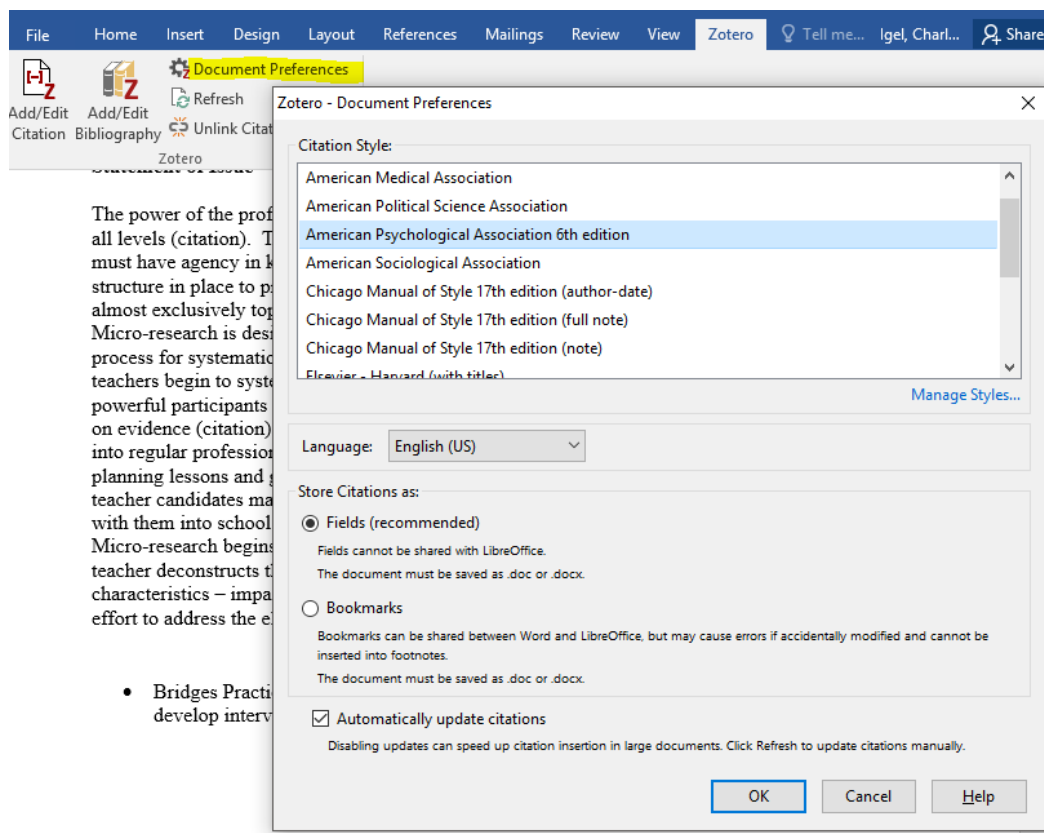


Figure 4: Setting Document Preferences

Now you've written some content and need to add a citation. Be sure your Zotero desktop is open (if not you will be prompted to do so). Simply place your cursor where you want the citation added, select **Add/Edit Citation** from your writing editor's toolbar, and start typing the name of the author, relevant keywords, or name of the reference. You will notice that {Citation} will be added in place of your cursor to indicate the selected location in the text. A drop down list will appear with choices. Select the desired reference and it will appear in the Zotero bar as shown in Fig. 5. Libre Writer users will find similar icons to those pictured here.

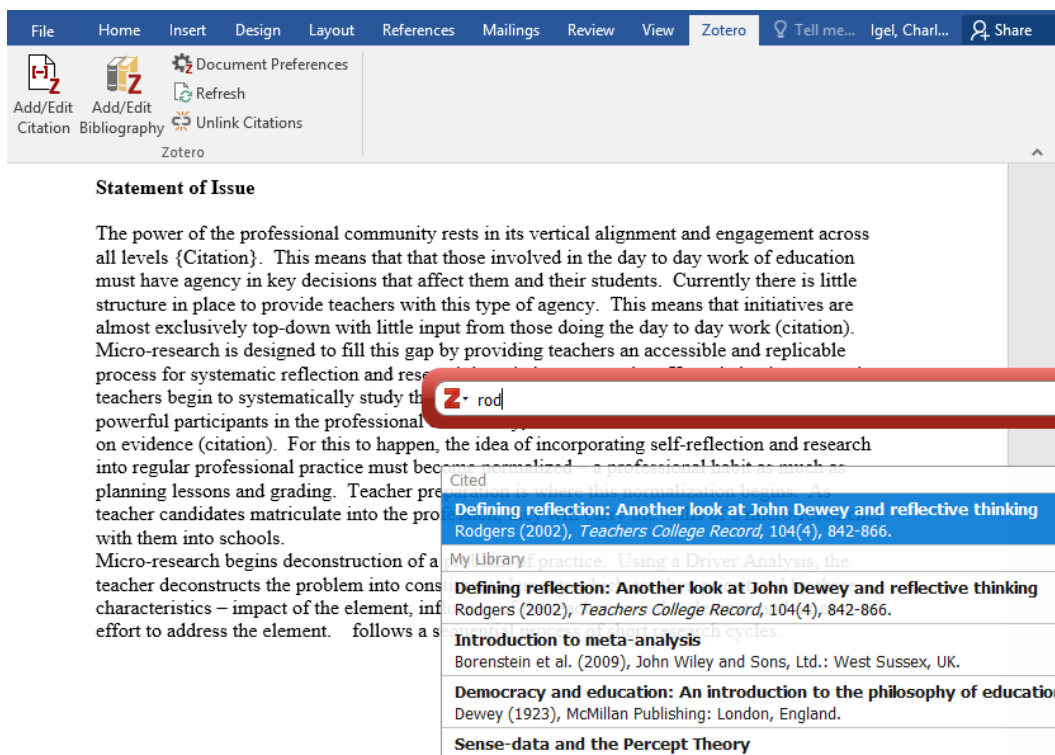


Figure 5: Adding a Single Citation

If you need to add additional citations for the same content, simply start typing in the bar again and select the additional citation(s) as shown in Fig 6. Don't worry about the order of your citations, Zotero will handle that for you based on the citation style you selected when setting up Document Preferences.

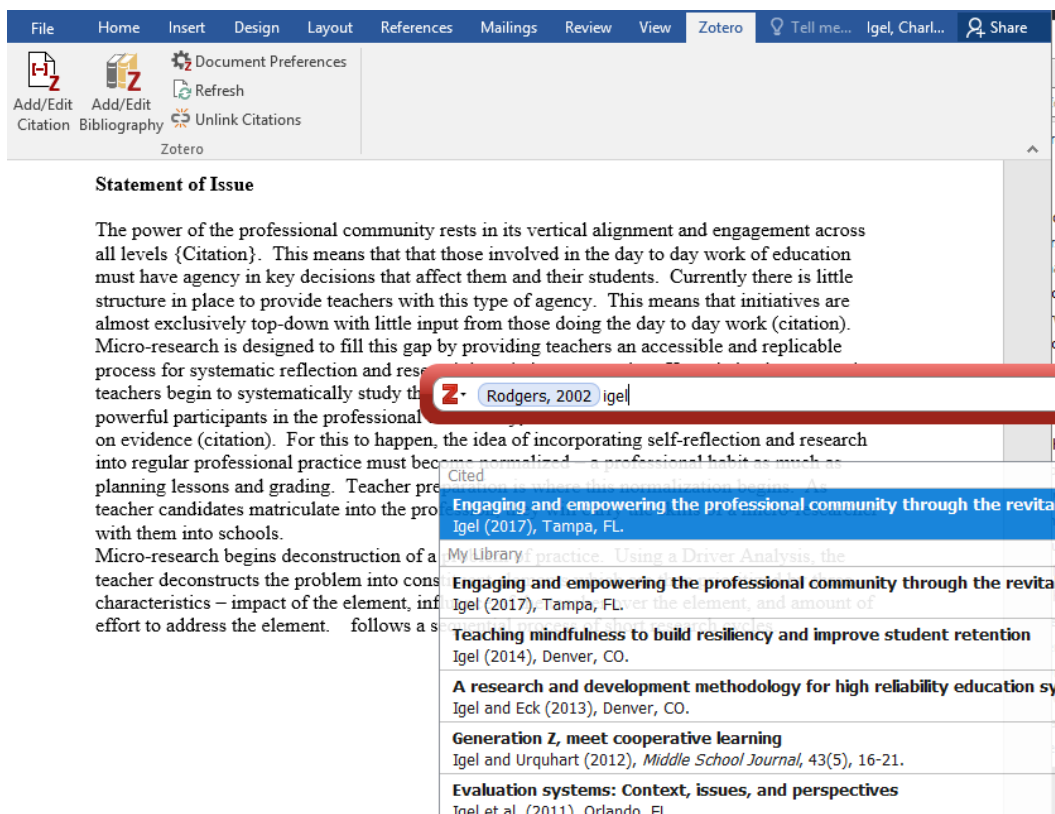


Figure 6: Adding Multiple Citations

Once you have all the desired citations added, simply hit Return/Enter and your citations will be included in the text as shown in Fig 7.

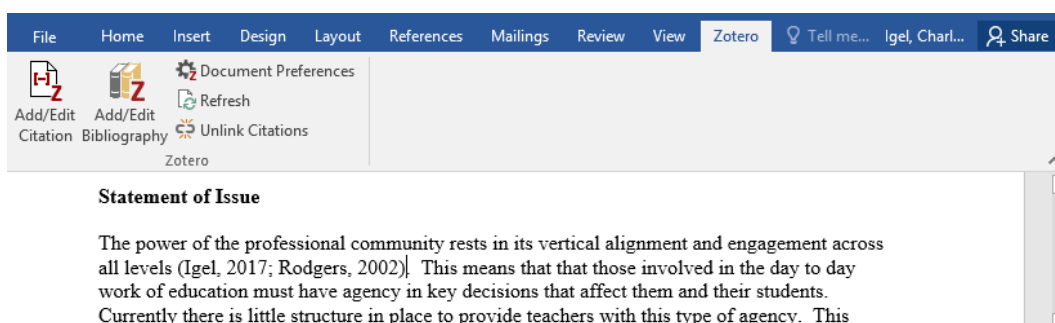


Figure 7: Citations in Text

Continue this process as you write. Citations can be added or deleted and Zotero will keep track of them as you go. Once the document is complete, create a reference section and select **Add/Edit Bibliography** from the Zotero options in the editor's toolbar. A reference list will be created for each (Fig. 8) based on the citation style you selected when setting up **Document Preferences**. Libre Writer users will find similar icons to those pictured here.

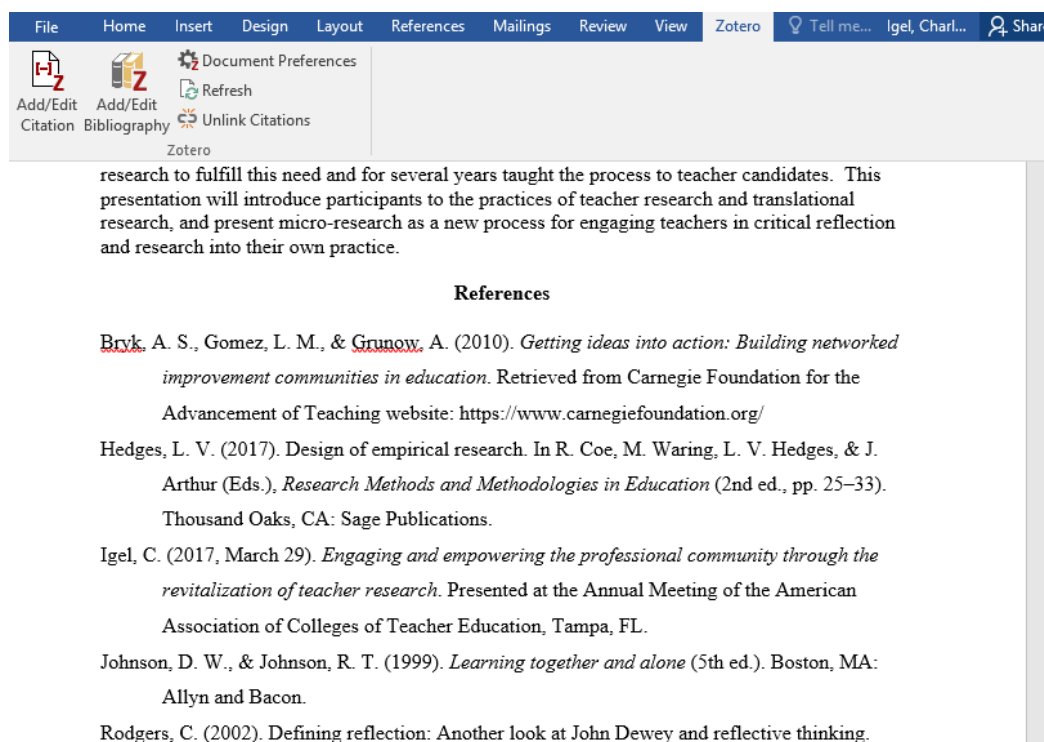


Figure 8: Reference Section

Once you've created a reference list (i.e., bibliography) the entries can be edited manually, but it's better practice to correct any mistakes within Zotero and select **Refresh**. Another option is to select **Add/Edit Bibliography** which will now open in editor mode to make specific changes to your extant entries.

Of course, you first need to have references in Zotero before adding them to your document. The following section will cover a few options for accomplishing that.

Adding References to Zotero

There are a variety of ways to add items into Zotero. I will cover three common ways here: manual entry, entry with identifier, and RIS import.

A word of caution is appropriate here before moving into the mechanics of this process. Zotero, or any reference manager for that matter, is not a replacement for knowing the [citation style](#) and writing conventions of your field. You will occasionally need to edit the references generated by Zotero, and will certainly need to know what information is required (and what can be omitted) when creating an entry in Zotero. This requires that you understand how to reference common sources such as books, journal articles, conference proceedings, and websites. It's easier to build a well-curated corpus of references from the beginning than it is to correct previous mistakes.

1. Manual Entry. Manual entry is the most cumbersome way of creating a reference, but sometimes other options are not available. Simply select the green + icon and choose the appropriate reference type from

the drop down as show in Fig. 9. Most common reference types are listed here; and Zotero will provide your most frequently used types at the top of this list.

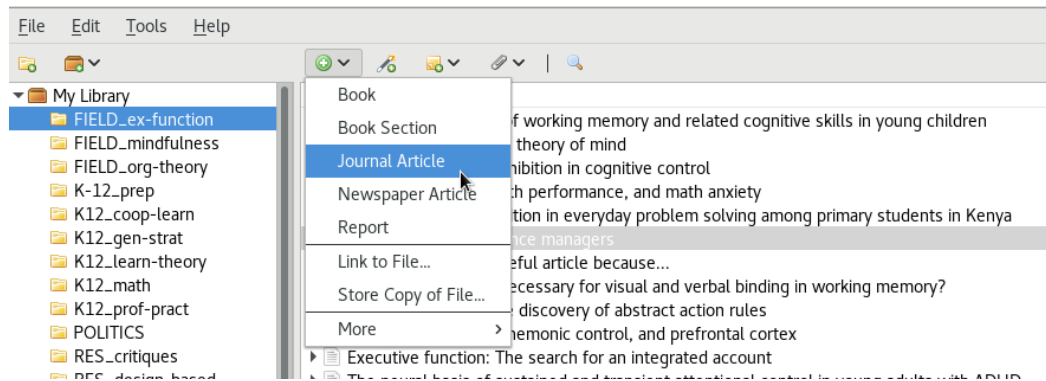


Figure 9: Manual Entry

Selecting the reference type will open a window where you can enter pertinent information about the source as pictured in Fig. 10. This is where knowing what is required for a given reference type and what is not becomes very important. Here you can also attach notes, add tags, and associate the entry with other references if desired.

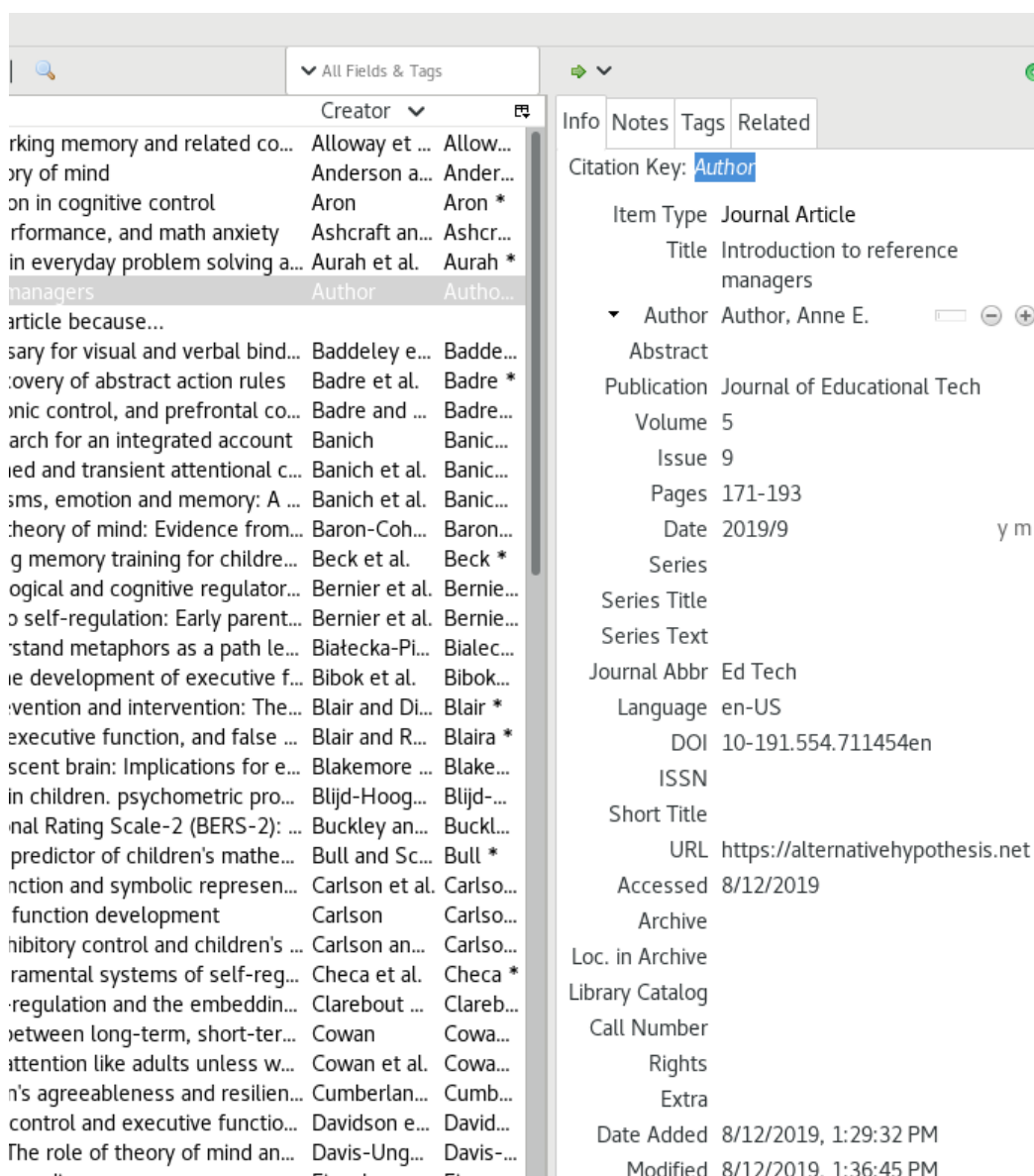


Figure 10: Adding Reference Information

Although I've praised Zotero for its intuitiveness, one of its less intuitive features, and a regular point of confusion for newer users, is how to add editors (the human type) to an entry - necessary information for a book section or edited book. The drop down menu does contain a **Book Section** option, but this gives no obvious choice for adding editors. The trick here is to add the editor(s) as you would with a regular author, then select the small arrow to the left of **Author**. This will open a menu that allows you to set the individual's role (e.g., Editor, Series Editor, Contributor). Once this is done, Zotero will take this cue to work out what type of reference it's dealing with when formatting your citation for your reference section.

2. Entry with Identifier. An easier way to add an item is to use the integrated Zotero database. If you have an object identifier (e.g., DOI, ISSN, PMID), you can enter it as pictured in Fig. 11.

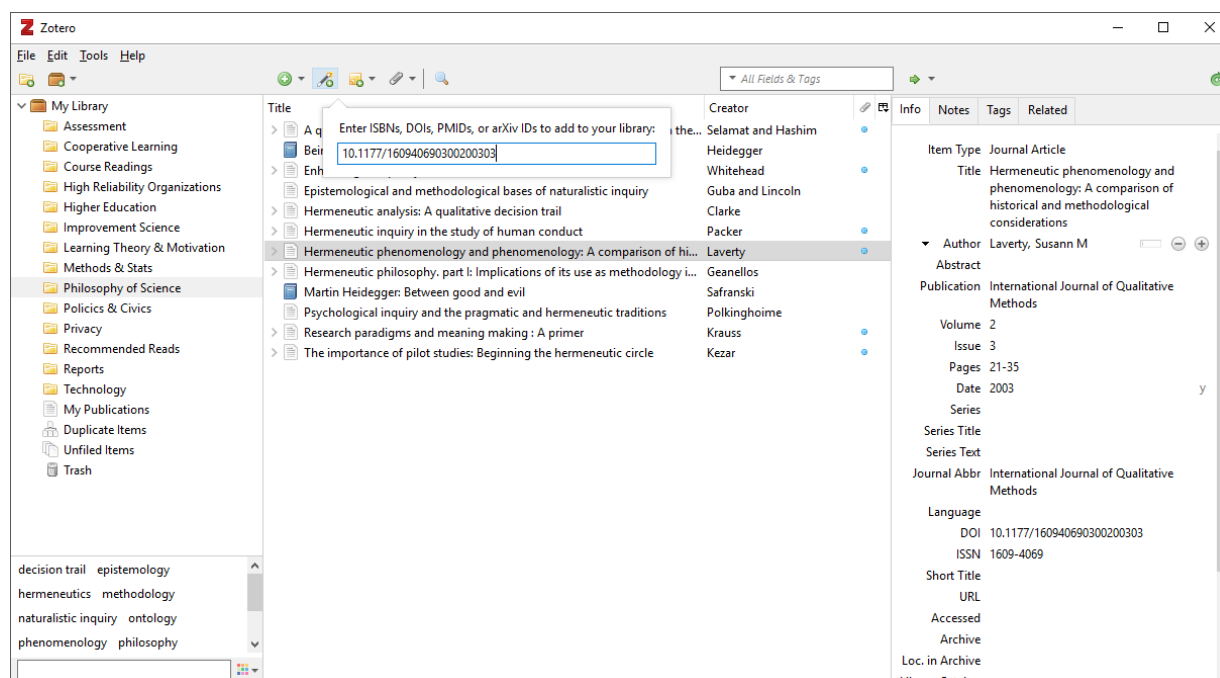


Figure 11: Entry with an Object Identifier

This method often provides the most robust information about the reference and will sometimes even attach a PDF of the reference to the entry. If a PDF is not automatically downloaded and you have a copy, you can attach it by selecting the reference, clicking the **Add Attachment** (paperclip) icon, and selecting the desired attachment type. I tend to use the **Attach a Stored Copy of the File** option. Once the reference is added you can access it by clicking on the small arrow to the left of the entry as pictured in Fig. 12. Notes added to the entry can be accessed in the same way.

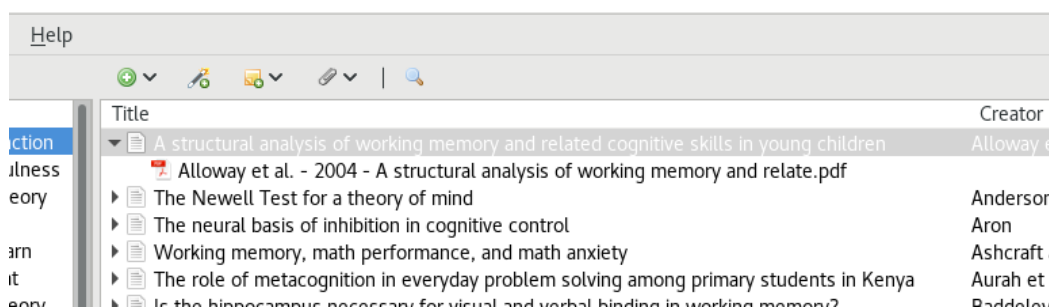


Figure 12: Accessing Attached Files and Notes

3. RIS Import. Often references are accessed through an academic database (e.g., JSTOR, Academic Search Premier, Sociological Abstracts) or through [Google Scholar](https://scholar.google.com/). A third way to add an entry into Zotero is to select the RIS import from the database while your Zotero desktop is opened. If you have completed the earlier step of [downloading the Zotero Connector](#) to your browser, this will automatically add the item into Zotero. The exact process for this differs across academic databases, so just look for the option to import using an RIS file. In Google Scholar this is not an option, so simply select the " (single quotation mark) in the Google window, then choose the **RefMan** import option as shown in Fig. 13. This will accomplish the

same function as importing with RIS.

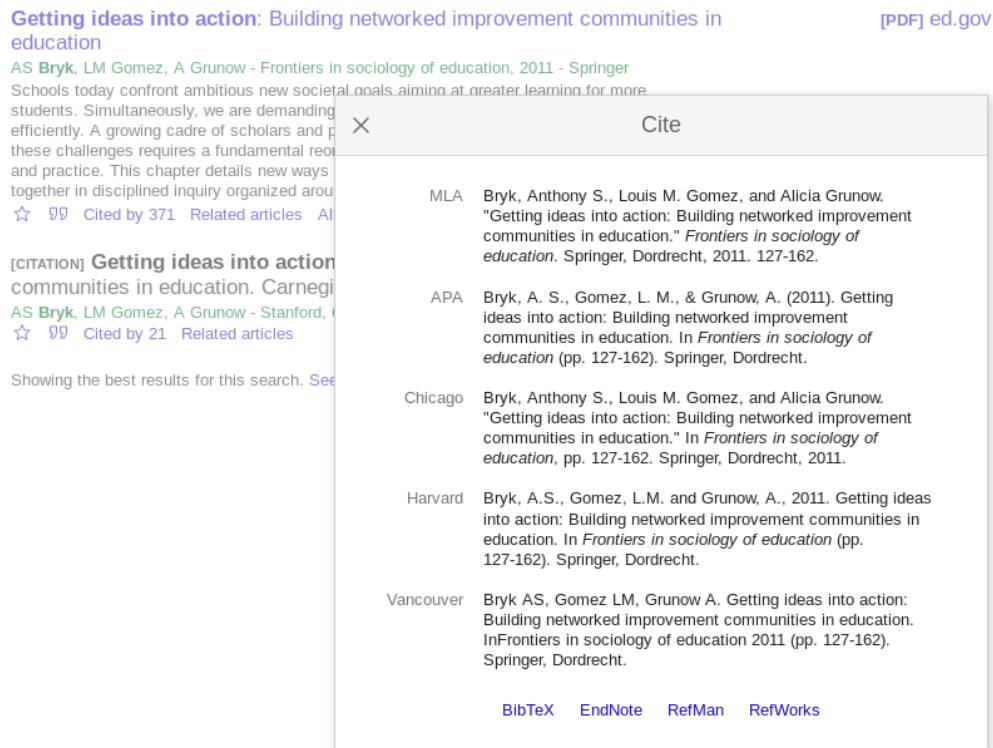


Figure 13: RefMan Option in Google Scholar

Tailoring Zotero

Everyone has their own preferred way to set-up and organize Zotero, but there are some basic things everyone can do to get started.

1. Behind the Curtain. First, set your **Export** and **Cite** preferences. Navigate to **Edit -> Preferences -> Export** and select a **Default Format** from the drop down as shown in Fig. 14. This function allows you to export your library as a .bib file that can be used with other writing platforms such as [LaTeX](#) and [Authorea](#). I'll discuss one use case for the .bib file export later. Here you can also select your preferred language for the platform.

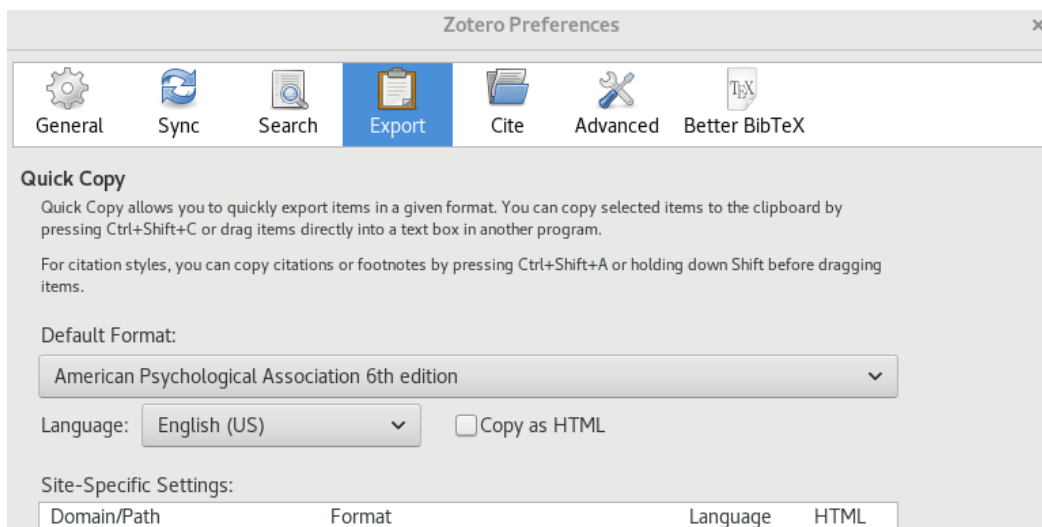


Figure 14: Set Export Preferences

Next, navigate to **Cite** and select your default **Style Manager** (i.e., citation style) as shown in Fig. 15. This directs Zotero how to cite references when you add them in a document.

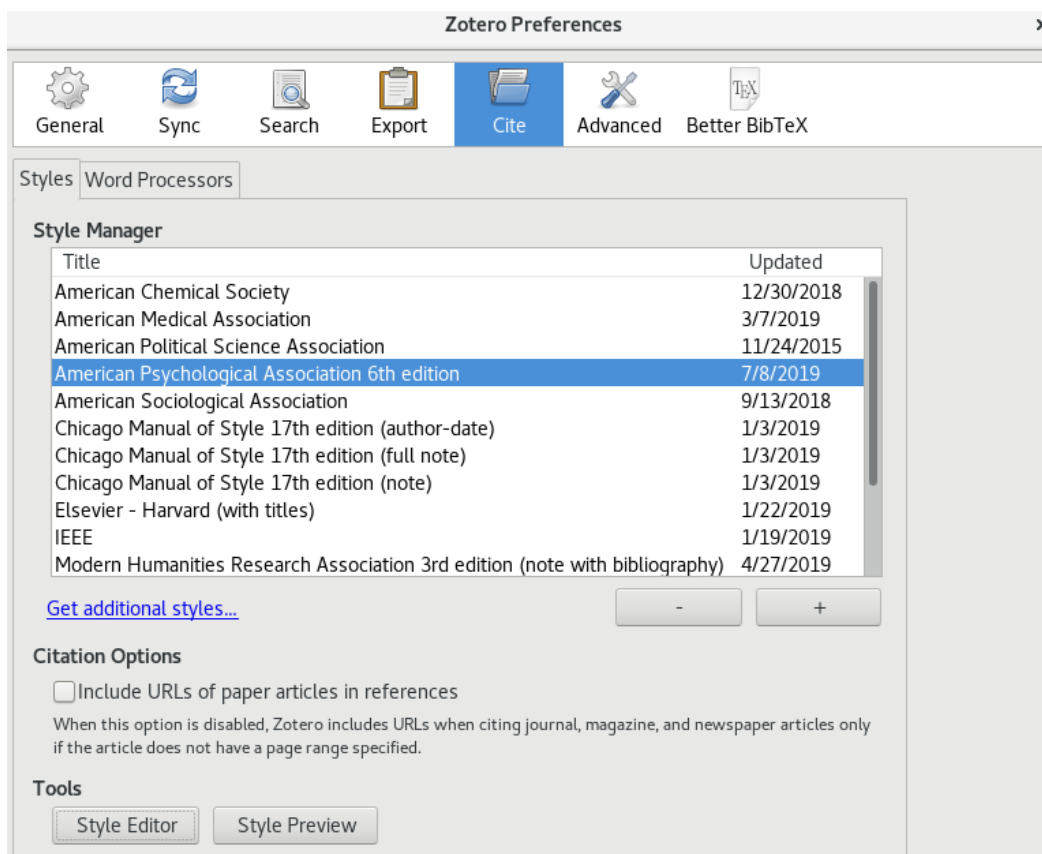


Figure 15: Set Cite Preferences

If you have intentions on becoming a power user, you'll want to learn at least some of the keyboard short-cuts. The defaults can be found, and customized if desired, by navigating to **Advanced** -> **Shortcuts** as show in Fig. 16.

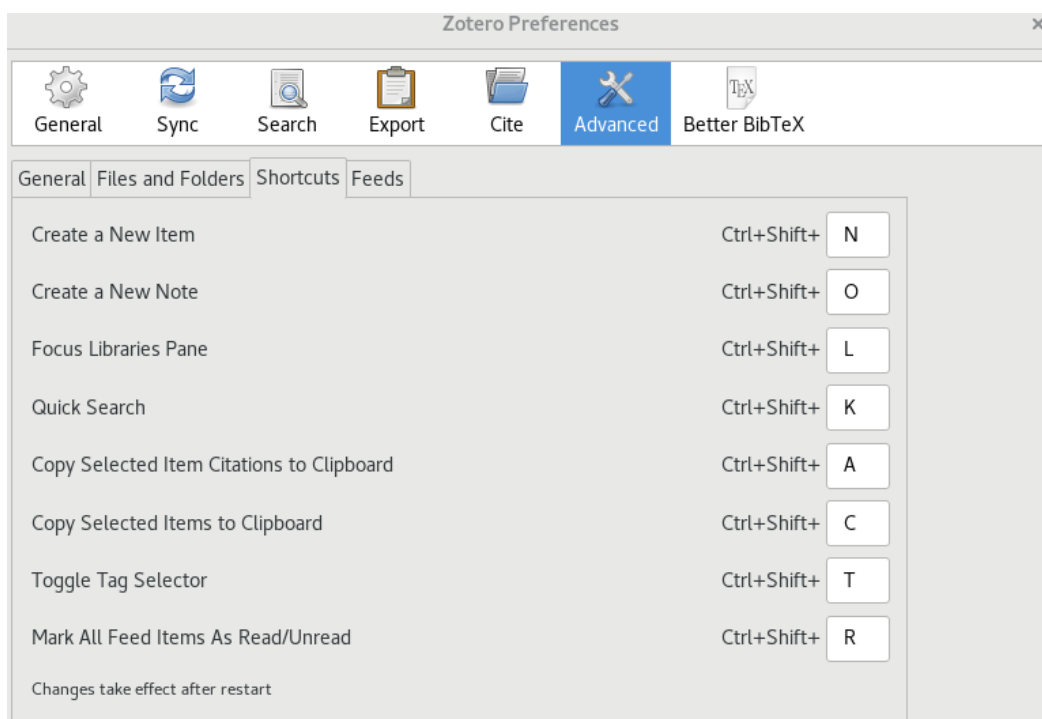


Figure 16: Keyboard Shortcuts

2. Organizing and Sharing. Zotero begins with a default **My Library**. All your entries can be added here, but it's good practice to add folders (called Collections in Zotero) within **My Library** otherwise you will end up with a mass of unorganized references to sift through. Folders can be added by clicking on the **New Collection** icon (smaller folder) in the Zotero toolbar as shown in Fig. 17. References can be added to a collection by simply dragging and dropping them in the desired location.

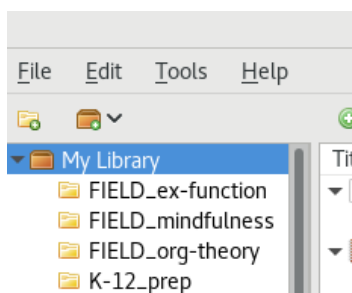


Figure 17: New Collection Icon

Determining how you will organize your collections is a non-trivial decision. The good news is that Zotero allows you to assign references to multiple folders simultaneously. So a journal that belongs in the “K-12-prep” collection *and* the “FIELD_ex-function” collection can be assigned to both by simply dragging the

entry into the desired folder. Any changes you make to a reference in one collection will be made across all collections; so you don't need to worry about version control issues. References can be moved to the trash altogether, or just removed from a given collection but kept within Zotero. Any references not assigned to a collection will be found in the **Unfiled Items** folder.

Items in your **My Library** and subordinate collections are visible only to you. However, the platform also supports group libraries that can be shared with other Zotero users. To create a shared Library, select **New Group** from the drop down icon (larger folder) from Fig. 17 above. This will take you to the Zotero website as shown in Fig 18. You will need to log in using your credentials and make some selections about the public visibility of the group.

Home My Library **Groups** People Documentation Forums Get Involved Search for groups Search

Home > Groups > New group

Create a New Group

[Search for Groups](#) · [Create a New Group](#)

Group Name

Choose a name for your group

Group URL: <https://www.zotero.org/groups/>

Group Type

Public, Open Membership

Anyone can view your group online and join the group instantly.

☒ Choose a Public, Open Membership

Public, Closed Membership

Anyone can view your group online, but members must apply or be invited.

☐ Choose Public, Closed Membership

Private Membership

Only members can view your group online and must be invited to join.

☐ Choose Private Membership

Create Group

Figure 18: Creating a Group Library Online

Once created, your group library will appear in your collections area of Zotero as shown in Fig. 19. Items can be added to the group libraries by dragging them into the folder just as you would with any other collection. Similarly, subordinate collections can be made within a group folder just as you would within your primary library. These will now be visible to all group members.

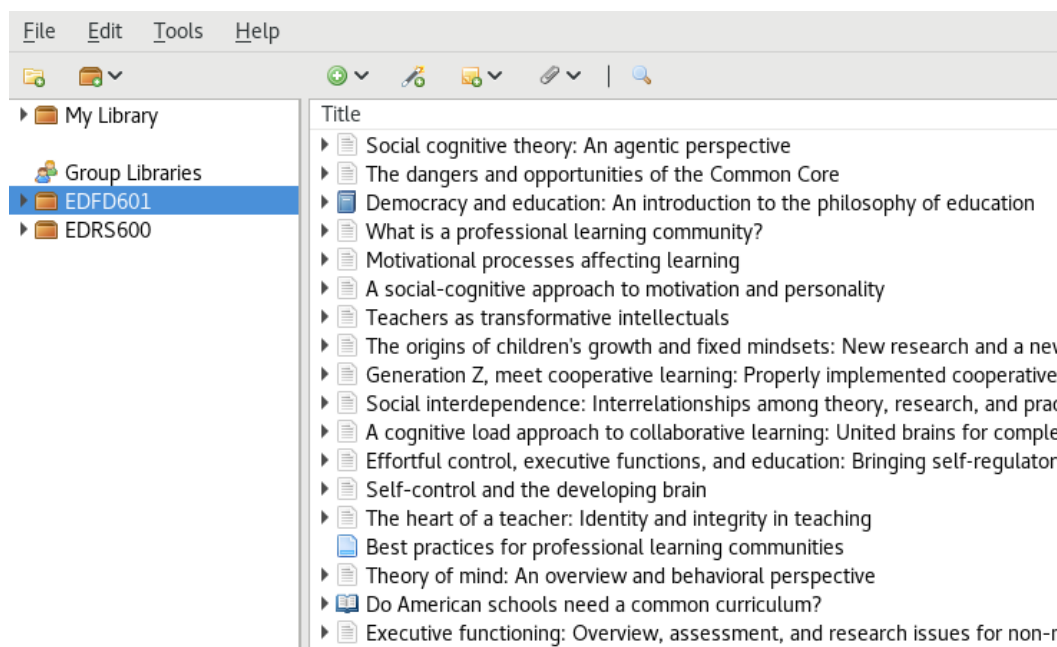


Figure 19: Group Library in Desktop

Using Zotero in Authorea

Authorea is an online platform designed for academic writing and publishing. For academics and students, it's a particularly good alternative to collaborative writing platforms such as Google Docs due to its robust citing functionality and myriad other features beyond the scope of this post. I do the majority of my writing in Authorea and host the [Alternative Hypothesis](#) blog on the site. Here I will briefly cover the process for integrating Zotero into Authorea and accessing references within the platform.

First, I should be more specific. You do not actually integrate Zotero into Authorea as you do with MS Word or Libre Writer; rather, you attach an exported library file to an Authorea document so you are able to cite your references within that document. If you're not especially tech savvy, don't worry; this is easier than it sounds. Begin by exporting your Zotero library as a .bib file. To do this, open desktop Zotero, select the **My Library** folder, then navigate to **File -> Export Library**. You will see a number of export types in a drop down menu. Select **BibTeX** from this list and leave **Character Encoding** at the default **Unicode (UTF-8)** as shown in Fig. 20. I tend to leave the **Translator Options** unchecked; but if you are writing with a citation style that uses journal abbreviations, you will want to check this option (note: APA 6th does not use abbreviations). Name your newly created .bib file and select a location to save it.

Although Authorea will accept file names with spaces, many programs do not. It's good practice to always name files with some form of connector between words rather than spaces (e.g., `zotero-lib-full.bib` or `zotero.-my-library.bib`).

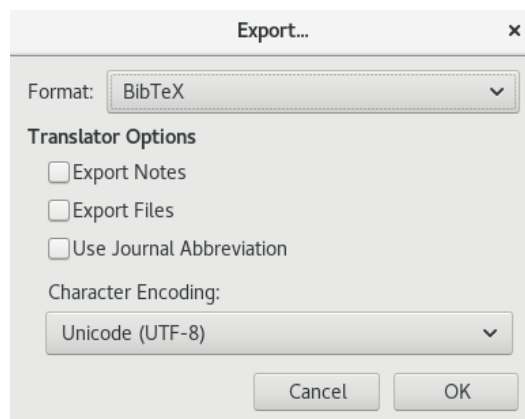


Figure 20: Exporting My Library

Now create a document in Authorea or open an existing one. Within the document, navigate to **Document** -> **Data** -> **Bibliography**. Here you can upload the .bib file you created in Zotero through drag and drop or by selecting it as shown in Fig. 21. Once your .bib file is uploaded, click on **Data** again for an option to navigate back to the document view. Your reference file is now attached and ready for use within the document.

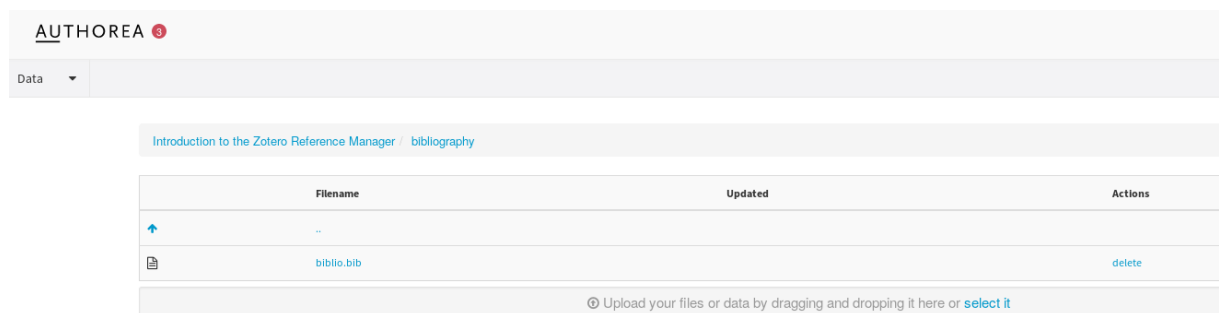


Figure 21: Uploading the Reference File

Authorea comes preloaded with the Pubmed and CrossRef databases. References can be searched for in these and added to your document. Now that you have uploaded your Zotero library, it will appear alongside these preloaded databases as **Local**. Citing from your imported Zotero library within an Authorea document is rather straightforward. Place the cursor where you wish to insert the citation, click **Cite** in the toolbar, select the radio button labeled **Local**, and begin typing search terms in the search bar as shown in Fig. 22. Terms can be the name of the author(s), keywords, or title of the reference. A list of references will begin to populate.

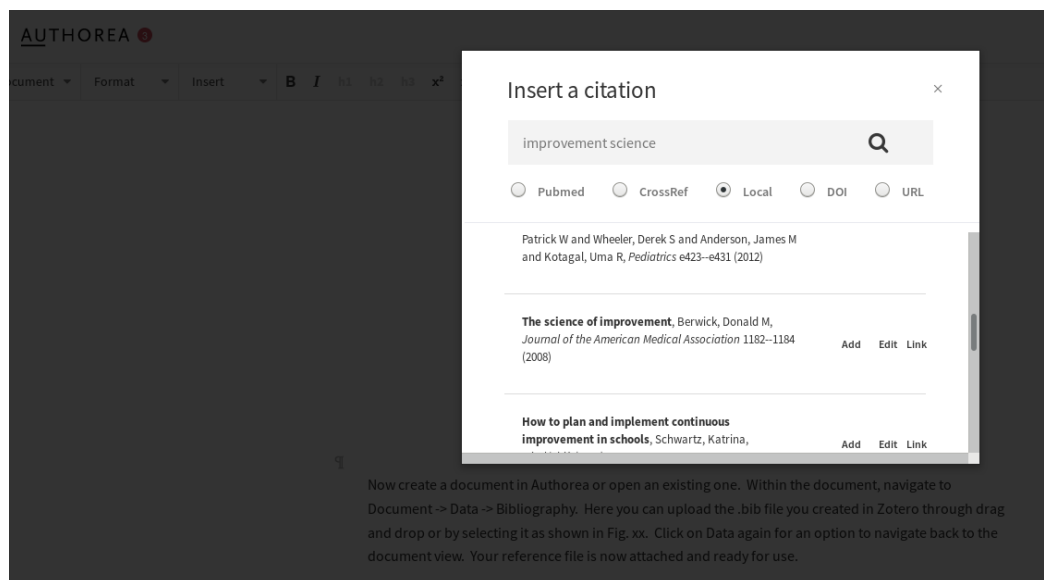


Figure 22: Insert a Reference

Simply click **Add** next to the desired reference. You will then be given the option to **Change Citation Text** which allows you to select from a variety of in-text citation options (e.g., suppress author, remove parentheses) or simply to **Cite and Close**. Once added, Authorea will automatically make a reference list at the end of your working document and update the list each time a new citation is added. References will appear in a generic format in the reference section. Note that these will appear in a generic Authorea style, not formatted to a particular citation style.

At some point, you may wish to export your document. Authorea gives you the ability to export as a PDF, LaTeX, or MS Word document as shown in Fig 23. Simply navigate to **Export** and select your preferred document type from the drop down menu.

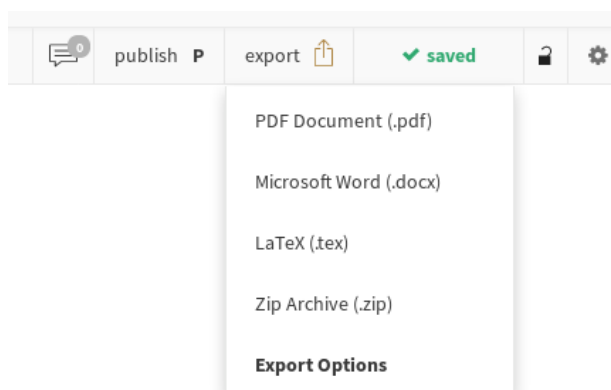


Figure 23: Exporting a Document

You have the ability to change the citation style used when exporting from Authorea by navigating to **Export -> Export Options**, then selecting your preferred style as shown in Fig. 24. Note that the references in your working document will not reflect this style choice. As mentioned above, they will retain a generic

Authorea style. Formatting occurs only when you export the document, so be sure to check the reference section of the export to ensure it reflects the style you specified.

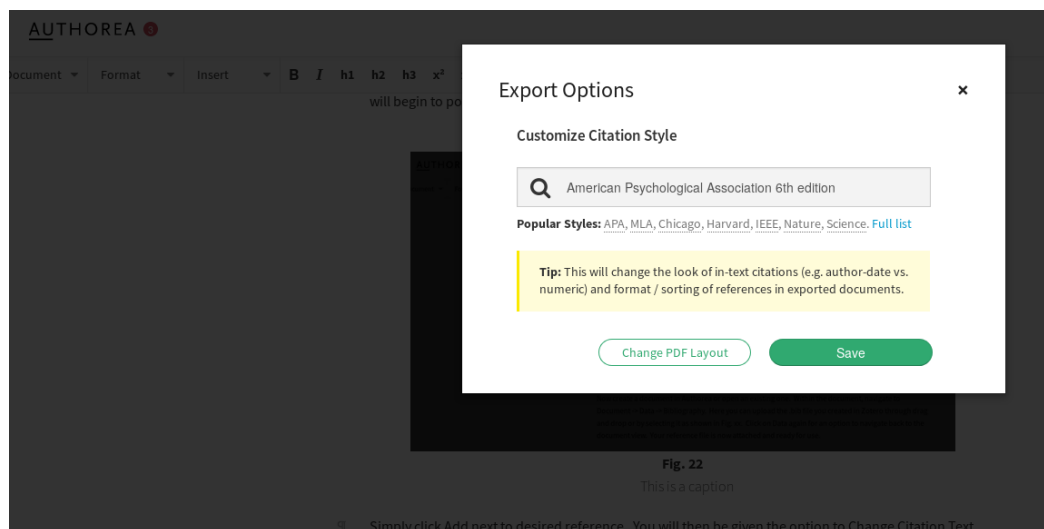


Figure 24: Select Export Options

Closing Thoughts

This post introduces just the basic functions of the platform and only scratches the surface of what Zotero can do. There are a robust community of platform users who post tutorials such as this one, how-to videos, as well as an official [Zotero blog](#) where you can learn more about its functionality. Once you've spent some time on the platform, I encourage you to expand your expertise with these resources.

Happy writing!