

# Assignment 4: Bibliometric Research

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The purpose of this assignment is to demonstrate knowledge of the basic principles and value of bibliometric analysis. Students will produce a bibliometric analysis of research on a topic of their choice.

You are encouraged to use an Ebsco database for this project, following along with the example that I provide in my video overview for the week. Please navigate to UNT Libraries website, then click on "Databases," then search "Ebsco" to pull up a list of Ebsco databases from which you can select the database of your choice.

## Task Overview:

Select a topic for your bibliometric analysis. This can be literally anything. Pick something of interest to you, or something related to your academic background. Make sure it is fairly specific, so you won't have 1000s of results when you search for articles, but not too specific, as you want at least 200 results. Enter this search in your search box, using relevant delimiters such as quotation marks. For example, "artificial intelligence" "libraries."

Export the RIS file, using the method described in the module overview. Download [VosViewer](https://www.vosviewer.com/)  (<https://www.vosviewer.com/>), if you have not already done so. We will use this tool for our analysis.

Within VosViewer, click "Create" on the left side, then choose the option "Create a map based on bibliographic data." Then select "Read data from reference manager files."

Each of the following is worth five points of your total grade of 25 points possible.

### 1. Create a Microsoft Word file and Add a Title Page with Your Name and the Name of this Class

### 2. Perform a Co-Authorship Analysis Within a Minimum Number of Documents Threshold of 2

For number of authors, use the default suggestion provided by VosViewer. If prompted whether to only show the largest set of connected items, select "No." This visualization shows all networks of authors who contributed at least two papers related to your topic.

Take a screen shot of this visualization and paste it on page two of your document. Below the visualization in your document, write a 1-2 sentence summary of what is shown in the visualization. Answer these questions in complete sentences: Are there any large co-authorship networks, or are they all very small (3-5 authors)? Which names stand out the most? Why would someone create a visualization like this one?

### 3. Perform a Second Co-Authorship Analysis Within a Minimum Number of Documents Threshold of 1

For number of authors, use the default suggestion provided by VosViewer. If prompted whether to only show the largest set of connected items, select "Yes." This visualization shows the largest network of authors who contributed at least one paper related to your topic.

Take a screen shot of this visualization and paste it on page three of your document. Below the visualization in your document, write a 3-4 sentence summary of what is shown in the visualization. Answer these questions in complete sentences: How many authors are included in this network? What are their names (e.g., "the authors within this collaboration network include... [list]")? Search some of these names on Google. Where do these authors work (university, country)? Do they all work at the same institution? What discipline/field do they work in? Do they all work in the same discipline or are they an interdisciplinary research collaboration? Why would someone create a visualization like this one?

#### **4. Perform a Keyword Co-Occurrence Analysis, Setting the Minimum Number of Occurrences at 3**

For number of keywords to include, use the default suggestion provided by VosViewer. This visualization will show all article keywords that were included in at least three of your articles, and which keywords they are included alongside.

Take a screen shot of this visualization and paste it on page four of your document. Below the visualization in your document, write a 3-4 sentence summary of what is shown in the visualization. Answer these questions in complete sentences: Which terms stand out the most in the visualization (list the 5-10 most prominent keywords)? How many different clusters are evident (different colors in the visualization)? Pick three of these clusters out of the visualization: If you were to give names to these clusters (what terms are grouped together), what would you choose and why? Are there any keywords included in the visualization that surprise you? What does this visualization tell you about your chosen topic? Why would someone create a visualization like this one?

#### **5. Perform a Keyword Co-Occurrence Analysis, Setting the Minimum Number of Occurrences at 1 and Set the Number of Keywords to Be Selected at "100"**

This visualization will show the 100 article keywords that have the strongest connections between them.

Take a screen shot of this visualization and paste it on page five of your document. Below the visualization in your document, write a 3-4 sentence summary of what is shown in the visualization. Answer these questions in complete sentences: How does this visualization compare to the visualization on the prior page? Which terms stand out the most? How many different clusters are evident? Is the visualization easier/more difficult to read? Which visualization to find to provide more valuable insight about your research topic? What does this visualization tell you about your chosen topic? Why would someone create a visualization like this one?

#### **Deliverables:**

Your final report should include:

- A title page.
- High quality screenshots that can be easily viewed by the instructor.
- Detailed responses to each question, written in complete sentences.

Points 25

Submitting a text entry box or a file upload

Due	For	Available from	Until
Apr 19, 2026	Everyone	Mar 30, 2026 at 12am	-

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