

# 'Cannabis' is a Blue State Word

**Marijuana Decriminalization,  
Keyword Development, and  
Considering Political Contexts  
in Search Results**

Kevin Seeber / @kevinseeber  
Education and Outreach Services  
Department Head

Rachel Stott / @rachellux  
Teaching and Learning  
Librarian

Auraria Library  
University of Colorado Denver  
#ACRL2019 / #ACRLweed



**acrl** 2019  
peer revered

APRIL 10-13  
Cleveland, OH

**Our paper:** [tinyurl.com/ACRLweedpaper](https://tinyurl.com/ACRLweedpaper)

**Our slides:** [tinyurl.com/ACRLweedslides](https://tinyurl.com/ACRLweedslides)

**Conference hashtag:** [#ACRL2019](https://twitter.com/ACRL2019)

**Our hashtag:** [#ACRLweed](https://twitter.com/ACRLweed)

# Introduction

**This paper is the result of  
everyday lesson planning.**

We decided to discuss  
“keyword development.”

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**This outcome was the result of consultation with the English Department, and is in line with our departmental SLOs, as well as concepts discussed in both the *ACRL Standards* and the *Framework*.**

**“How has legalizing the  
sale of recreational  
marijuana impacted drug  
crime in Colorado?”**

This particular  
question sparked  
discussion in our  
department.

**“Query expansion”** is when you search with one word, but the database **automatically** searches for others.

Are the words “**marijuana**” and  
“**cannabis**” really used  
interchangeably?



The **political context**  
surrounding this drug has  
drastically shifted **since 1996.**

# California Started It



## Los Angeles Times

WEDNESDAY, NOVEMBER 6, 1996  
 CIRCULATION: 1,000,000  
 DAILY: 1,000,000  
 YEARLY: 365,000,000

### Clinton Rolls to Solid Victory GOP Adds Senate Seat, Is Holding on to House

#### Prop. 209 Wins, Bars Affirmative Action

■ Initiative: Clinton says it will undo a 'terrible injustice'. Limits on campaign donations, illegal minimum wage are among other measures that win or fail.

■ Election: President swears on edge of winning outright majority of the popular vote. But calls president's opponent and not my enemy and pledges his support.

By BILL LEVIN and GUY LAWRENCE, Los Angeles Times Staff Writers  
 President Bill Clinton's victory in California was a landmark moment in the state's history. Clinton won the state by a margin of 55 percent to 45 percent, a record for any presidential candidate in California. Clinton's victory was a testament to his popularity in the state and his ability to connect with voters. Clinton's victory was a testament to his popularity in the state and his ability to connect with voters.

President Clinton, flanked by daughter Chelsea and First Lady Hillary Clinton, waves to supporters celebrating his election victory outside the White House in Washington. Clinton's victory was a landmark moment in the state's history. Clinton won the state by a margin of 55 percent to 45 percent, a record for any presidential candidate in California. Clinton's victory was a testament to his popularity in the state and his ability to connect with voters.

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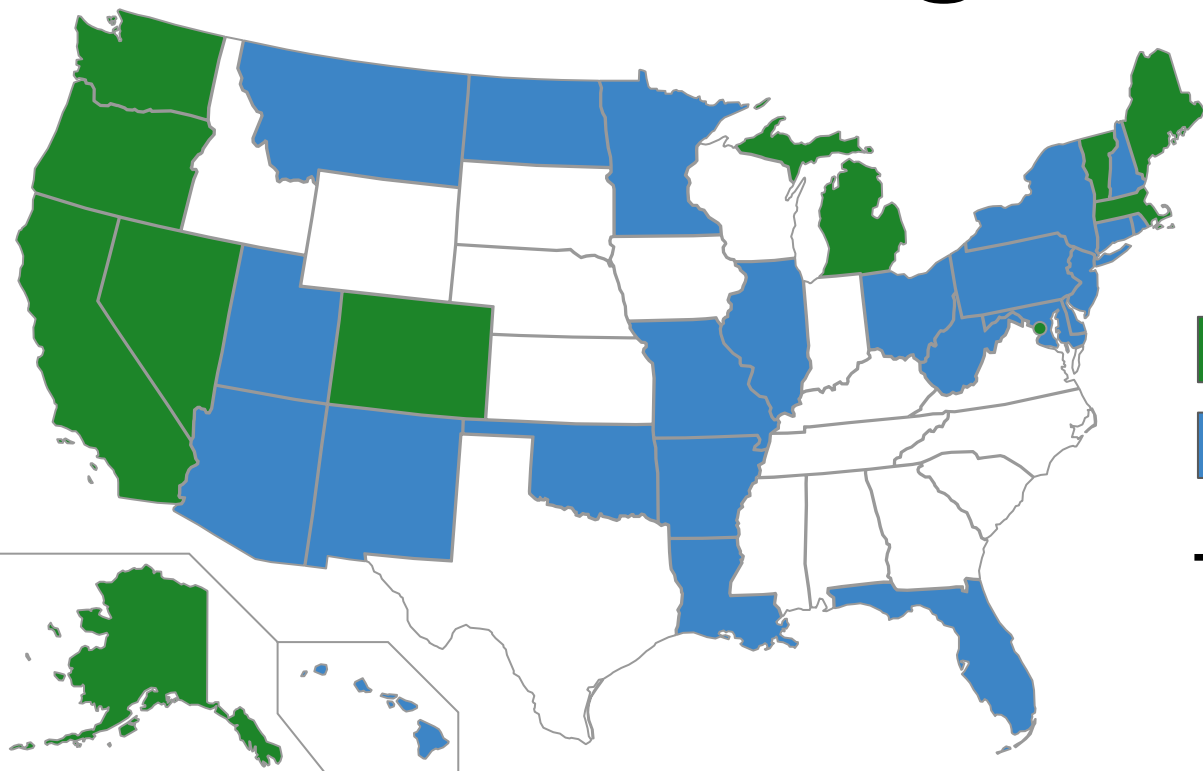
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## A map of the United States with the state of Colorado highlighted in green. The map shows the outlines of all 50 states, with Alaska and Hawaii shown in insets. Colorado is located in the central-western part of the country, bordered by Wyoming to the north, Nebraska to the east, Kansas to the south, and Utah to the west.



# The State of Legalization Today



 Recreational  
 Medical

Total = 33 states + D.C.

# Methods

To address our research questions, we conducted a systematic literature review.



Searching: Academic Search Premier, Show all | Choose Databases

Auraria Library

<input type="text"/>	Select a Field (optional) ▼	Search
AND ▼ <input type="text"/>	Select a Field (optional) ▼	
AND ▼ <input type="text"/>	Select a Field (optional) ▼	

Clear ?



[Basic Search](#) [Advanced Search](#) [Search History](#)

## Search Options

Reset

### Search Modes and Expanders

#### Search modes ?

- ☒ Boolean/Phrase
- ☐ Find all my search terms
- ☐ Find any of my search terms
- ☐ SmartText Searching [Hint](#)

#### Apply equivalent subjects

☐

#### Apply related words

☒

#### Also search within the full text of the articles

☐

### Limit your results

#### Full Text

☐

#### Scholarly (Peer Reviewed) Journals

☐

#### Publication

#### References Available

☐

#### Published Date

Month ▼ Year:  – Month ▼ Year:

#### Image Quick View

☐

## Search Modes and Expanders

### Search modes

- ☒ Boolean/Phrase
- ☐ Find all my search terms
- ☐ Find any of my search terms
- ☐ SmartText Searching [Hint](#)

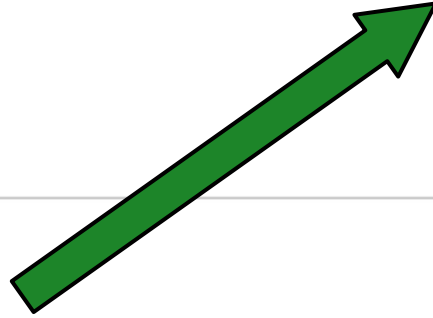
### Apply equivalent subjects

☐

### Apply related words

☒

### Also search within the full text of the articles

☐

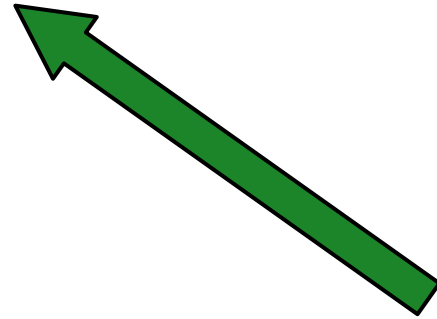
**“Apply related words” is EBSCO’s version of Query Expansion. We used Academic Search Premier because it is possible to turn off this functionality.**



EBSCO also  
permits batch  
exporting of  
metadata as .csv  
files, which made  
our data  
collection simple.

**Save citations to a file formatted for:**

- ☐ Direct Export in RIS Format (e.g. CITAVI, EasyBib, EndNote, ProCite, Reference Manager, Zotero)
- ☐ Direct Export to EndNote Web
- ☐ Generic bibliographic management software
- ☐ Citations in XML format
- ☐ Citations in BibTeX format
- ☐ Citations in MARC21 format
- ☐ Direct Export to RefWorks
- ☐ Direct Export to EasyBib
- ☒ Download CSV



**In total, we collected metadata  
for 10,479 articles.**

**5,643 about “Cannabis” and  
4,836 about “Marijuana.”**

**We hand coded a representative  
sample of 540 articles  
(5.2% of the total dataset).**

## Coding Categories

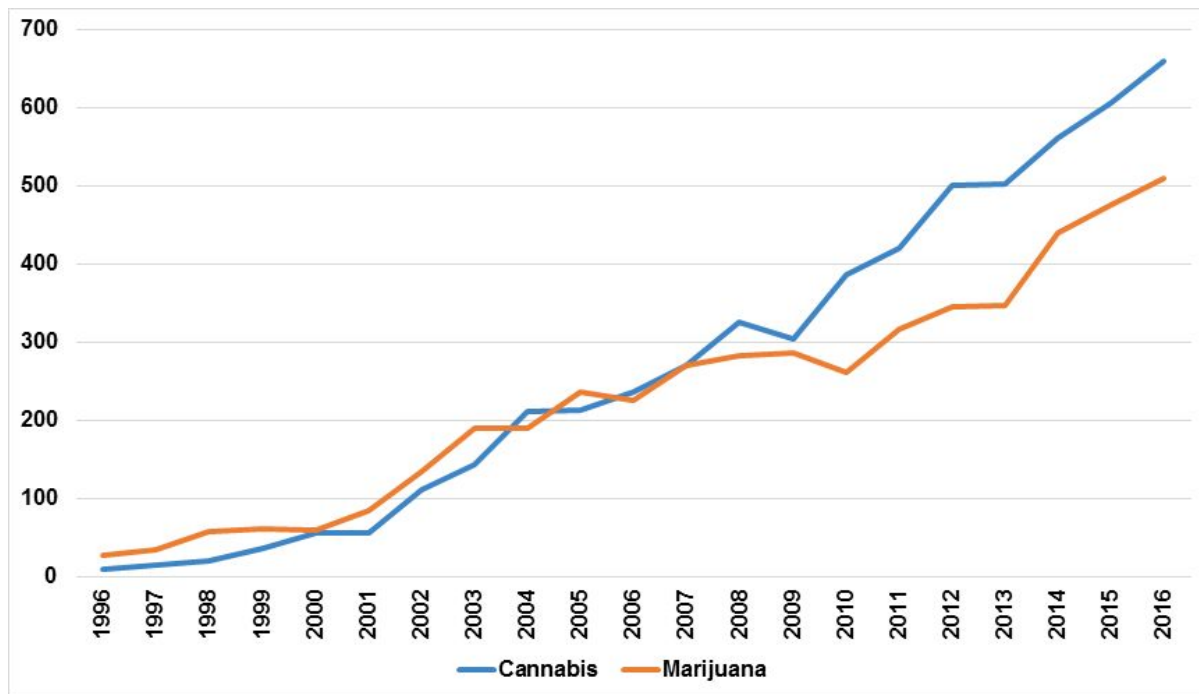
**Geography.  
Academic Discipline.  
Application of Use.  
Sentiment Expressed.**

**We'll have time for questions at  
the end, but in the meantime...**

**#ACRLweed**

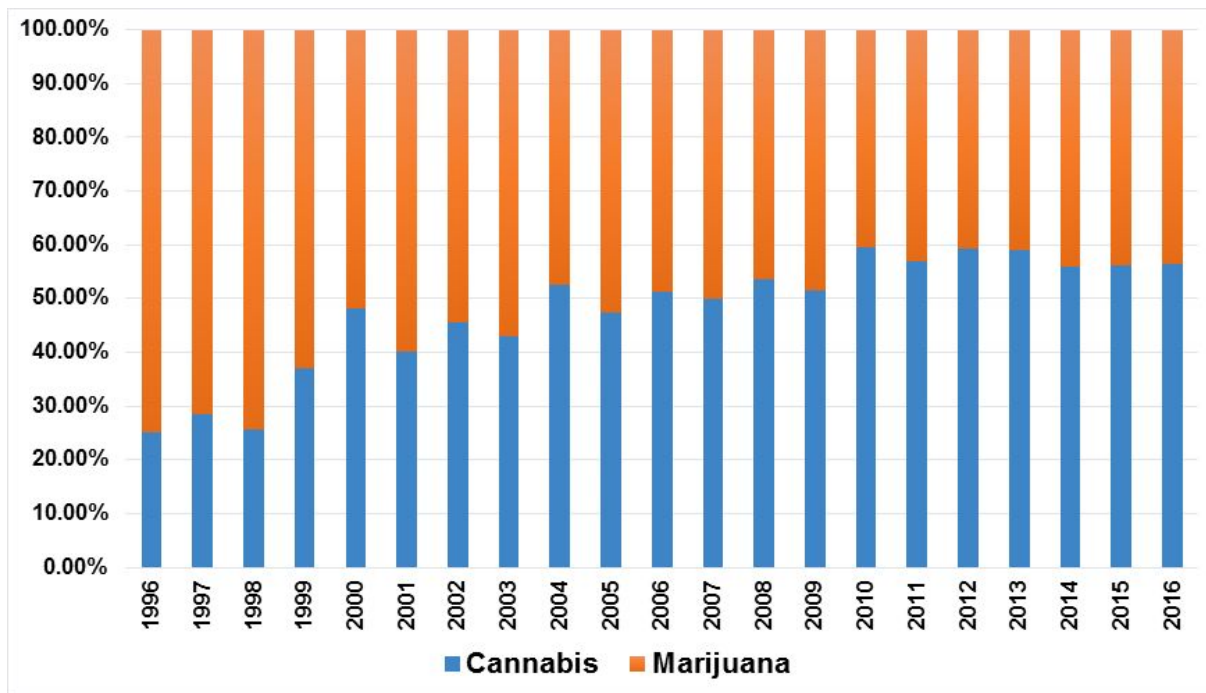
# Results

# Total Number of Articles Published, by Term, 1996-2016



(n=10,479)

# Use of Individual Term as a Percentage of Total Articles Published, 1996-2016



(n=10,479)

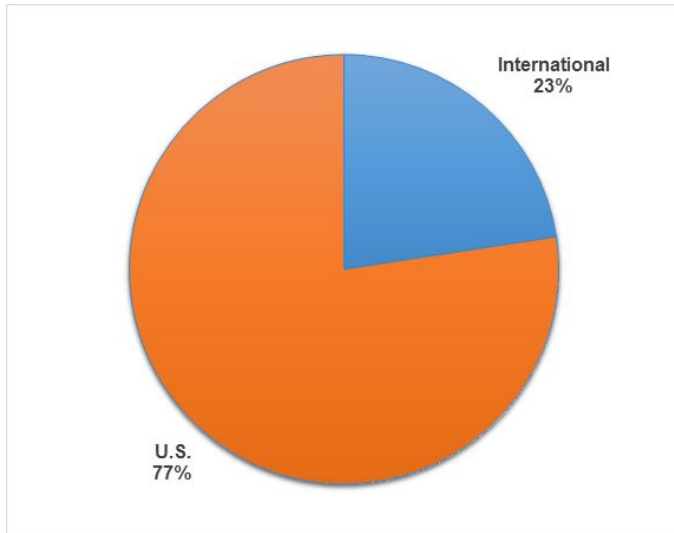


# Use of Terms “Marijuana” and “Cannabis” by Academic Discipline

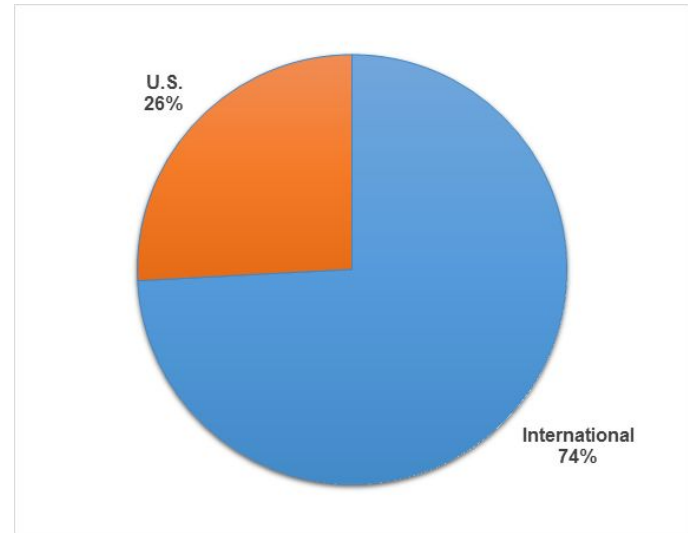
	Marijuana (n 250)		Cannabis (n 290)	
Discipline	Count	Percentage	Count	Percentage
Agriculture	0	0.00%	7	2.41%
Biology	0	0.00%	6	2.07%
Business	2	0.80%	0	0.00%
Counseling	1	0.40%	0	0.00%
Chemistry	0	0.00%	1	0.34%
Criminology	12	4.80%	2	2.41%
Education	7	2.80%	1	0.34%
Environmental Science	0	0.00%	1	0.34%
Forensics	3	1.20%	13	4.48%
Gender/Sex	9	3.60%	3	1.03%
Law	7	2.80%	1	0.34%
Medicine	57	22.80%	89	30.69%
Policy	9	3.60%	16	5.52%
Psychology	34	13.60%	34	11.72%
Public Health/Safety	16	6.40%	8	2.76%
Religion	1	0.40%	1	0.34%
Sociology	5	2.00%	4	1.38%
Sports	1	0.40%	0	0.00%
Substance Use	85	34.00%	98	33.79%

# The geographic location of where the study took place made a difference.

Of the 217 articles about “marijuana” that mentioned a location...



Of the 147 articles about “cannabis” that mentioned a location...



# Sentiment expressed toward the use of the substance.

Of the 250 articles about  
“marijuana”

150 (60%) were negative  
82 (33%) were mixed  
18 (7%) were positive

Of the 290 articles about  
“cannabis”

142 (49%) were negative  
115 (40%) were mixed  
33 (11%) were positive

	Marijuana (n 250)		Cannabis (n 290)	
	Count	Percentage	Count	Percentage
<b>Recreation</b>	190	76.00%	202	69.66%
<b>Medical</b>	31	12.40%	28	9.66%
<b>Criminal</b>	14	5.60%	10	3.45%
<b>Laboratory</b>	13	5.20%	39	13.45%
<b>Agriculture</b>	2	0.80%	11	3.79%

# Application of Use Described in the Article

# Discussion and Implications

**Words Matter**

# What would we like vendors to do?

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- Notify users when related terms are applied.**
- Tell users what those related terms are.**
- Allow users to turn off query expansion.**

**The “Black Box” approach to  
algorithm development makes  
this scenario unlikely.  
(We already tried...)**



# So what can reference and instruction librarians do?

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**Work with our colleagues in electronic resources and metadata positions to customize search interfaces that make it easier for users to control search behavior.**

# What else can reference and instruction librarians do?

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**Continue to discuss algorithms and applied synonyms with students, as well as talk about how these added keywords might impact an individual's research.**

This goes beyond  
one example.

**Language is often  
politicized and turned  
against those who are  
marginalized, such as the  
LCSH “illegal aliens.”**

Think about other ways that  
language has been politicized.

What **questions** do you have?

**#ACRLweed**

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