

Citation Management Software

Overview

“A reference manager supports researchers in three core steps: **searching, storing, and writing**. It helps you find relevant literature, store papers and their bibliographic metadata in a personal database, and insert citations and bibliographies in a chosen style when writing.

Fenner, M., Scheliga, K., & Bartling, S. (2014). Reference management. In S. Bartling & S. Friesike (Eds.), *Opening Science* (pp. 125–137). Springer. https://doi.org/10.1007/978-3-319-00026-8_8

Citation managers reduce transcription errors, automate reformatting when you switch citation styles, and provide structured deduplication across multiple database exports for systematic reviews.

Choosing a Tool

The table below compares the three tools most commonly used in academic contexts. **The library recommends Zotero** for all students: it is free, open-source, and has no storage paywall for the core workflow.

Feature	Zotero	Mendeley	EndNote
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Cost	Free (open-source)	Free (basic); owned by Elsevier	Paid
Storage (free tier)	300 MB sync; unlimited local	2 GB	n/a (local only)
Browser connector	Yes — all major browsers	Yes	Limited
Word processor	Word, LibreOffice, Google Docs	Word, LibreOffice	Word
Group libraries	Yes — free, unlimited members	Yes — limited to 25 members	No
Deduplication	Built-in duplicate detection	Basic	Basic
Open-source	Yes	No	No
PDF annotation	Yes (built-in reader, Zotero 7+)	Yes	Yes
Cite styles available	10,000+ (CSL)	4,000+ (CSL)	7,000+



Installation

Zotero has two required components and one optional one:

1. **[Zotero desktop application](#)**: Available for Windows, macOS, Linux, iOS, and Android.
2. **[Browser Connector](#)**: a browser extension for Chrome, Firefox, Edge, and Safari. Once installed, a toolbar button appears in your browser. Clicking it captures the metadata (and often the PDF) of whatever page you are viewing — a journal article, a book record, a webpage — directly into your Zotero library.
3. **[Word processor plugin](#)**: automatically installed with the desktop app for Microsoft Word and LibreOffice. A Google Docs connector is also available. The plugin inserts in-text citations and generates a bibliography in any style, and reformats both instantly if you

switch styles.

Keep the Zotero desktop application open while you are writing. The word processor plugin communicates with the desktop app to retrieve your references; it cannot function if the app is closed.

Core Features

Collecting Sources

- **Browser Connector:** Save a source with one click from any database, catalogue, or webpage. Zotero detects the item type (journal article, book, report, webpage) and populates the correct metadata fields automatically. For most databases (EBSCO, JSTOR, Google Scholar), it also downloads the PDF where your access allows.
- **Manual entry:** Add items by DOI, ISBN, or arXiv ID via *File → Add Item by Identifier*, or enter metadata manually.
- **Import from databases:** Export search results from EBSCO or JSTOR as RIS or BibTeX files and import them in bulk via *File → Import*. This is the recommended method for SLR database searches.

Organizing Your Library

- **Collections:** Create a folder (collection) per database search or project. One item can belong to multiple collections without being duplicated. For SLRs, create one collection per database, one for each screening phase, and one final collection for included studies.
- **Tags:** Apply keyword tags to items for thematic grouping. Tags can be added manually or imported automatically from database keywords.
- **Saved searches:** Create persistent, auto-updating searches across your library based on any field combination.

Reading and Annotating

Zotero includes a built-in PDF and EPUB reader with full annotation support: highlights, comments, and text notes are stored in Zotero and can be exported. Annotations appear in the item pane alongside metadata and are searchable across your library.

Citing Sources

The word processor plugin inserts citations and manages bibliographies dynamically. Key operations:

- **Insert Citation** (Ctrl/Cmd + Shift + A in Word): Search your Zotero library and insert an in-text citation at the cursor.
- **Insert Bibliography**: Generates a full reference list at the cursor position, automatically sorted and formatted.
- **Switch Style**: Change the citation style across the entire document in one step; all in-text citations and the bibliography reformat automatically. No manual reformatting is required.

Supported styles include APA 7, Chicago 17 (Author-Date and Notes-Bibliography), MLA, Harvard, and over 10,000 others from the [CSL style repository](#).

Group Libraries

Group libraries allow multiple users to share a Zotero collection in real time. They are free and have no member limit. Use cases:

- Sharing a reading list with fellow students working on a joint project
- Collaborative SLRs where two reviewers need access to the same reference set
- Supervisor access to a student's reference library for review

To create a group: go to [zotero.org](https://www.zotero.org), sign in, and create a group under *Groups*. Invite members by email or Zotero username. Group libraries appear in the left panel of the desktop app.

Zotero for Systematic Literature Reviews

For [SLRs](#), Zotero's most important functions are import, deduplication, and collection structure. The workflow below follows the steps described in [Conducting Your Search](#).

Step 1: Create a collection structure before searching

Create the following collections in Zotero before you begin:

```
My SLR/
├─ 01_Database Searches/
│  ├─ EBSCO [date]
│  ├─ JSTOR [date]
│  └─ Google Scholar [date]
├─ 02_After Deduplication/
├─ 03_Title-Abstract Screening/
│  ├─ Included
│  └─ Excluded
├─ 04_Full-Text Screening/
│  ├─ Included
│  └─ Excluded
└─ 05_Final Included Studies/
```

This structure mirrors your PRISMA flow diagram and makes it easy to report numbers at each stage.

Step 2: Import search results

Export results from each database as an RIS or BibTeX file, then import into the corresponding sub-collection via *File* → *Import*. Do this separately for each database so counts per database are preserved.

Step 3: Deduplicate

1. Select all items across your database sub-collections and copy them into the *02_After Deduplication* collection.
2. Click *Duplicate Items* in the left panel. Zotero groups likely duplicates for review.
3. Review each pair: click *Merge Items* to keep the record with the most complete metadata.
4. Record the number of duplicates removed for your PRISMA diagram.

Zotero's automatic duplicate detection works on title similarity and DOI matching. Always review suggested duplicates manually before merging — conference pre-prints and final journal versions of the same paper will be flagged as duplicates but may need to be kept separately depending on your protocol.

Step 4: Use tags for screening decisions

During title/abstract screening, add tags such as `include`, `exclude`, or `uncertain` to each item. The Tags panel (bottom-left) lets you filter your library instantly by any tag, making it easy to move items between collections after screening.

Further Learning

Resource	Description
Zotero Quick Start Guide	Official introduction from the Zotero team
Word Processor Plugins	Official instructions for Word, LibreOffice, and Google Docs
Zotero for Systematic Reviews	UCL Library guide on deduplication for SLRs
ZoteroBib	Quick browser-based citation generator (no account needed; does not require the desktop app)

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