A Case Study
on the Email Q & A Service at Health Sciences Library

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Ask Us

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Email Us

Submit a Question / Schedule a Consult

Question

More Detail/Explanation

Your Email

Email Address *

Name

Affiliation *

Select One ▾

Status (select one) *

Select One ▾

Enter preferred dates/times below to request a meeting to discuss your question.

Phone Number

☐ Receive an email confirmation of your submission.

Fields marked with * are required.

Submit Your Question

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Ask HSL Chat

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📞 Phone HSL User Services 919-962-0800 ⓘ

📱 TXT us your question 919-584-5931 ⓘ

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Frequently Ask Questions (FAQs)

Featured Answers   Popular Answers

Recent Answers

I'm a UNC-CH student and I was interested in using the UpToDate app on my iPhone. Is there a way to register as a student?

Last Updated: Jul 26, 2017 | **Topics:** Mobile

UpToDate   Drug Informatiion   Databases

Research Questions

▢ What are the characteristics(affiliations, status, etc) of users that use email Q&A service?

▢ What kinds of topics are mostly mentioned in email Q&A records?

▢ What kinds of questions are preferred to be solved via a physical meeting instead of virtual reference？

Methods

- Data collection. From 01-2016 to 12- 2016, **811** email records ☐ **776**

Id	QueueID	Asked On	Question	Details	Answer	Owner	Source	Name	Email	Last Update	Tags	Affiliation	Status (sele	What do you wan	Enter preferred dates/t	Phone N
2192530	1991	12/16/16 17:13	I need help	systematic review through unc that has not been published. We are trying to decide what date range is best and if we have too many results may just	Hi Jamie- would you like to meet at 1 pm on the 3rd?	Moreton, N	System	Jamie Hobs	jamie.korn	########		Nursing (UI	Students	Systematic Review	Jan 3rd anytime	

- Data encoded. <u>Preferred date for meeting</u> ☐ **Ask for meeting (Yes/No)**

ASAP, Anytime, Time preferred, No need, N/A

↓   ↓

Yes   No

Methods

- Data cleaning ☐ *Question, Details, Answers (Text area), Python*
- Built Datasets☐ 10 datasets (1 Full dataset + 9 sub-datasets)
  - The sub-datasets were built from the three fields: Affiliation, Status, and Ask for meeting.
  - For the Affiliation and Status fields, I built datasets of groups that obtain most numbers of records*(See next slide, basic statistical analysis)*
  - For Ask for meeting, besides Yes/No, I also built a dataset that contains records with no requirements for meeting, but librarian suggest in feedback to have one.

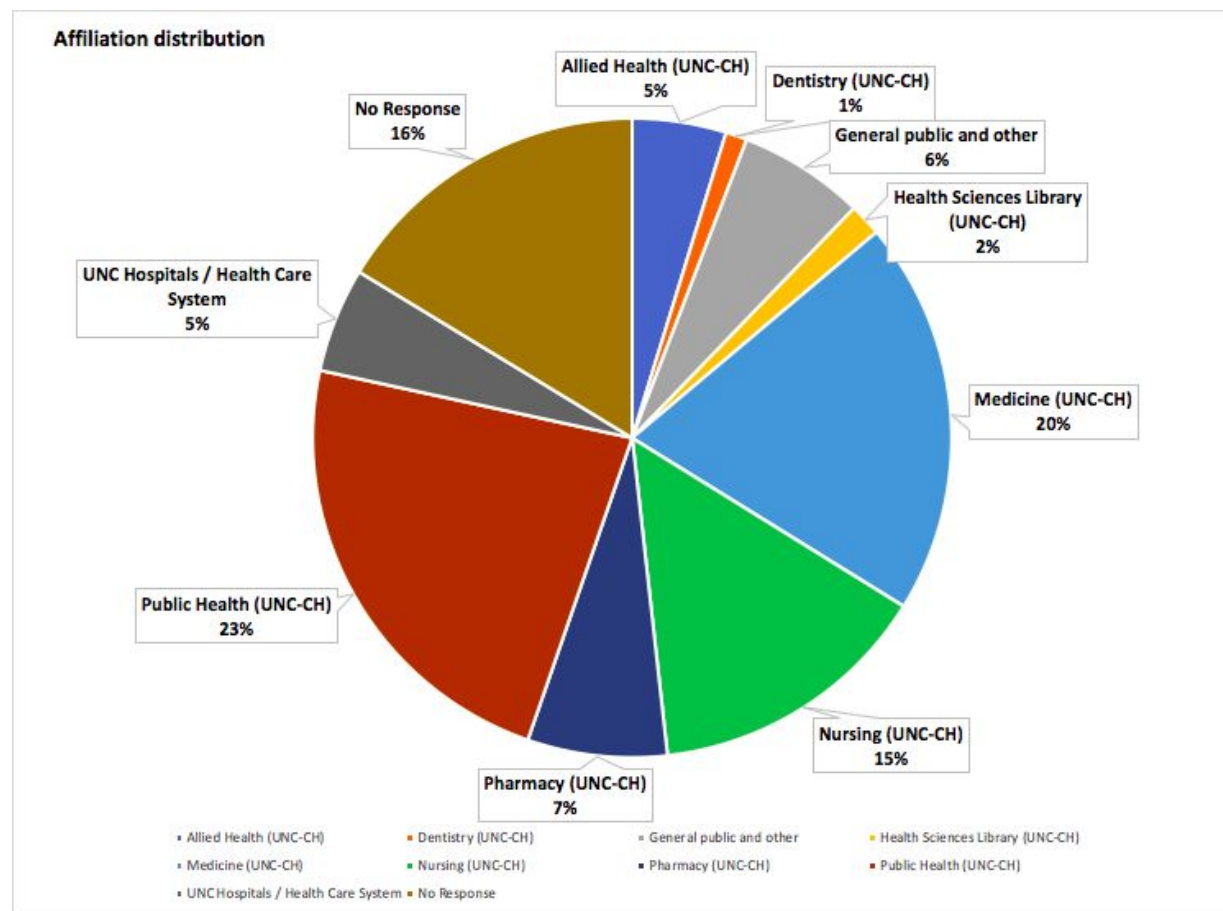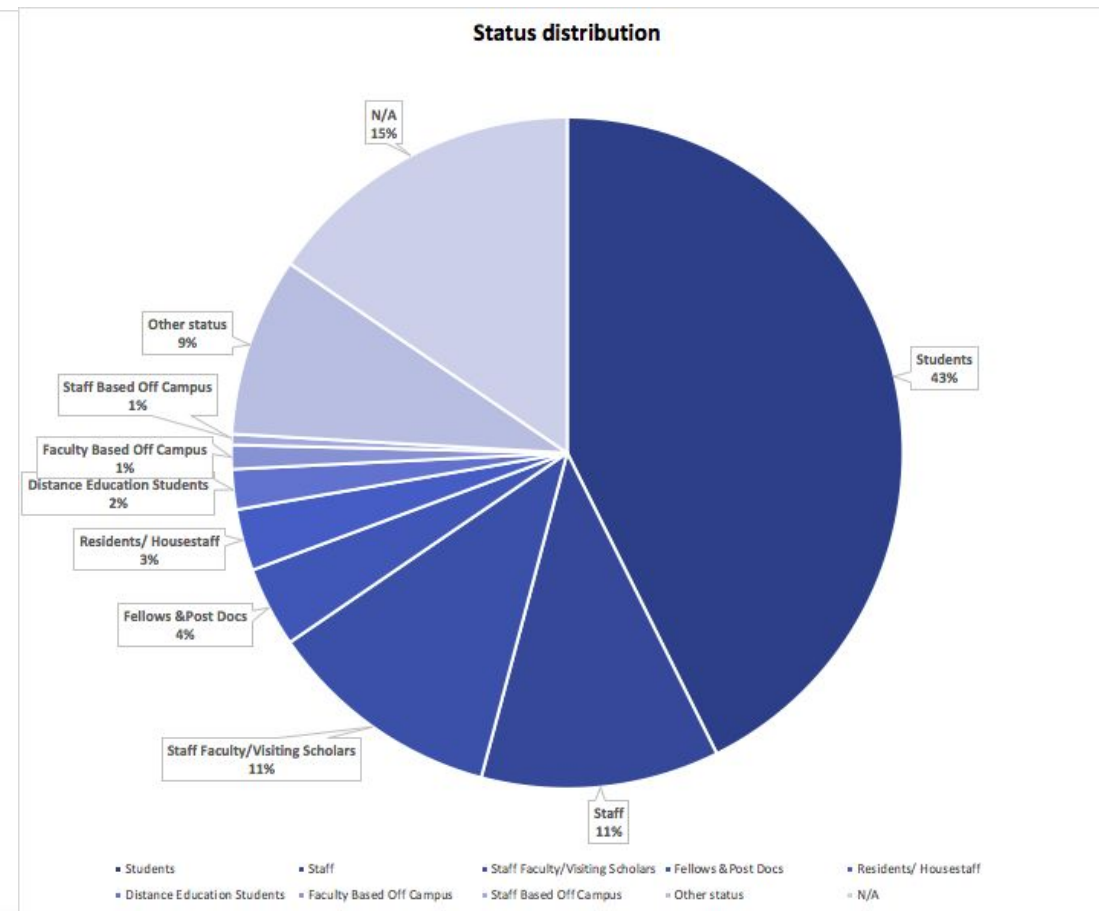| Dataset	Numbers of records
Full dataset	776
Medicine dataset	147
Nursing dataset	106
Public Health dataset	170
Students dataset	331
Staff dataset	89
Visiting Scholar dataset	88
Yes for meeting dataset	263
No for meeting dataset	513
SuggestMeeting dataset	53

Methods

- Tools using ⬚ Python, LightSide, VOSViewer

    o Python for data extract, data cleaning, and basic analysis

    o LightSide for text mining work (text features table building and correlation)

    o VOSviewer for topics extraction and visualization

Basic statistical analysis of Email records
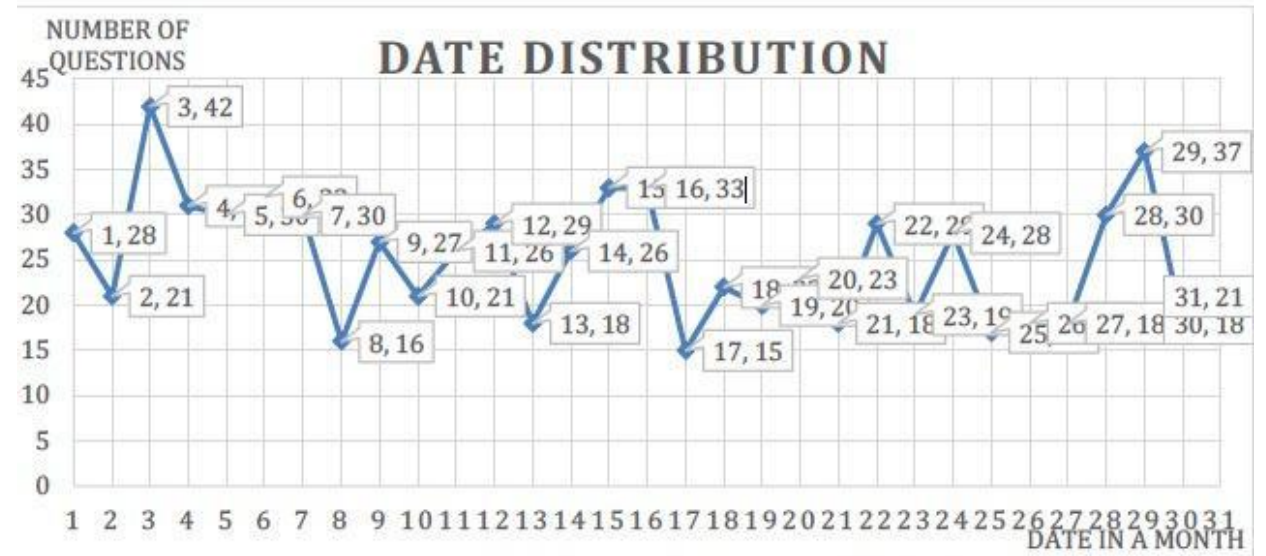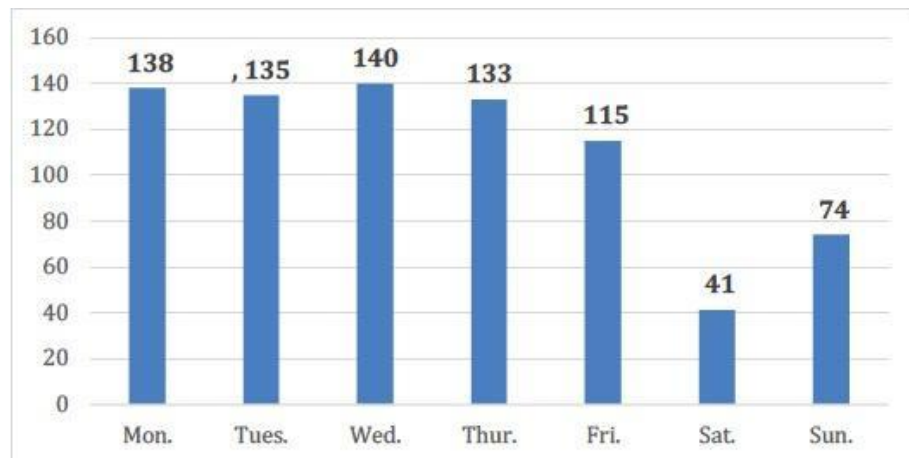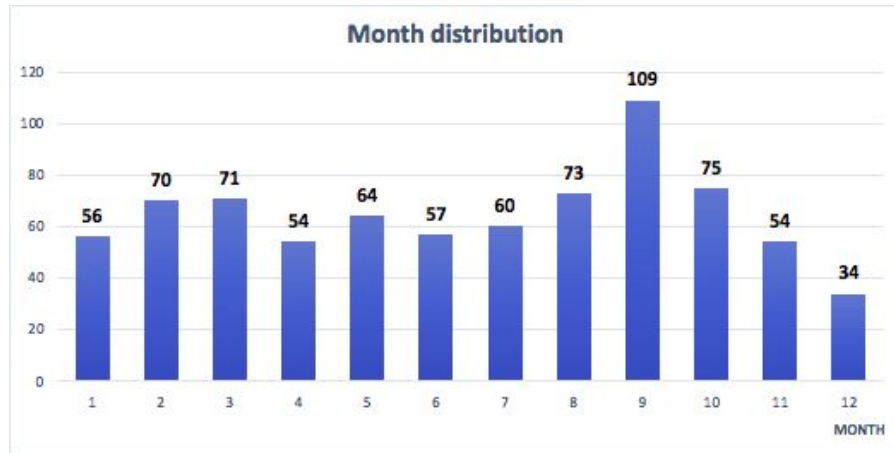
1. Affiliation

2. Status

Affiliation distribution

- Allied Health (UNC-CH) 5%
- Dentistry (UNC-CH) 1%
- General public and other 6%
- Health Sciences Library (UNC-CH) 2%
- Medicine (UNC-CH) 20%
- Nursing (UNC-CH) 15%
- Pharmacy (UNC-CH) 7%
- Public Health (UNC-CH) 23%
- UNC Hospitals / Health Care System 5%
- No Response 16%

Legend: Allied Health (UNC-CH) · Dentistry (UNC-CH) · General public and other · Health Sciences Library (UNC-CH) · Medicine (UNC-CH) · Nursing (UNC-CH) · Pharmacy (UNC-CH) · Public Health (UNC-CH) · UNC Hospitals / Health Care System · No Response

Status distribution

- Students 43%
- Staff 11%
- Staff Faculty/Visiting Scholars 11%
- Fellows & Post Docs 4%
- Residents/ Housestaff 3%
- Distance Education Students 2%
- Faculty Based Off Campus 1%
- Staff Based Off Campus 1%
- Other status 9%
- N/A 15%

Legend: Students · Staff · Staff Faculty/Visiting Scholars · Fellows & Post Docs · Residents/ Housestaff · Distance Education Students · Faculty Based Off Campus · Staff Based Off Campus · Other status · N/A

Basic statistical analysis of Email records

3. Asked on date (Month, Weekday, Date in a month)

When? Users ask for help?

- September
- Monday & Wednesday
- Beginning & end of a month

Basic statistical analysis of Email records

4. Asked for meeting(□ Enter a preferred date for meeting)

Distribution of meeting requirements

YES	ASAP	13	
	Anytime	5	263
	Special time asked	239	
NO	N/A	466	513
	No need	47	

Basic statistical analysis of Email records

4. Asked for meeting

Which affiliation is mostly likely to have a meeting?

Public Health (UNC-CH)	92
Medicine (UNC-CH)	53
Nursing (UNC-CH)	48
Other UNC-CH	18
UNC Hospitals / Health Care System	16
Allied Health (UNC-CH)	11
Pharmacy (UNC-CH)	11
General public and other	9
Health Sciences Library (UNC-CH)	5

Which group is mostly likely to have a meeting?

Students	163
Staff	27
Faculty / Visiting Scholars	22
Fellows & Post Docs	17
Other status	15
Residents / Housestaff	9
Distance Education Students	5
Staff Based Off Campus	4
Faculty Based Off Campus	1

Basic statistical analysis of Email records

5. "What do you want to learn"

☐ Among all 776 valid records, only 356 records have values in this field

☐ "Consultation" & "Systematic review search" were the top topics that users want to learn

☐ Users would like to *have a meet* when their questions are related to "Consultation" & "Systematic review search"

What do you want to learn	Counts	Ask for meeting? (yes : no)
Audio and video editing	1	1:0
CINAHL	4	2 :2
Consultation	118	82:36
EndNote	20	13:7
Online design	2	1:1
Other database	44	17:27
Poster and print design	5	3:2
Pubmed	39	25:14
Refworks	20	6:14
Systematic review search	99	75:24
Working with images	4	2 :2
Total	356	227:129

Text Analysis

Average sentence length of each text area

Text Area	Average sentence length (words count)
Questions	18
Details	12.45
Answers	9.23

Text Analysis

Correlation between text features and Ask for meeting (Yes)

LightSide

Phrase	Correlation
Meet_char5	0.3302
Meet_char4	0.2903
Meet_char3	0.2818
Meet	0.2792
Literature_char3	0.2727
Lit_char4	0.2702
Review_char4	0.2542
Search_char5	0.2279
review	0.2268
view	0.2244
article	0.2172
literature	0.2091
Source_char3	0.2015

What topics are mostly mentioned in users' emails?

VOSviewer

Generally Visualized
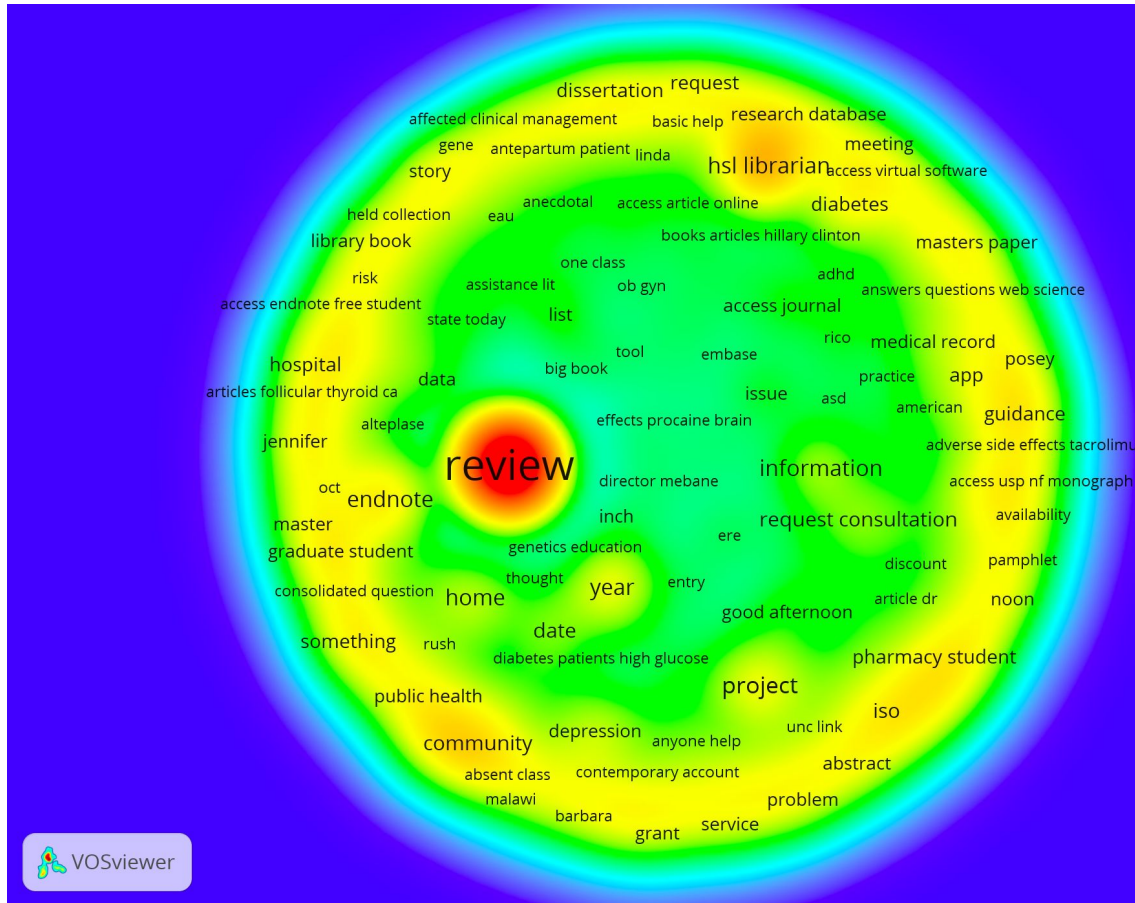
Questions topics density visualization
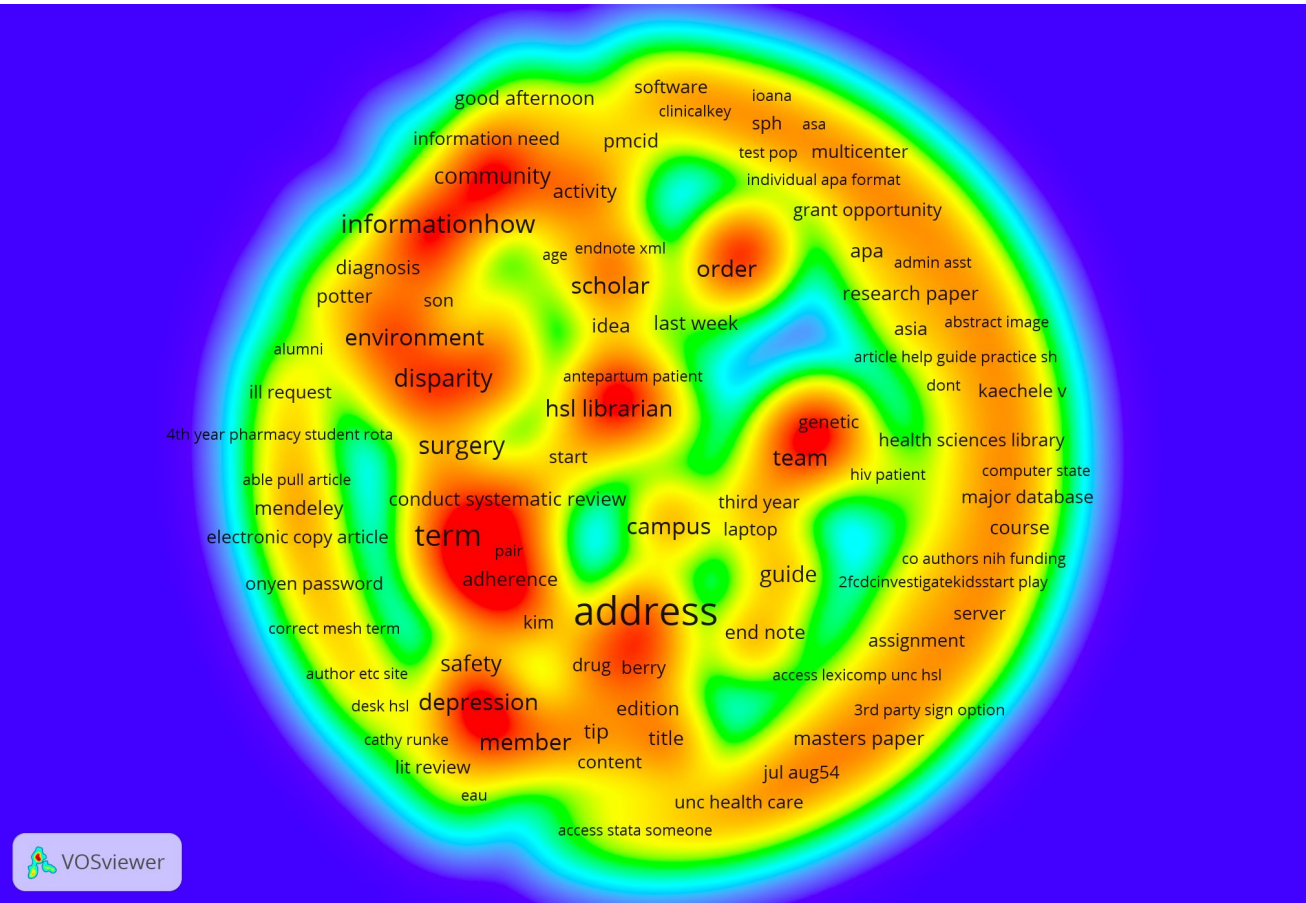
Details topics density visualization

What topics are mostly mentioned of different affiliations?
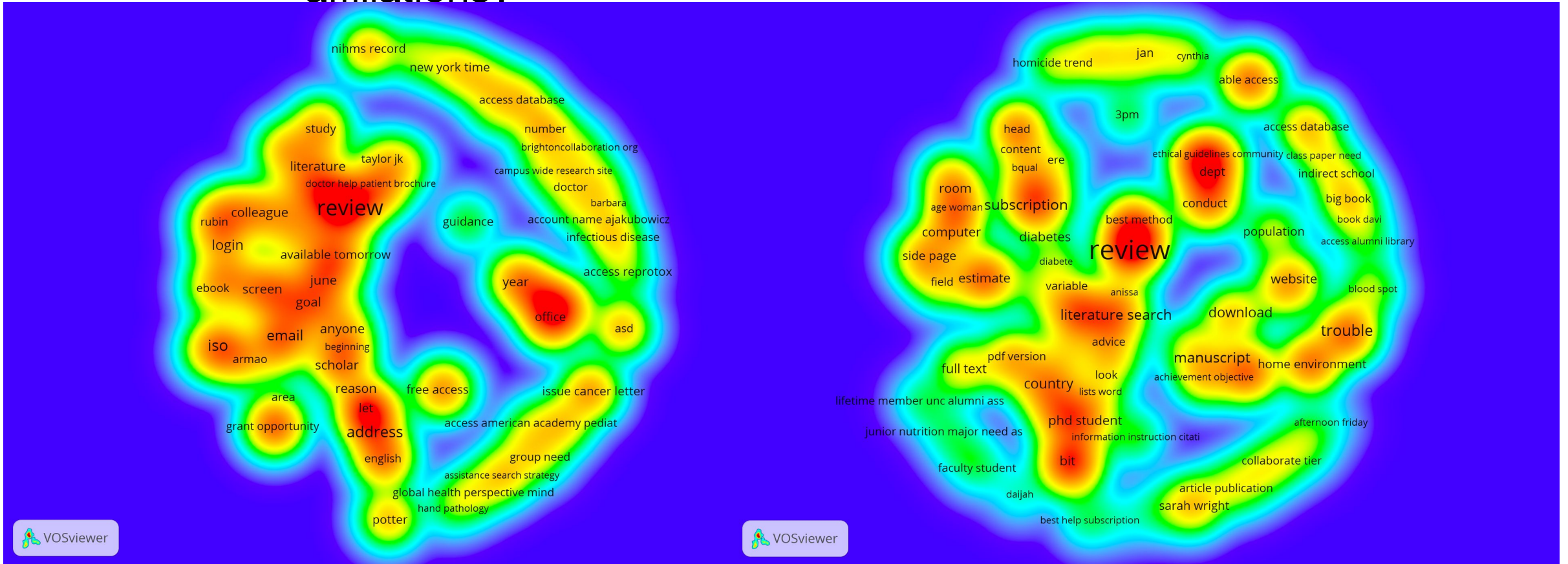
Medicine datasets topics density visualization

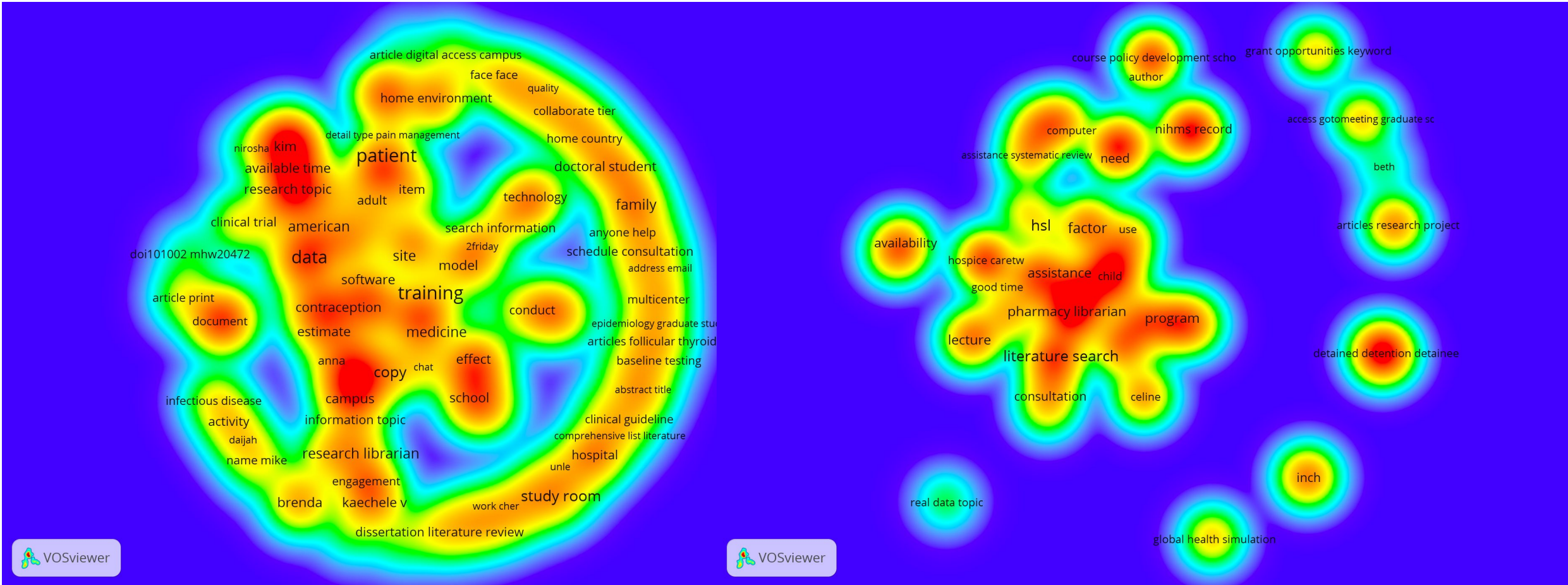Public health datasets topics density visualization

What topics are mostly mentioned of different groups?
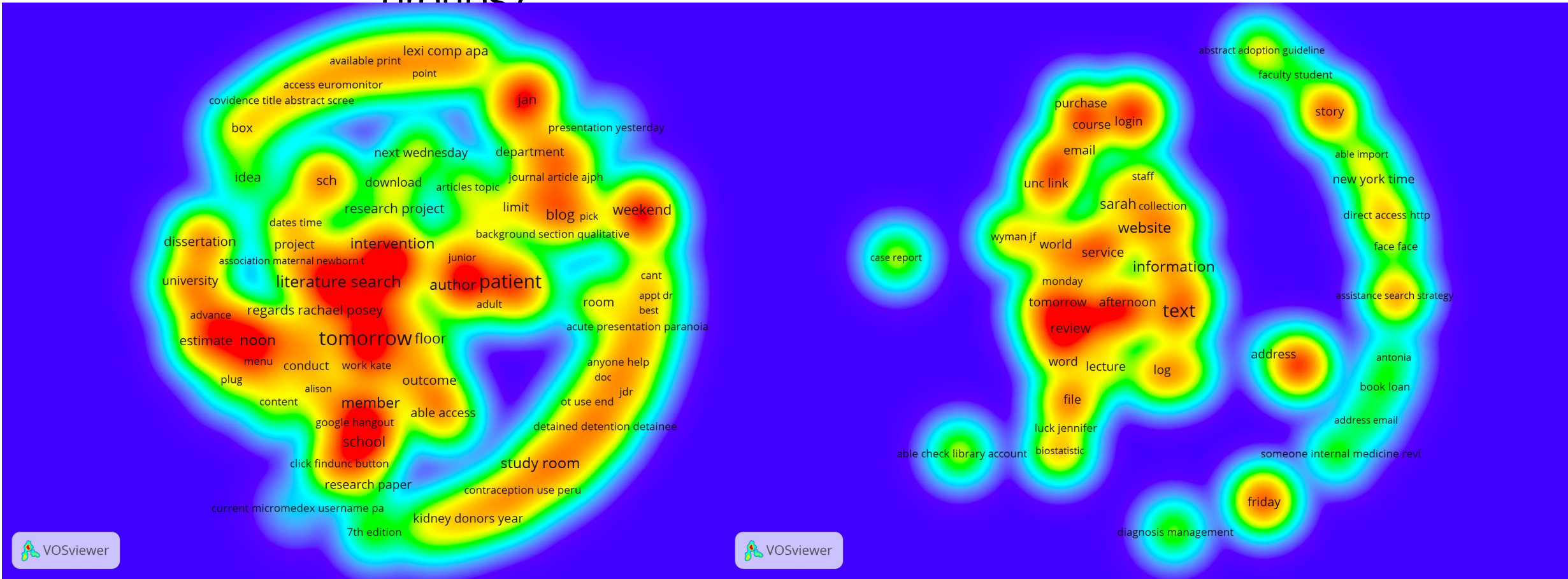
Students datasets topics density visualization

Visiting scholar datasets topics density visualization

What topics are mostly mentioned for meeting requirements?

Yes for meeting datasets topics density visualization

Suggest meeting datasets topics density visualization

Discussion

1. What characteristics of users that use email Q&A services?

❖ *School of Public Health, School of Medicine, and School of Nursing.*
❖ *Students, staff and visiting scholars*
❖ *February and March in spring, September and October in the fall*
❖ *Users do not fill the " preferred date for meeting" part a lot*

2. What kinds of topics are mostly mentioned in email Q&A records?

❖ *"systematic review" , " literature" , "search"*

❖ *Information resources & access*
❖ *Time*

3. What kinds of questions are preferred to be solved via a physical meeting instead of virtual reference？

❖ *No strong correlation between the text features of Email and Ask for meetings*

❖ *Relatively, "literature review search" & "meet" are related to higher correlation of request a physical meeting.*

Suggestions

☐ **For Question area**

o Drop-down list

☐ **For meeting requirements**

o Required
o Select a time

☐ **For peak time arrangements**

o Busy time, beginning and end of a

semester

Limitation and next step

- Data scale. For this project, I only used one year Email records.
  - More data, avoiding bias
  - Another years, seeing trends, or changes

- Refine. For text features VS Ask for meeting
  - I only test linear correlation, whether there is other relationship between these two values?
  - More data, avoiding bias
  - Better definition of *No meeting ,i.e. N/A*

- Chat data. Working on it, to make a comparation with Email records.

Any questions?

Thank you very much for your time!

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