

Literature Reviews with MAXQDA

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MAXQDA includes many tools that can be used to facilitate a literature review. In previous Spotlight Sessions on this topic, I have discussed several of these, emphasizing the importance of ensuring the use of MAXQDA is driven by the analytic needs of the type of literature review you're doing. The previous three Spotlight Sessions on this topic are available on the MAXQDA YouTube channel, and they cover the following topics:

- 2021 Spotlight <http://tinyurl.com/Lit2021Spotlight>
 - Importing references and metadata from bibliographic tools (Endnote, Mendeley, Zotero)
 - Using documents to create your own critical appraisals that can be analysed
- 2022 Spotlight <http://tinyurl.com/Lit2022Spotlight>
 - Screening abstracts for inclusion/exclusion using codes & document-sets
 - Assessing quality at quantitative & qualitative levels using codes & variables
- 2023 Spotlight <http://tinyurl.com/Lit2023Spotlight>
 - Importing and working with PDF files directly : marking & paraphrasing
 - Coding to systematise thinking about literature, integrate with other data & make comparisons

This year we focus on the use of AI Assist in contributing to doing a literature review focusing on summarizing, suggesting codes and explaining text passages.

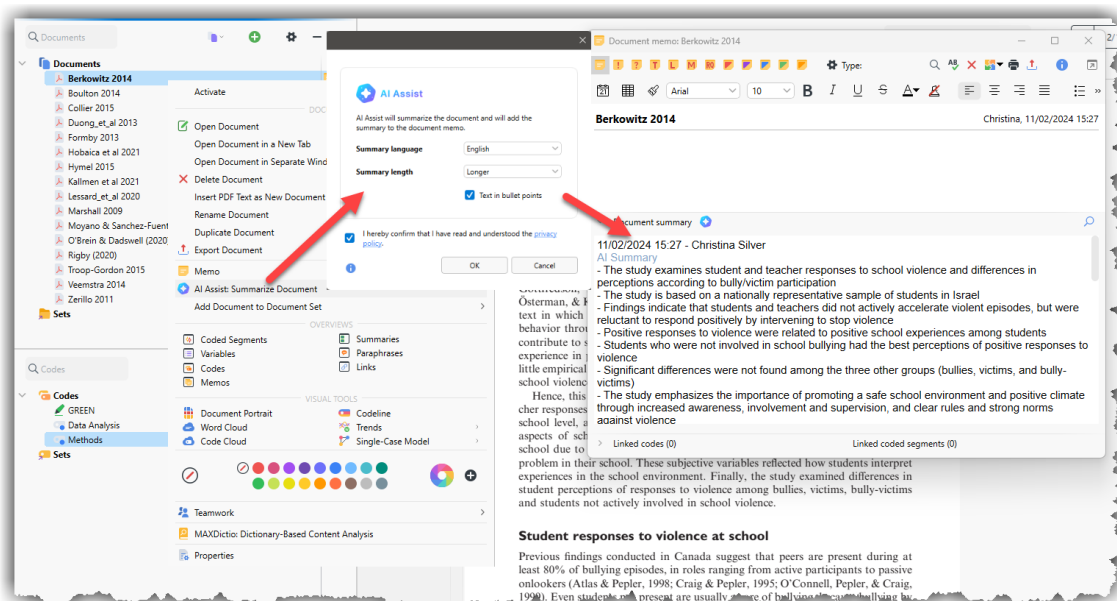
Note: if you would like copies of the slides from today's Spotlight or any of the previous ones, please email me at christina.silver@qdaservices.co.uk

Using AI Assist Summarization for a literature review

Whatever you're summarizing using AI Assist, you get to choose among several options for how the summary will be generated – for example the language the ai-generated summary will be produced in (this does not have to be the same language as the document itself), the length of the summary (longer, standard or shorter) and whether you want the summary as a paragraph or a bullet pointed list.

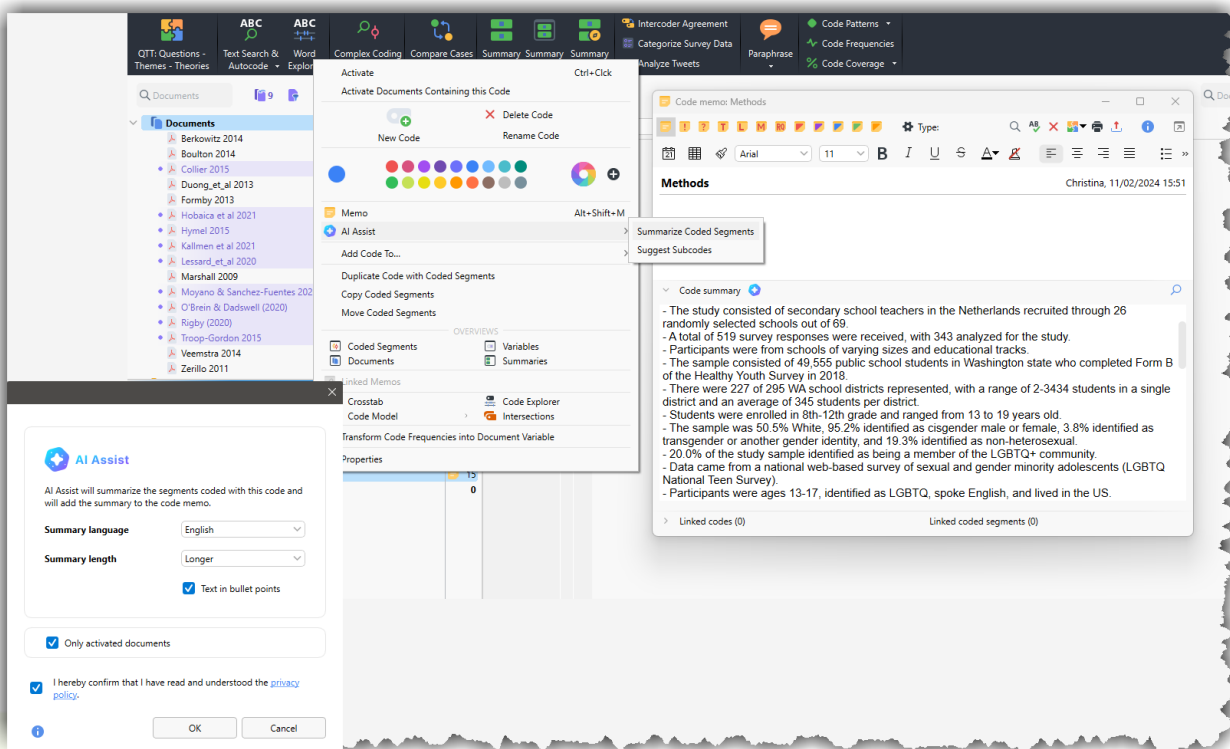
In addition, you can use AI Assist to summarize on several different levels. These are described below, largest first:

- **Summarize a document:** this might initially seem the most obvious and useful form of AI-generated summary for a literature review, and it can be accomplished easily for each full-text article or other piece of literature you have imported into a project. Document summaries can be generated one document at a time, easily by Right Clicking on the document of choice in the Document System and choosing the AI Assist: Summarize Document option. The AI summary is created within a linked memo for that document
 - *This can be a useful initial overview of each piece of literature, allowing you to get a more in-depth understanding of what the article is about than the abstract might give you, but without having to read the whole article.*

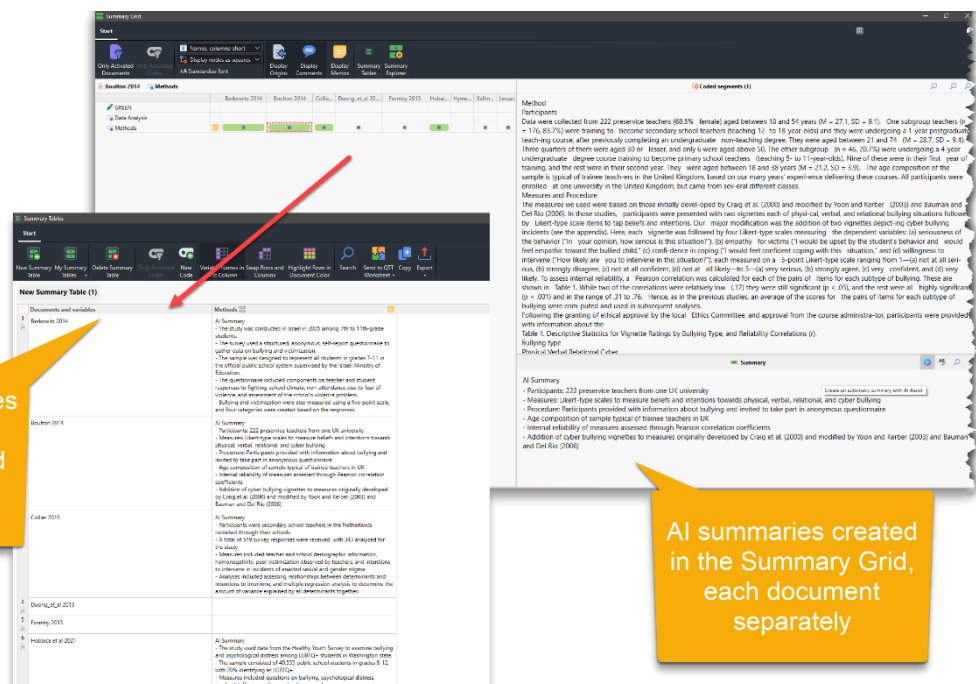


- **Summarize coded segments:** if there are particular parts of the articles you're reviewing that you want to focus on, for example, the methods sections, to understand how the topic area has been researched in the past, you can first code those sections, and then summarize the coded-segments for that code. When using this option you can optionally scope the ai-generated summary to activated documents. Note there is a 80,000 character limit on this feature so you may find you need to scope in this way
 - *These summaries will be more analytically focused around parts of the literature you are particularly interested in, which might not be standardized sections like 'Methods' in this example, but more thematic areas of interest you have already coded for, based on the topic of interest or identified gaps in the literature, for example*
 - *Note that when doing this you may be summarizing content from across several documents, so the summary will combine information from all of them. There is currently no way to see directly from the summary which document is being referenced when summarizing in this way*

In the example below the 'Methods' code is summarized but only for activated documents (those articles published since 2015)



- **Summarize coded segments via Summary Grids.** An alternative to 'globally' summarizing at the code level is to do so via Summary Grids, whereby the coded-segments for the code of interest are summarized separately for each (activated) document.
 - *The benefit of this approach is that you can trace more clearly which document the content comes from, and make direct comparisons in the Summary Grids*

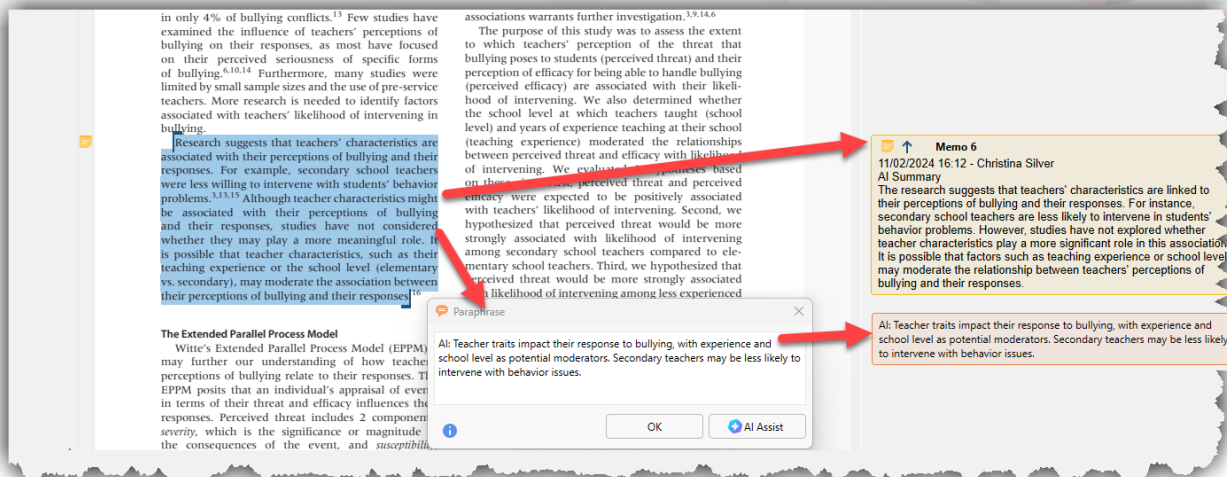


Once all AI summaries have been created these can be viewed and compared in a Summary Table

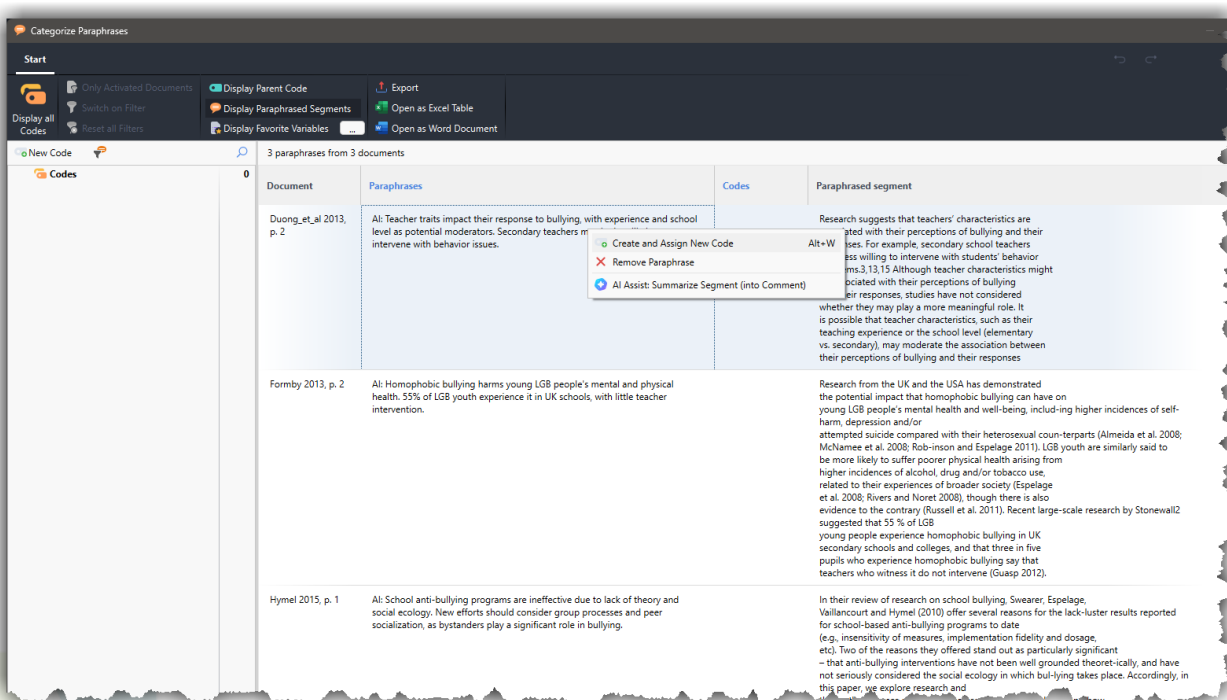
AI summaries created in the Summary Grid, each document separately

- **Summarize and Paraphrase text segments.** These options are similar to one another in that they use AI Assist to summarize segments of text without the prior need to code (as is necessary in the previous two options, above). The image overleaf shows the difference, in terms of the nature of the summary that is generated and where and how they are displayed
 - *When summarizing a text segment, you have the same length choices as previously, and the AI summary is placed in an in-document memo (viewable as an icon in the left margin and displayed in full in the right sidebar if that display option is chosen)*

- *When paraphrasing a text segment, there is no choice regarding length, as paraphrases are always short. They will also be displayed in the side panel*



The additional functionality you have when paraphrasing in this way is that you can subsequently view all AI paraphrases together (or selectively by activating documents) and optionally categorize the paraphrases to move to the coding level via your interpretations. Note that you can view and work with all paraphrases together in this way – i.e. any you created yourself as well as those created using AI Assist.



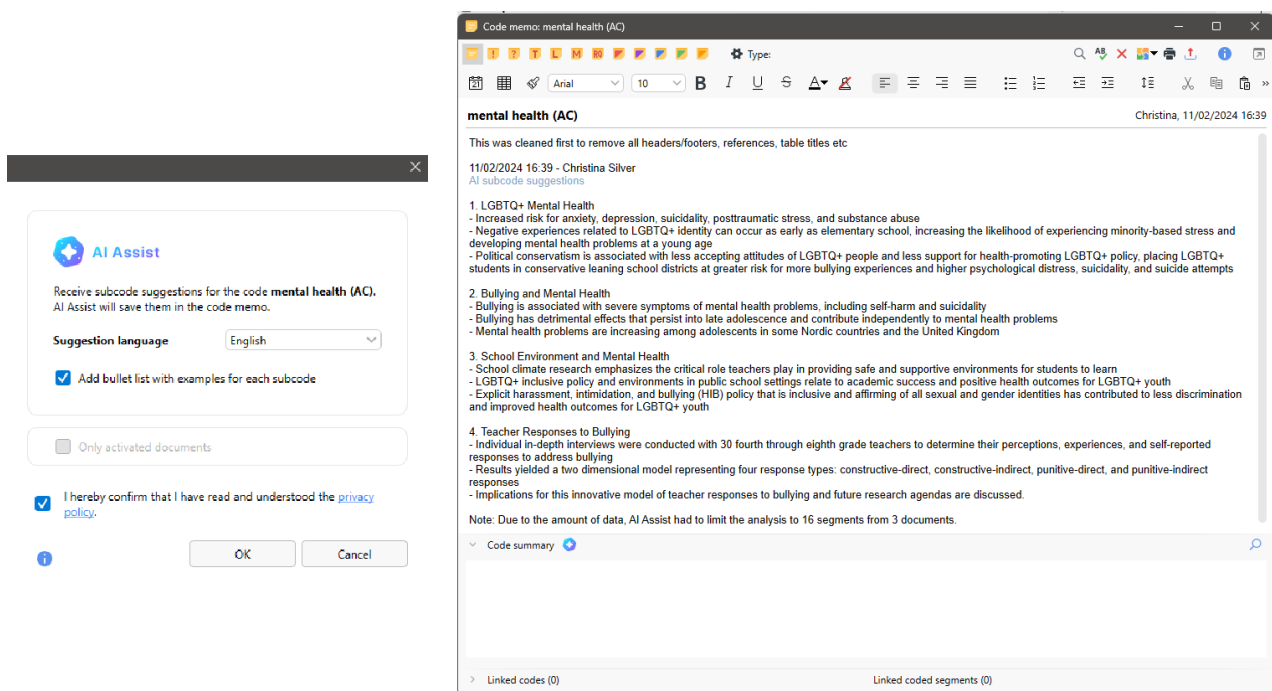
Using AI Assist Coding for a literature review

There are now three ways to use AI Assist for coding. Consider for what purpose and when coding is appropriate (it might not be if you have a large number of articles (see 2021 Spotlight on creating and analyzing critical appraisals of literature rather than working directly with full-text articles).

Code Suggestions for a literature review

You can ask AI Assist to suggest codes in two ways: via a code (sub-code suggestions) and via a selected text segment.

- **Code suggestions via a code.** From the RC menu of a code you can generate code suggestions based on the segments coded to the code. You can choose to have examples from the text bullet-pointed for each sub-code
 - *This is usefully accomplished together with AI Code Summaries which are displayed in the same menu, and retrieving the coded-segments themselves*



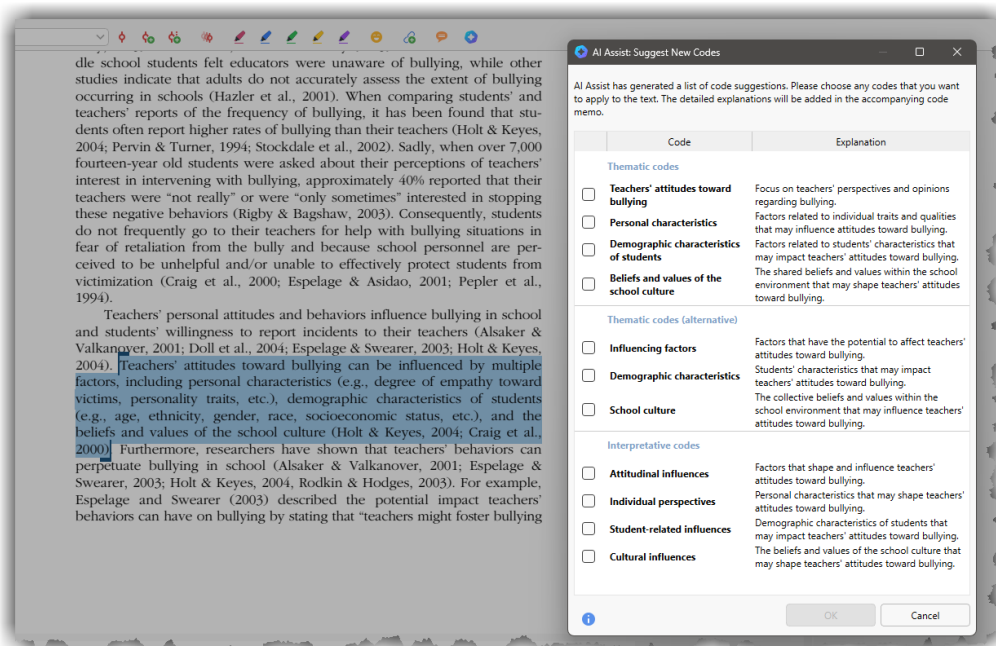
The image shows a screenshot of the AI Assist interface in MAXQDA. On the left, a dialog box titled 'AI Assist' is open, showing options for generating subcode suggestions for the code 'mental health (AC)'. The 'Suggestion language' is set to 'English', and the option 'Add bullet list with examples for each subcode' is checked. Below the dialog, a 'Code memo: mental health (AC)' window is visible, displaying the generated suggestions. The memo includes a list of four subcodes with their respective descriptions and examples:

1. **LGBTQ+ Mental Health**
 - Increased risk for anxiety, depression, suicidality, posttraumatic stress, and substance abuse
 - Negative experiences related to LGBTQ+ identity can occur as early as elementary school, increasing the likelihood of experiencing minority-based stress and developing mental health problems at a young age
 - Political conservatism is associated with less accepting attitudes of LGBTQ+ people and less support for health-promoting LGBTQ+ policy, placing LGBTQ+ students in conservative leaning school districts at greater risk for more bullying experiences and higher psychological distress, suicidality, and suicide attempts
2. **Bullying and Mental Health**
 - Bullying is associated with severe symptoms of mental health problems, including self-harm and suicidality
 - Bullying has detrimental effects that persist into late adolescence and contribute independently to mental health problems
 - Mental health problems are increasing among adolescents in some Nordic countries and the United Kingdom
3. **School Environment and Mental Health**
 - School climate research emphasizes the critical role teachers play in providing safe and supportive environments for students to learn
 - LGBTQ+ inclusive policy and environments in public school settings relate to academic success and positive health outcomes for LGBTQ+ youth
 - Explicit harassment, intimidation, and bullying (HIB) policy that is inclusive and affirming of all sexual and gender identities has contributed to less discrimination and improved health outcomes for LGBTQ+ youth
4. **Teacher Responses to Bullying**
 - Individual in-depth interviews were conducted with 30 fourth through eighth grade teachers to determine their perceptions, experiences, and self-reported responses to address bullying
 - Results yielded a two dimensional model representing four response types: constructive-direct, constructive-indirect, punitive-direct, and punitive-indirect responses
 - Implications for this innovative model of teacher responses to bullying and future research agendas are discussed.

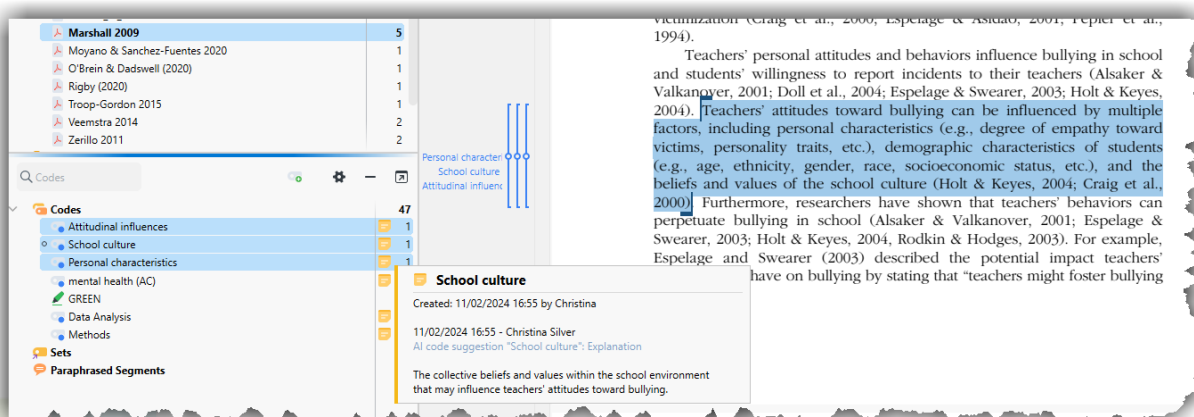
Note: Due to the amount of data, AI Assist had to limit the analysis to 16 segments from 3 documents.

At the bottom of the memo window, there are sections for 'Code summary' and 'Linked codes (0)' and 'Linked coded segments (0)'.

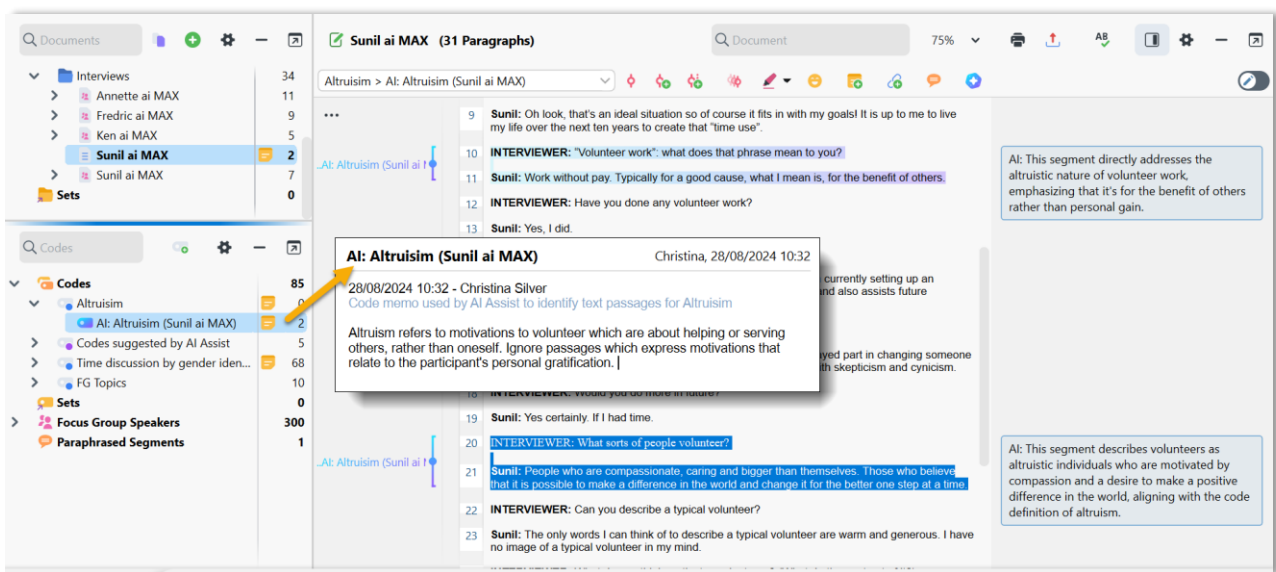
- **Code suggestions via a selected text segment.** Simply select a text segment, and have AI Assist suggest possible codes from that segment.
 - *This is particularly useful if you want to remain primarily in control of the analytic process yourself, and code as you previously might have done, but have some suggestions that you can pick and choose from whilst reading and interpreting the text sequentially*



If you choose to apply any of the suggested codes, they are displayed in the Code System and linked code memos contain the explanations. Once codes are created in this way they can be used like any other code – and the content of the memo adjusted as you add more segments and review them as you proceed.

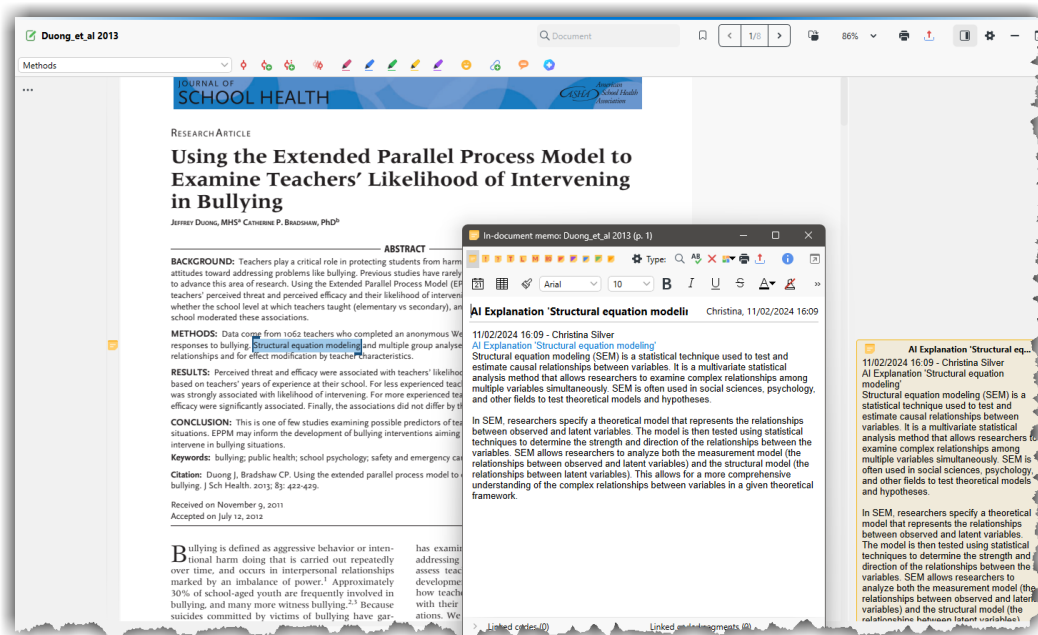


- **AI Coding a Document.** Select one Document and ask AI Assist via the RC menu to start AI Coding. You choose an existing Code and specify a clear definition, providing examples of what should or should not be coded (inclusion and exclusion criteria). AI Assist examines the document and finds segments that match, providing an explanation for the rationale for coding each segment.
 - *The way AI coding is implemented keeps you in control of what is happening – for literature reviews this is particularly important, so consider useful codes (these may not only be topic based)*



Using AI Assist Explaining Text Segments for a literature review

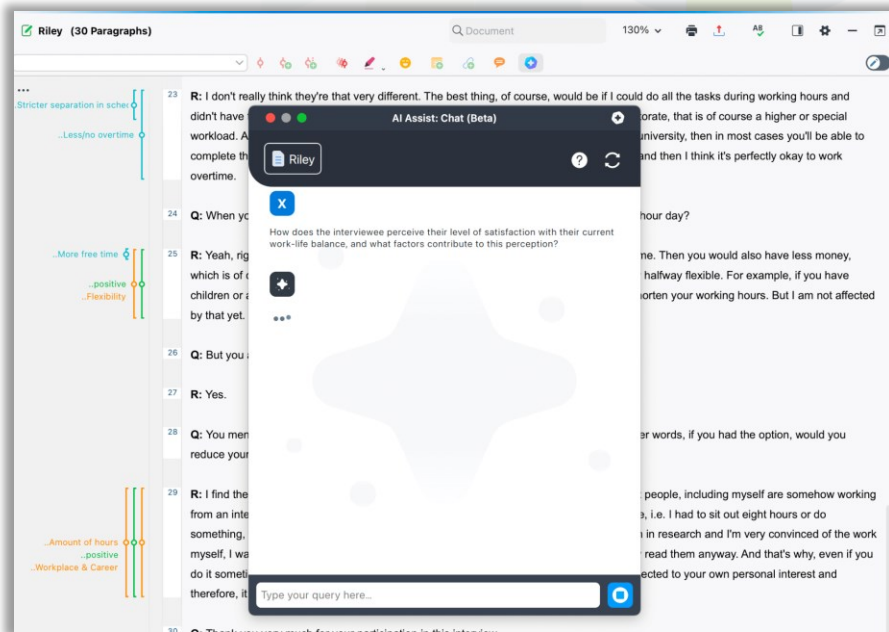
In addition is the ability to have AI Assist clarify terms, concepts, theories, technical terminology, or anything in the literature that you are unclear about the meaning of. This can be particularly useful when the author has neglected to define a term, or you are unsure whether the way they are using particular terms reflects broader understandings. Note, this feature, designed as it is to explain terms, has a character limit of 15 characters.



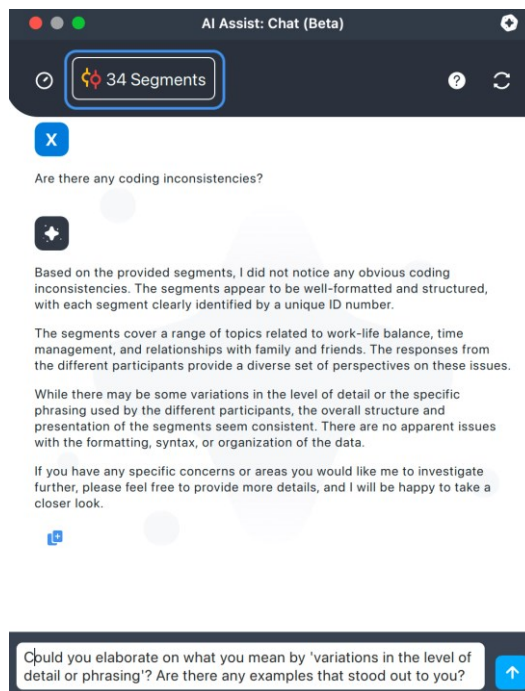
Using AI Assist Chat in your Literature Review

You can Chat with one Document or Chat with Coded Segments using AI Assist, in a conversational interface.

- **Chat with one Document.** Select the relevant Document and via RC or the shortcut icon start the Chat. A pop-up conversation window appears



- **Chat with Coded Segments.** Start this off from several places, including RC on a code, or via the Retrieved Segments window when you have activated the Documents/Codes you're interested in.
 - *Chatting with Coded Segments can be useful for literature reviews when e.g. you have codes relating to theories, gaps in knowledge, citations and so on*



Integrating AI Assist in your Literature Review Workflow

The AI Assist features are most usefully seen as an addition to the suite of tools and analytic techniques you may already be using to undertake a literature review, rather than as a replacement for them – hence the name AI **Assist**. As discussed in previous Spotlight Sessions on this topic, your literature review methodology (your analytic strategy) should drive your use of MAXQDA's tools (your tactics).

It is definitely worth experimenting with these AI tools, and considering whether and how they may support your work.