



Literature Review

Learning objectives

- Working with bibliographic data from reference management programs
- Organizing and analysing literature and excerpts with MAXQDA

Working with bibliographic data from reference management programs

MAXQDA offers the possibility to import bibliographic data from reference management software such as Mendeley, Endnote, Citavi and Zotero. Like MAXQDA, these reference managers use project files, meaning databases, containing all collected bibliographic information. The smallest unit of a project is a bibliographic reference (author, title, etc.) which may also contain links to websites, keywords, abstracts, full texts and other information.

MAXQDA can work with all reference management programs that are able to export their databases in RIS-format, a standard format for bibliographic data. A detailed description of the RIS-format can be found on Wikipedia.

RIS data contains “tags”, each consisting of two letters, to which the corresponding information is attached.

Some important tags include:

TY – Type of reference, always introduces a new entry

ID – Unique identification number for the entry

AU – Author

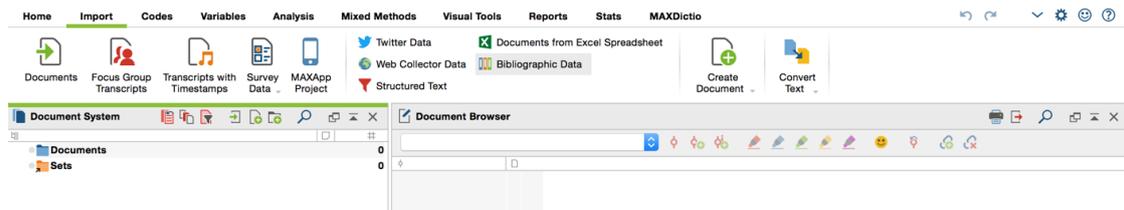
TI – Title

PY – Publication date

ER – must appear at the end of an entry for closure of said entry Source specification in RIS- format appears as follows:

Import and automatic pre-coding

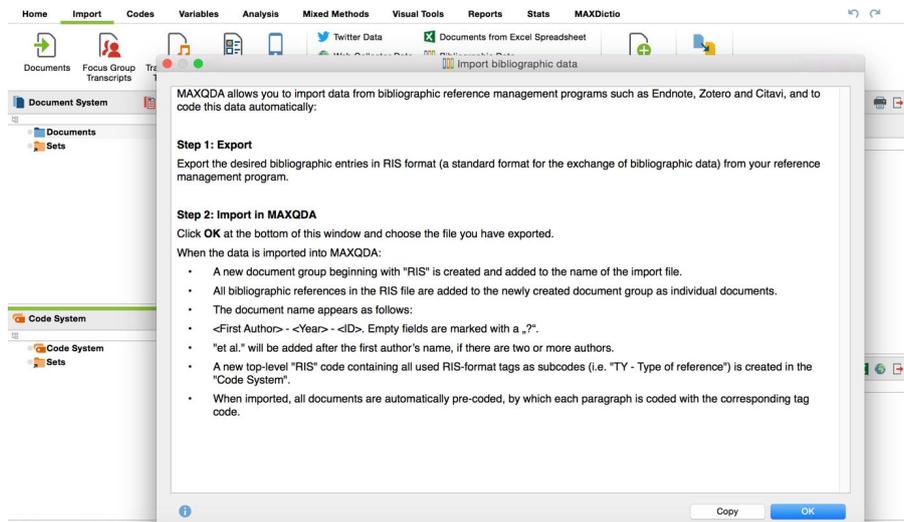
RIS data can be imported via the option BIBLIOGRAPHIC DATA in the Tab IMPORT of the main menu.



Import Bibliographic Data



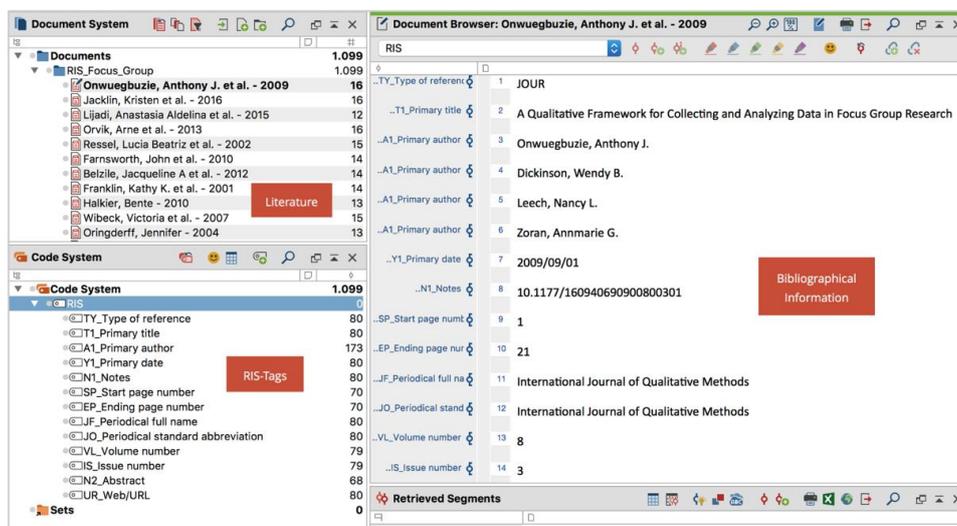
First, a dialog window with import information will appear, followed by a dialog window, in which the file with the extension RIS or TXT can be selected.



Import and automatic pre-coding

During the import process, the following occurs:

- A new document group is created in MAXQDA, whose name begins with "RIS" and is supplemented with the name of the import file.
- All references from the RIS file are added to the newly created document group as a single document. The entries remain in their original order. The imported documents are identified with a book symbol in the Document System.
- The document names are structured as follows: <Author> - <Year> - and if available <ID>. Empty fields may be indicated with the "?" symbol. In the case of multiple authors, only the first author's (last and first) name will appear, followed by the abbreviation "et al."
- The newly created documents contain the information to the right of the tags. The tags themselves will not be imported.
- A new top-level code, "RIS," will appear in the Code System, which contains all the RIS tags used in the import file as subcodes, for example "TY – Type of reference".
- Upon import, all documents will be automatically pre-coded, meaning each text excerpt will be coded with the corresponding tag code.



RIS data in MAXQDA following import

Five pieces of information which may also be important for future selections are also stored as document variables:

- RIS_Type (Type of Reference) – Text
- RIS_Author (First Author) – Text
- RIS_Title (Title) – Text
- RIS_Reference-ID (Identification number) – Integer
- RIS_Year (Year of publication) – Integer

These variables are created as system variables and cannot be changed by the user.

The screenshot shows the 'Data editor - All documents' window with a table of document variables. The table has 7 columns: Document gro..., Document name, Creation date, Number of co..., Number of me..., Author, RIS_Type, and RIS_Author. The table contains 15 rows of data for various documents.

Document gro...	Document name	Creation date	Number of co...	Number of me...	Author	RIS_Type	RIS_Author
RIS_Journal fo...	Abildso, Christ...	21.02.18 16:37	17	0	Lena	JOUR	Abildso, Christ...
RIS_Journal fo...	Alise, Mark A. ...	21.02.18 16:37	14	0	Lena	JOUR	Alise, Mark A. ...
RIS_Journal fo...	Arnault, Denis...	21.02.18 16:37	14	0	Lena	JOUR	Arnault, Denis...
RIS_Journal fo...	Bazeley, Pat ...	21.02.18 16:37	12	0	Lena	JOUR	Bazeley, Pat ...
RIS_Journal fo...	Bazeley, Pat et...	21.02.18 16:37	14	0	Lena	JOUR	Bazeley, Pat et...
RIS_Journal fo...	Bergman, Man...	21.02.18 16:37	12	0	Lena	JOUR	Bergman, Man...
RIS_Journal fo...	Bergman, Man...	21.02.18 16:37	13	0	Lena	JOUR	Bergman, Man...
RIS_Journal fo...	Bergman, Man...	21.02.18 16:37	12	0	Lena	JOUR	Bergman, Man...
RIS_Journal fo...	Castro, Felipe ...	21.02.18 16:37	16	0	Lena	JOUR	Castro, Felipe ...
RIS_Journal fo...	Christensen, P...	21.02.18 16:37	15	0	Lena	JOUR	Christensen, P...
RIS_Journal fo...	Crooks, Valori...	21.02.18 16:37	17	0	Lena	JOUR	Crooks, Valori...
RIS_Journal fo...	Curry, Leslie A...	21.02.18 16:37	18	0	Lena	JOUR	Curry, Leslie A...
RIS_Journal fo...	DeCuir-Gunby...	21.02.18 16:37	15	0	Lena	JOUR	DeCuir-Gunby...
RIS_Journal fo...	Denzin, Norma...	21.02.18 16:37	13	0	Lena	JOUR	Denzin, Norma...
RIS_Journal fo...	Durham, Jo et ...	21.02.18 16:37	15	0	Lena	JOUR	Durham, Jo et al.
RIS_Journal fo...	Edmeades, Je...	21.02.18 16:37	18	0	Lena	JOUR	Edmeades, Je...
RIS_Journal fo...	Evans, Bronwy...	21.02.18 16:37	15	0	Lena	JOUR	Evans, Bronwy...

Assumed variable values for each document



Working with bibliographic data and exporting

Following import and automatic pre-coding, the bibliographic data is still available in MAXQDA as normal text. This means the data can be searched, coded, linked, edited and have memos added for further qualitative and quantitative data analysis (Kuckartz 2014). Now one can answer questions such as:

- How often are specific authors named?
- Which topics are represented?
- How has the focus on specific topics shifted?
- Are there more journal articles or monographs on a specific topic?
- To what extent have journal article titles changed over time?

Naturally, *Visual Tools* and all other MAXQDA functions, such as graphics and statistics functions, can be applied. On basis of the automatic pre-coding, only documents of a specific type can be selected, for example only journal contributions or only articles in compilations.

Bibliographic data can be exported from MAXQDA in RIS-format, for example to a reference management program. The export function can be accessed via REPORTS > EXPORT > BIBLIOGRAPHIC DATA AS RIS-FILE. All documents of a project containing bibliographic data and therefore identified with a book symbol will be exported in a RIS file (Encoding: UTF-8).

Organizing and analysing literature and excerpts

Characteristic of working with literature are finding and reading relevant works, identifying important points, understanding arguments, and extracting, compiling and comparing texts.

Creating literature reviews with MAXQDA

A literature review as Fink (2010, p.3) define is conducted on a specific topic or research question. The objective is to determine the current state of research and/or the scientific discussion with regard to a particular field of knowledge. The focus may be on different pre-determined aspects, for example theoretical or methodological aspects. A literature review represents a specific form of secondary analysis, as it is not a matter of new, independent research but rather a review of research that has already been conducted. A literature review, like an essay, is frequently conducted by an individual researcher. It systematically presents substantial research results, identifies controversies, and summarizes the state of scientific discourse in a specific field. A literature review is always a structured text, not simply a list of sources.

Work phases for the creation of a literature review

Based on the work of Fink (2010, pp. 4–7) and Heyvaert et al. (2016, pp. 6–8), six phases for the creation of a literature review can be identified:



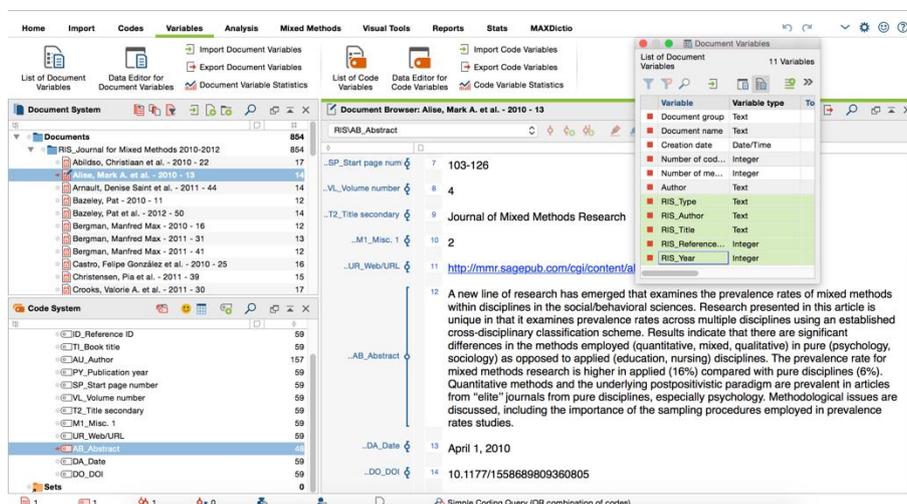
1. Formulation of research questions and objectives of the review. The research question should be precisely formulated and lead the review.
2. Selection of bibliographic databases, which today are normally online databases.
3. Determination of search terms within these databases.
4. Application of practical and methodological criteria for the selection of high-quality scientific literature.
5. Conducting the review. This includes, among other aspects: import of bibliographic data and eventually full texts; definition of variables such as author, year of publication, etc.; thematic coding of significant text segments, writing of excerpts and summaries.
6. Synthesis of results and writing of the review, either in the form of a qualitative description of results or as a quantitative meta-analysis as a calculation of statistical characteristic values and measures.

Phase 4: Application of practical and methodological criteria for the selection of high-quality scientific literature

This phase concerns the selection of relevant literature, that is to say the literature found in the database search is now examined in order to determine if it falls within the narrower parameters of the research question, and whether it fulfils the objectives of the review.

Practical as well as methodological criteria of the selection should be documented. Practical criteria are those which relate to the practical accessibility, language, and type of publication. For example, for a study on environmental awareness in Europe, only results in the most common languages, possibly only in English, would be considered. In addition, the search would be restricted to only the most important social science journals.

For the earlier example of the literature review of data analysis in mixed methods research, all bibliographic search hits were imported into MAXQDA. The sources now appear in the Document System. The image below shows how MAXQDA appears after this information is imported.



View following import of search results in "Journal for Mixed Methods"



The RIS-format tags are found in the Code System. Here it can be seen that an abstract is available for only 48 of the 59 sources. The list of document variables displayed on the right shows that five tags are also available as variables for later selections, namely type of publication, author, title, ID, and year of publication.

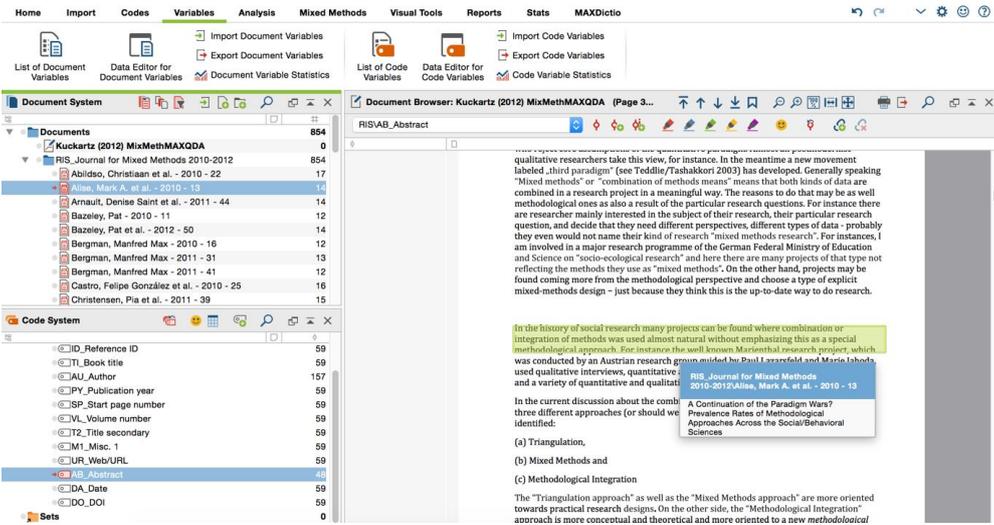
The next step is to systematically read each abstract in order to decide if the source is relevant or not. It is advisable to set up two (or more) new document groups to which the results can be assigned according to their relevance. The names of the document groups should indicate their functions, for example "Relevant Sources" and "Less Relevant Sources." Sources that do not contribute to the review can be deleted immediately. If there is any doubt concerning where to assign a source when reading the abstract, the full text can be obtained by clicking the link coded with the tag "UR_Web/URL". This will open the information page in the Sage Publications database. A link leading to the full text is located here. Reading the full text provides a solid basis on which to classify the text as relevant or less relevant.

Other variables which allow the user to make selections or comparisons and recognize trends can be defined in this phase of the literature review. For example, the variable "Year of publication" allows for the creation of a distribution of sources by year.

There may be other primary sources outside the results of the database search that should be included in the review. In principle, all types of sources, including audio and video sources, can be imported into MAXQDA. Sources such as books that cannot be borrowed may only be available as scanned copies. Such scanned sources can also be included in the literature review.

Linking full text and bibliographic reference

- Open the full text.
- Open the bibliographic reference in the second document browser.
- Highlight the first word (or first paragraph) in the full text and select INSERT DOCUMENT LINK from the context menu.
- Highlight the first word (or first paragraph) in the bibliographic reference and select INSERT DOCUMENT LINK from the context menu.

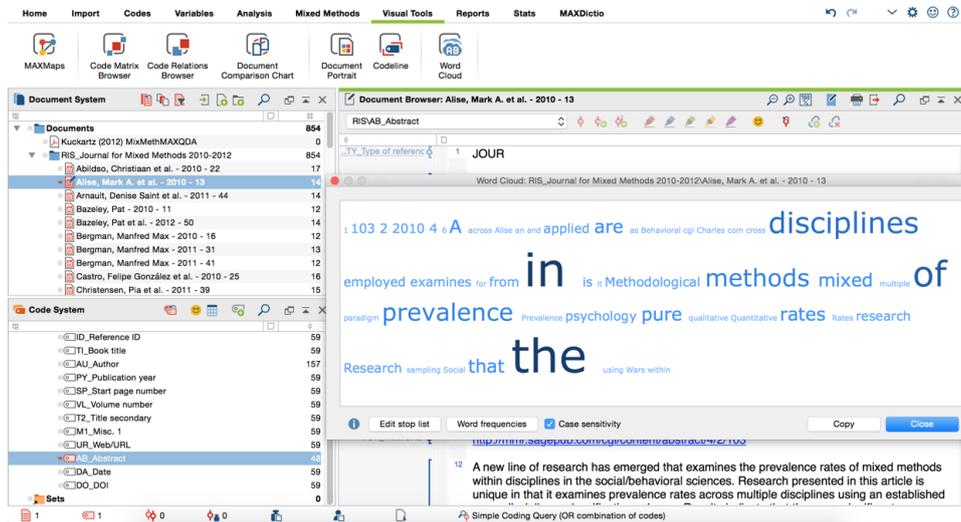


Linking full text and bibliographic reference

Phase 5: Conducting the review

Working with word clouds

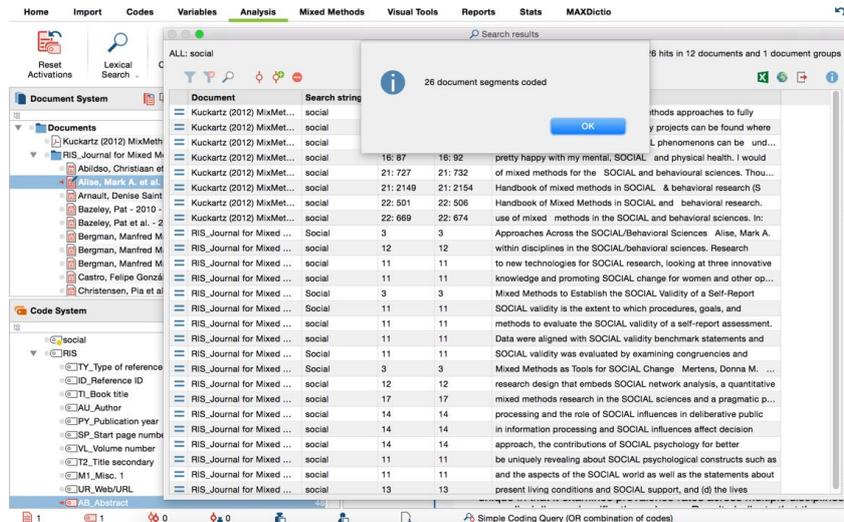
What are the central themes of a text and the key terms that are used? These can be easily explored by clicking on the full text or the bibliographic reference and selecting the option WORD CLOUD. Nonsensical words or words that are not relevant in the context of the review can be transferred to the stop list.



Working with the Word Cloud

Automatic coding of text segments

Interesting keywords can be searched in the text and automatically coded using the function ANALYSIS > LEXICAL SEARCH. The range of text passages to be coded can be freely selected by the user (reference, sentence, several sentences, paragraph). Following automatic coding, these points can be collocated and further explored.



Lexical search and auto coding

Phase 6: Synthesis of results and writing of the review

Most of the work has been completed in the first five phases, and now the findings must be summarized. When the review is written, the preparatory work of the first five phases comes into effect, that is to say, the results of the previous work prepare the researcher to write a well-structured text. One can effectively build on the memos prepared in phases 5 and 6, as well as the tables such as summary tables, and visual representations, in the review.

There are two types of reviews:

1. A review in the form of a qualitative description of results (descriptive literature review); occasionally, quantitative results can also be included, such as the number of sources, their distribution over time, eventual trends, frequency of sub-topics, etc. The focus, however, remains a qualitative one.
2. A review in the form of a quantitative meta-analysis with calculations of statistical parameters and measures. Here, the results of statistical procedures are central, as in the case of a meta-analysis of attitude-behaviour research, where average correlations in various spheres of activity are calculated and communicated. Both types of literature reviews should always contain the following four parts (Fink 2010, pp. 206–207):

- Mission and objectives of the review
- Methods and sampling
- Results
- Conclusions

In the case of a quantitative meta-analysis, the methods section should be expanded with particular attention to the description and substantiation of the statistical methods used. When writing the review, the following MAXQDA tools can provide valuable assistance:



- The Coding Query, with which previously classified text segments can be located.
- Memos, particularly the Free Memos written during the course of work on the review, from which passages can be copied and inserted into the final text.
- Summary Tables, with which compressed summaries of sources can be effectively compared and represented. Summary tables can also be integrated into the review.
- The word frequency functions of MAXDictio, with which the application of specific search terms and semantic contexts can be represented.
- The graphical representation possibilities of MAXMaps, which in particular permit the creation of concept maps.

Further reading

Creswell, John W. 2016. 30 essential skills for the qualitative researcher. Los Angeles: Sage Publications.

Creswell, John W. 2014. Research design: qualitative, quantitative, and mixed methods approaches. 4th ed. Thousand Oaks: SAGE Publications.

Fink, Arlene. 2010. Conducting research literature reviews: from the Internet to paper. 3rd ed. Los Angeles: SAGE.

Heyvaert, Mieke, Karin Hannes, und Patrick Onghena. 2016. Using mixed methods research synthesis for literature reviews. Los Angeles: SAGE.

Kuckartz, Udo. 2014. Qualitative Text Analysis: A guide to methods, practice and using software. Thousand Oaks: SAGE Publications.

Meyer, Uta-Kristina. 2014. MAXQDA11 Tip of the month: How I manage my excerpts with MAXQDA. MAXQDA blog. <http://www.maxqda.com/tip-months-manage-excerpts-with-maxqda/>.

Sauerborn, Elgen. 2014. MAXQDA11 Tip of the months: How I manage my literature with MAXQDA. MAXQDA blog. <http://www.maxqda.com/managing-literature-maxqda/>.