

Quantitative Content Analysis with MAXDictio

MAXDictio is a quantitative text analysis module that is part of MAXQDA Plus and MAXQDA Analytics Pro. It is not a part of MAXQDA Standard. MAXDictio offers tools for word-based analysis of text and PDF documents:

- Analysis of word frequencies and word combinations
- Analysis of Keyword-in-context (results tables and Interactive Word Tree)
- Quantitative content analysis with a dictionary



Explorations – Word Frequencies

Select MAXDictio > Word Frequencies to count and list words in all (or only in activated) text and PDF documents. Alternatively, you can restrict the search to the text currently displayed in the “Retrieved Segments” window.

The result table lists all words in the analyzed text by their absolute and relative frequencies. The columns “Documents” and “Documents %” indicate the number and percentage of documents in which a word occurs.

Word	Word length	Frequency	%	Rank	Documents	Documents %
opportunistic	13	5	0.00	1855	4	8.89
partner-based	13	4	0.00	2053	4	8.89
profitability	13	17	0.01	1023	14	31.11
remeasurement	13	23	0.01	847	19	42.22
self-produced	13	5	0.00	1855	4	8.89
significantly	13	18	0.01	985	11	24.44
strategically	13	13	0.01	1186	10	22.22
substantially	13	7	0.00	1597	6	13.33
supermajority	13	3	0.00	2348	3	6.67
transactional	13	4	0.00	2053	3	6.67
unfortunately	13	6	0.00	1706	6	13.33
unprecedented	13	7	0.00	1597	6	13.33
word-of-mouth	13	5	0.00	1855	4	8.89
acceleration	12	12	0.01	1241	10	22.22
ad-supported	12	20	0.01	934	7	15.56
additionally	12	3	0.00	2348	3	6.67

Stop and Go Lists

Stop lists are a place to collect uninteresting words, for example to or and, that you wish to exclude from your analysis. You can send words to the stop list with a click on the green icon in result tables or open MAXDictio > Stop List to customize, export, import and merge stop lists.

Differentiate by Document, Document Group or Document Set

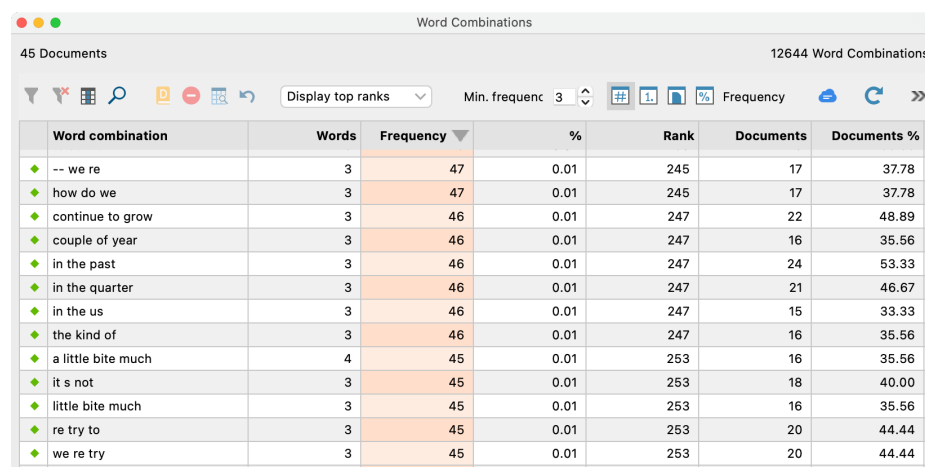
Result tables can hold additional columns to display word frequencies for documents or document groups. Columns can display how often a word occur, the rank of a word in this document (group) or if the word occurs at all (1, 0).

Lemmatization

Activate the lemmatization option to count words from the same stem together. For example, the frequency for “give” will include occurrences of give, gave, or given. Lemmatization is currently available for 14 languages.

Exploration: Word Combinations

Select MAXDictio > Word Combinations works similar to the Word Frequencies feature but counts and lists word combinations rather than single word occurrences. You can search for combinations of up to 5 words. You can decide if word combinations should occur within the same sentence or if word combinations should also be counted across paragraphs and full stops.



Word combination	Words	Frequency	%	Rank	Documents	Documents %
-- we re	3	47	0.01	245	17	37.78
how do we	3	47	0.01	245	17	37.78
continue to grow	3	46	0.01	247	22	48.89
couple of year	3	46	0.01	247	16	35.56
in the past	3	46	0.01	247	24	53.33
in the quarter	3	46	0.01	247	21	46.67
in the us	3	46	0.01	247	15	33.33
the kind of	3	46	0.01	247	16	35.56
a little bite much	4	45	0.01	253	16	35.56
it s not	3	45	0.01	253	18	40.00
little bite much	3	45	0.01	253	16	35.56
re try to	3	45	0.01	253	20	44.44
we re try	3	45	0.01	253	20	44.44

Tip: If you hover with a mouse over a row in the results table, all the lemmatized words or word combinations in this row will be displayed.

Exploration: Keyword-in-context

Select MAXDictio > Keyword-in-context to view selected keywords in a tabular view along with the words that appear before and after the word. The table also displays document information.

Keyword-in-context

Keywords: pull forward 19 hits in 11 documents and 4 document groups

Document group	Document	Beginning	Context	Keyword	Context
2019	19-Q2 T	25	maybe a little bit more	pull forward	of our subscriber growth from
2020	20-Q1 T	36	March. It's essentially a	pull forward	of the rest of the
2020	20-Q1 T	38	growth and the topic of	pull forward	that you just referenced, Reed
2020	20-Q2 T	43	Obviously, we've seen some	pull forward	in our member growth, if
2020	20-Q2 T	50	expectation of a lot of	pull forward	of growth. But over this
2020	20-Q2 T	53	that kind of near-term	pull forward	that you're seeing, Kannan
2021	21-Q1 L	3	to the big Covid-19	pull forward	in 2020 and a lighter
2021	21-Q1 L	11	performance vs. forecast. With similar	pull forward	and delayed slate dynamics plus
2021	21-Q1 T	18	particular, we had this huge	pull forward	in 2020 in terms of
2021	21-Q1 T	44	of still working through that	pull forward	, still working through some of
2021	21-Q1 T	45	we come out of that	pull forward	. So feeling good about the
2021	21-Q1 T	47	Q2 sort of encapsulate the	pull forward	that you're expecting? I
2021	21-Q1 T	47	as maybe some of the	pull forward	behind us? Spencer Adam Neumann
2021	21-Q2 T	18	had the kind of big	pull forward	in 2020 of subscriber adds
2021	21-Q3 T	32	with COVID, past that COVID	pull forward	into the strength of our
2021	21-Q4 T	31	9 million. And so the	pull forward	sort of makes it hard
2022	22-Q1 L	7	was due to the COVID	pull forward	Now, we believe there are

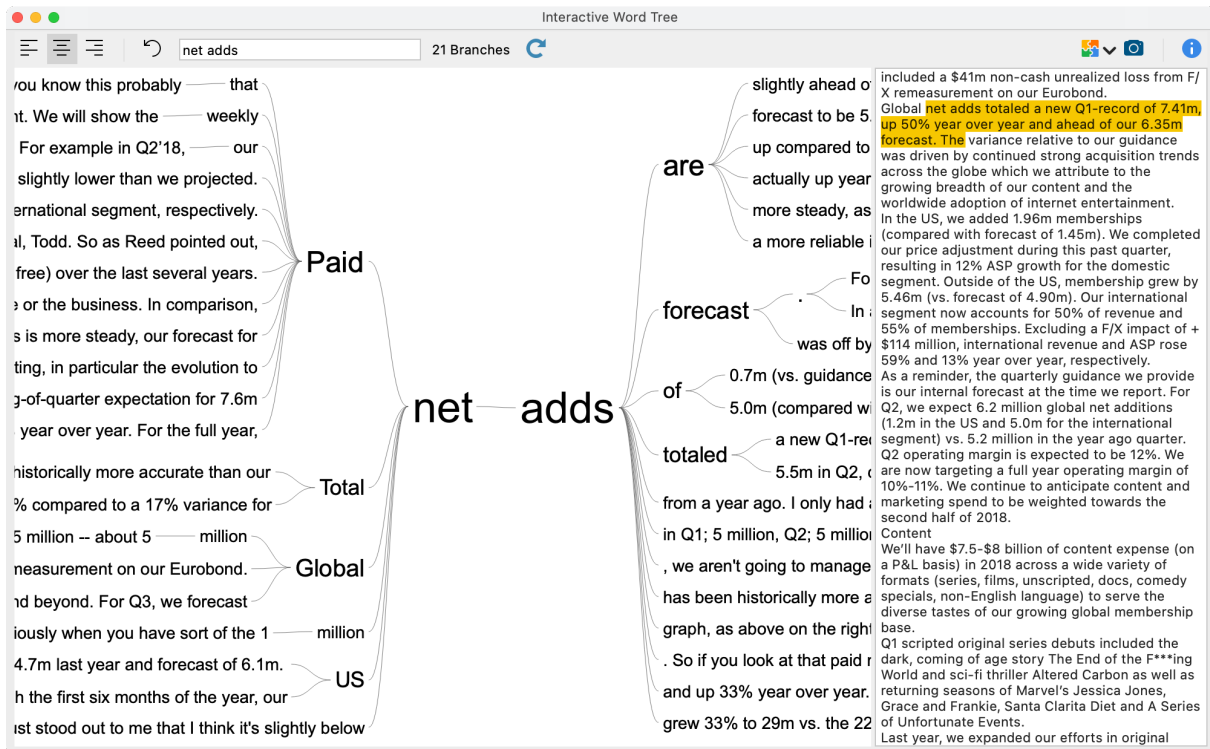
Tip: This table is interactively linked to the original source data. Click into a table row to highlight the search item in the original text in the Document Browser. Each column of a result table can be alphabetically sorted with a click on the column header. You can rearrange columns via drag & drop, and right click on a column header to filter for characters.

Exploration: Interactive Word Tree

Select MAXDictio > Interactive Word Tree to visually explore word and word combinations in your data). Drag all the documents, document groups or sets into the dialog window that you want to use to create a Word Tree.

The word “net adds” is the root of the tree with branches to the left and right showing the words before and after that word. The root can be placed in the middle (as shown above) or as the starting or ending point. The window to the right contains the complete analyzed text. Yellow highlighted passages are currently displayed in the tree view.

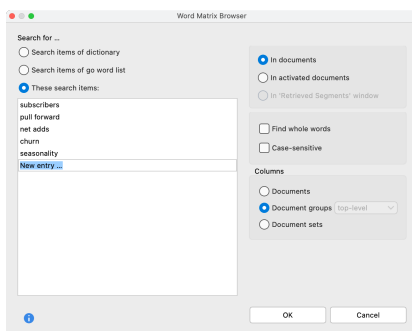
Tip: Click on another word to use it as the new root or search for word (combinations) in the search field.



Word Matrix Browser

The Word Matrix browser lets you produce a table like the code matrix browser, but instead of showing the distribution of codes in documents, document groups or document sets, it lets you see how words are used.

Word Matrix browser can use a set of search terms, words in a “go list,” or words in a dictionary (see below).



	2018	2019	2020	2021	2022	SUM
cash flow	23	42	57	32	38	192
revenue	42	67	45	69	185	408
M&A	4	2	1	10	3	20
acquisition	20	13	10	35	27	105
financ	45	57	80	82	66	330
stock price			1	1	1	3
pric	59	98	43	50	106	356
margin	53	56	41	51	76	277
tax	6	8	5	4	7	30
spend	36	36	42	19	51	184
buyback			5	9	1	15
FCF	7	12	20	12	14	65
bond	4	1	2	2	3	12
repay			1		1	2

If you click on one of the cells, you will see the search results of that word or phrase and can then auto-code it if you want.

Search results

35 hits in 7 documents and 1 document groups

Preview	Document group	Document name	Search item	E
s difficult to build organically. I'm just curious what your reaction to that is. And why isn't Netflix participating in big acquisitions given your aspirations in gaming? Gregory K. Peters - COO & Chief Product Officer Well, it's -- I mean it was	2021	21-Q4 T	acquisition	1
ties to sort of anchor the product? Just the last couple of weeks, we've obviously seen a couple of major companies make big acquisitions or at least announce big acquisitions because this is obviously something that's difficult to build organically.	2021	21-Q4 T	acquisition	1
our own game studio. We've been hiring some incredible talent that brings a set of experience to this process. We've done an acquisition in this space. And that now allows us to incrementally gradually, over a period of time, get to that sort of the	2021	21-Q4 T	acquisition	1
ng to our members and sort of iteratively doing this walk where the metrics that we see in terms of engagement and churn and acquisition and those kind of things are really our signal that we've done a good job at sort of creating this more value	2021	21-Q4 T	acquisition	5
pre-COVID levels, just hasn't fully recovered. And we're trying to pinpoint what that is. It's tough to say exactly why our acquisition hasn't kind of recovered to pre-COVID levels. It's probably a bit of just overall COVID overhang that's still	2021	21-Q4 T	acquisition	2
much the same trends we saw in Q4: so healthy retention with churn down, healthy viewing and engagement with viewing up and acquisition just growing but a bit slower than pre-COVID levels, just hasn't fully recovered. And we're trying to pinpoint	2021	21-Q4 T	acquisition	2

Dictionary-based Content Analysis

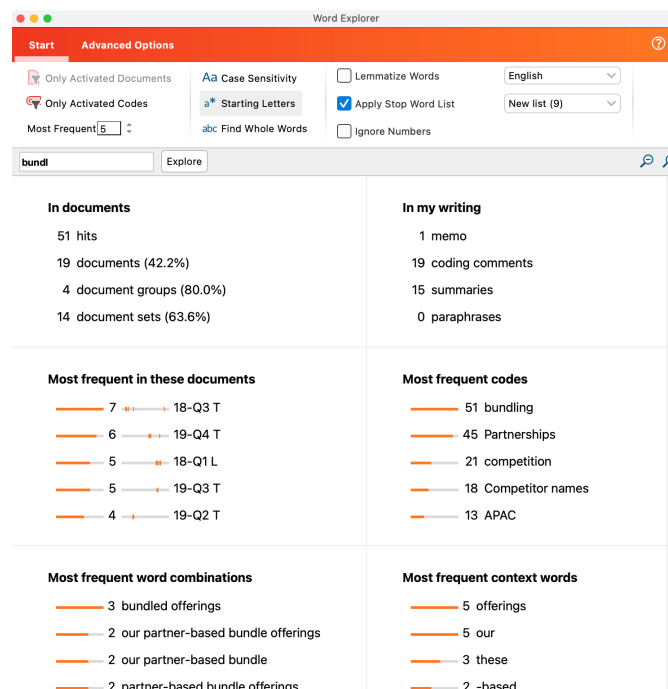
To conduct a dictionary based quantitative context analysis, your first step is to create a dictionary via MAXDictio > Dictionary. A dictionary may contain any number of categories with an unlimited number of search items. For example, a simple dictionary may look like this:

This dictionary contains categories, like “Finances” or Partnerships”, each of which includes search items. A search item can also consist of multiple words or phrases. As you can see, you can specify if you want whole word, case sensitivity, or starting letters. Like stop-lists, dictionaries can be imported, exported, and merged. By default, dictionaries and stop lists are saved within a MAXQDA project, to ensure that if you share your project data with your team, everyone can use them.

Selecting Search Terms

The hard work is in creating a functional dictionary that will capture the terms you are looking to include. Here you can draw on other MAXDictio tools, such as Word Combinations, and Word Frequencies to drag words into search terms in a dictionary.

Use the Analysis > Word Explorer or MAXDictio > Word Matrix browser to first explore the terms you are thinking of including in a dictionary. Word Explorer can let you see the usage of words or phrases in documents, groups, word combinations, context words, and associated codes. It is probably the best place to “beta test” words to include as dictionary search terms.



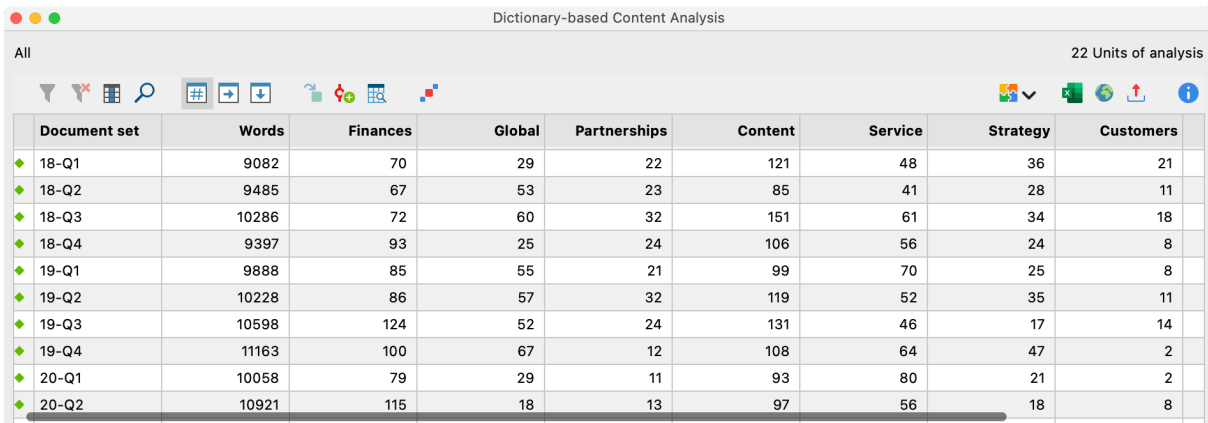
Search results

ALL: bundl 51 hits in 19 documents and 4 document groups

Preview	Document group	Document name	Search item	E
from sky which will begin later this year and with Comcast in the US, which are currently being rolled out.	2018	18-Q1 L	bundl	2
We believe that the lower churn in these bundles offsets the lower Netflix ASP.	2018	18-Q1 L	bundl	2
We remain primarily a direct-to-consumer business, but we see our bundling initiative as an attractive supplemental channel.	2018	18-Q1 L	bundl	2
And based on what we've seen with these new bundling models that we referred to with both Comcast and Sky announcing in the last quarter, we've seen the economics of those, we take in the retention, the acquisition characteristics to be very, very	2018	18-Q1 T	bundl	2
We are expanding our partner-based bundle offerings, announcing deals with Telefonica in Spain and Latin America as well as KDDI in Japan.	2018	18-Q2 L	bundl	2
While the majority of our acquisition happens by consumers signing up with us directly, bundles continue to be a high-performing additional acquisition channel.	2018	18-Q2 L	bundl	2
We're fairly new when it comes to these partner bundles .	2018	18-Q2 T	bundl	1
By being included in a bundle , we get to remove a separate purchase decision, we get to eliminate the sign-up flow, which makes it super simple and easy for consumers to sign up via that mechanism.	2018	18-Q2 T	bundl	1
And Todd, it's not a radical thing, MVPDs bundling another network.	2018	18-Q2 T	bundl	1

Frequencies of Dictionary Categories

Select MAXDictio > Dictionary-based Content Analysis to create a frequency table similar to the ones we discussed earlier. This time MAXQDA only searches for search items in active dictionaries.

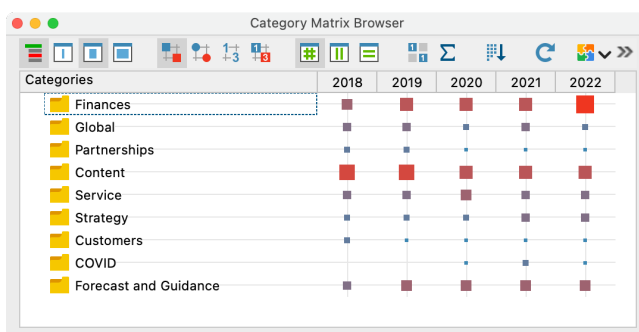


Document set	Words	Finances	Global	Partnerships	Content	Service	Strategy	Customers
18-Q1	9082	70	29	22	121	48	36	21
18-Q2	9485	67	53	23	85	41	28	11
18-Q3	10286	72	60	32	151	61	34	18
18-Q4	9397	93	25	24	106	56	24	8
19-Q1	9888	85	55	21	99	70	25	8
19-Q2	10228	86	57	32	119	52	35	11
19-Q3	10598	124	52	24	131	46	17	14
19-Q4	11163	100	67	12	108	64	47	2
20-Q1	10058	79	29	11	93	80	21	2
20-Q2	10921	115	18	13	97	56	18	8

Tip: You can also right click on a document or document group to start the quantitative content analysis for the selected document(s).

Visualize Frequencies of Dictionary Categories

Select MAXDictio > Category Matrix Browser to visualize the same type of frequencies in a visual matrix. The image below visualizes how often search items from different categories occur in different fairy tales. You can also start this feature by clicking the matrix browser icon in the result table of a quantitative content analysis.



Like in the code matrix browser, or code relations browser, you can choose to view the results with symbols (circles or squares), numbers, or numbers in a heat map.

Auto-code documents with Dictionary Categories

Select MAXDictio > Auto code with dictionary to automatically search for occurrences of category search items. Each search result can be coded with the name of the category, that holds this search item. All the usual auto code options of MAXQDA are available, e.g. to code just the search item, or the (adjoining) sentence(s) or paragraph(s) it occurs in.

Category	Count
Code System	1983
MAXDictio	0
competition	343
industry	2
competitor as partner	8
Competitor names	161
Partnerships	109
partnership strategy	10
bundling	31
advertising partnerships	7
brand partnerships	6
content partnerships	11
fitness partnership	2
distribution partnerships	5
MVPD	9
gaming partnerships	2
global	2
mobile strategy	7

Reviewing Auto-coded segments in a dictionary-based content analysis

While dictionary-based auto-coding is powerful, you need to be sure that what you are coding is relevant, and that it codes all of the relevant segments in your documents. There are multiple ways of doing this:

- Manual review of the coded segments in your documents. Read through the documents to see if what you coded is comprehensive or even relevant. One way to assist in this is to activate the new codes and use the Document Browser settings to only display activated coded segments.
- Use the Smart Coding tool to review coded segments. This can be both a check for accuracy, and a powerful tool to do secondary coding. If you treat the coded categories like themes in a thematic analysis, you can use smart coding tool to easily add sub-codes.
- You could also use the Word Explorer to double check some of categories you coded to determine if your results appear to be accurate and complete.
- A good workflow for dictionary building might be to begin with Word Explorer and Word Frequencies/Combinations, and Word Matrix Browser to develop a dictionary. Test it out by running the Dictionary Content Analysis and Category Matrix Browser to see if the results seem to be capturing what you are hoping to capture. Then auto-code and review the results in the document browser and smart coding tool.

For More information contact. Dr. Michael Gizzi, Certified MAXQDA Trainer

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