Let Data Guide Us Into



The Next Discovery Experience

A Collaborative Approach to Optimizing Primo VE Search Configurations

eCAUG 2024

AGENDA



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Introduction

Primo VE Analytics

Campus comparisons

Future Directions and Q&A

INTRODUCTION

PROJECT OVERVIEW

Conduct a comprehensive across multiple CSU ca State, and CSULB. By levera Primo VE Search API, we s and boosting factors on b optimize these s

- Conduct a comprehensive analysis of OneSearch configurations
 - across multiple CSU campuses, specifically SFSU, CSUN, Sac
- State, and CSULB. By leveraging both Primo VE Analytics and the
- Primo VE Search API, we seek to understand the impact ranking
- and boosting factors on blended search results to evaluate and
 - optimize these settings and increase user satisfaction.

PRIMO ANALYTICS 11





PRIMO VE ANALYTICS

Methods:

Primo VE Analytics tracks and records many data points. By comparing campuses against past iterations of themselves with different settings or against campuses with different settings, we can approximate A/B testing and (hopefully) learn the effects (or estimations of them) that changes to the Primo VE relevancy ranking settings have on our users.

Before May 2024 both San Fransisco State and Sacramento State made changes to their relevancy ranking configurations. These changes were not present in 2023, we thus compare May-September data from these campuses over two years against Northridge and Cal State Long Beach where no changes were made.

Hypothesis 1	Hypothesis 2
"Better" relevance settings will	"Better" relevance settings will
result in less time spent in Primo	result in more interaction with
VE.	Primo VE Actions on bib records

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Hypothesis 3

"Better" relevance settings will result in fewer clicks navigating users to other pages of results.

HYPOTHESIS 1

Monthly Average Session Duration (minutes)



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Reply hazy, try again

Average Session Duration *increased* at SFSU and CSUS after improving their relevancy settings.

Means:

- SFSU 2023: 12.05
- SFSU 2024: 12.62
- CSUS 2023: 8.19
- CSUS 2024: 8.92

CSUN and CSULB act as pseudo-controls and have the same relevancy settings. Means:

- CSUN: 12.59
- CSULB: 13.99



HYPOTHESIS 2a Click on title OR Click on icon OR Click on availability statement - Monthly Actions Per Session (a ratio)



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Cannot predict now

Clicks into the full record from the brief results using the title, icon, or availability statement *decreased* at SFSU and CSUS after improving their relevancy settings.

Means:

- SFSU 2023: 5.00
- SFSU 2024: 4.92
- CSUS 2023: 5.81
- CSUS 2024: 5.62

CSUN and CSULB act as pseudo-controls and have the same relevancy settings. Means:

- CSUN: 5.09
- CSULB: 5.45

HYPOTHESIS 2b

Did they like what they found? - Selected Monthly Actions Per Session (a ratio)

19



Variables: BibTeX, Citation, Copy permalink, EasyBIB, eMail, EndNote Web, Excel Export, Print, RefWorks, RIS Export, Save to eShelf

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Better not tell you now

Clicks on actions indicating user interest in results decreased at SFSU and CSUS after improving their relevancy settings.

Means:

- SFSU 2023: 16.68 -
- SFSU 2024: 16.23
- CSUS 2023: 15.08
- CSUS 2024: 14.75

CSUN and CSULB act as pseudo-controls and have the same relevancy settings. Means:

CSUN: 15.11

CSULB: 16.13

HYPOTHESIS 3

Next Result OR Previous Result - Monthly Actions Per Session (a ratio)

12



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Concentrate and ask again

Clicks between results pages decreased at SFSU but increased at CSUS after improving their relevancy settings.

Means:

- SFSU 2023: 5.59
- SFSU 2024: 4.09
- CSUS 2023: 4.04

- CSUS 2024: 4.44 CSUN and CSULB act as pseudo-controls and have the same relevancy settings. Means:

- CSUN: 3.58
- CSULB: 4.02

WHAT DOES IT MEAN?



A counterintuitive picture

Most of these results are the opposite of what we expected. They don't make much sense.





If these results are correct:

Making your relevancy settings "better" means people spend more time in Primo and take fewer actions to save/export records while clicking into full records less.

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Our sample size must increase

Five months in 2024 (and five in 2023 from SFSU and CSUS) Is not a reliable sample. We need longer data from an academic year.



We will continue

looking for other We are campuses to contribute data.

If you want to participate, **do not**

change your settings. Please

contact us soon!



O SEARCH SCENERIOS



SEARCH SCENARIOS





Users are searching for a specific item such as a book or DVD within the library's collection. Li, Cribbs, Ward, & Gardner, eCAUG 2024

Topic/Keywork



Undergraduate research use case

SAN FRANCISCO STATE UNIVERSITY | J.Paul Leonard Libra



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		Field	Name	Boosting Factor
ary	1	title	Title	10
ources	2	creator	Creator	3.0
	3	sub	Subject	2.5
	4	toc	тос	1.5
	5	isbn	ISBN	1.0
	6	lang	Language	1.0
	7	addtitle	Additional title	0.01

Description

ecords within your Central ex profile	Filter by Availability	✓Exclude CDI eBooks
physical scope		
SU e-resources		

Blending configuration

	Enabled	Search engine	Boost type		Settings	
1		Central Index	Boost		Boost records wi 5	ith a high score - Boost position: top - Nu
2		Local	Deboost			
				Define	Boost Type	
				C	Choose boost t	ype: 🔵 Boost
						Deboost
				Define	Parameters	
				E	Boost factor	
				Boost r	ecords with a score:	● high ─ medium ─ low
				Position	of boosted records	🔵 top (2nd record) 🔵 midd
						O bottom (9th record)





Ranking configuration - Date Boosting

Date Boosting				
1 - 2 of 2			воок Artificial intelligence.	
Field	Boosting Factor		Apter, Michael J., author 2021	
1. 2019-2024	30	R	𝔗 Online access ⇒	
2. 2014-2018	10	4	AUDIO Artificial Intelligence / Pickover,	
		CLITONO A RESOLD	Pickover, Clifford, author 2019	
			𝔄 Online access ⇒	
Institution Boosting				
1 - 1 of 1				
Active Name	Boosting Fac	ctor		3
1. O Boost My Institution	100			

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JOURNAL Mental health.

Ø Online access (Coverage: 1940-1971) >

ARTICLE Mental Health Literacy: Empowering the Community to Take Action for Better Mental Health

Jorm, Anthony F.

The American psychologist, 2012-04, Vol.67 (3), p.231-243

Image: received much less attention... 🛍

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JOURNAL Mental health.

Available at Main Library (Lib 440) (GP 3.22/2:167/) >

CHALLENGES TO KNOWN-ITEM SEARCHES

Overly Broad search results

While it returns many records, the system sometimes buries the item you are searching for, particularly if the title has common or generic terms.

Over-reliance on keywords

Sometimes emphasizes individual words without considering the whole phrase, word proximity, or word order.



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Metadata and Record Matching

Titles might be slightly different across records or difficulty differentiating between different formats or versions of a title (e.g., print vs. electronic, different translations, or various editions).

Relevance Ranking Complexities

Many metadata fields—such as author, subject headings, publication date, and even citation counts—impact how OneSearch ranks and blends results.

CSUN'S APPROACH TO SEARCH

Large print and electronic collections including ASRS. Focus on what is immediately available; users must expand their search to see CSU+ and other libraries items.

FTE: 30,277 (Fall 2023 enrollment) Location: Near Los Angeles, CA





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Total Student Ethnicity



Default to local scope, other options include Course Reserves and All CSU Libraries (Everything).

CSUN SEARCH PROFILES

Name		Desc	ription							
Central Index		All red	All records within your Central Index profile Availability eB							
My Institution		All re	cords belonging to	o your institutio	n					
		Enable	ed Search engine		Boost type		Settings			
	1.		Central Index		Deboost		Deboost fa	ictor: 0.1		
	2.	C) Local		Boost		Boost reco factor: 4	rds with		
Name		Descr	ription							
Central Index		All rec	ords within your C	entral Index pro	file	_F Ava	ilter by ilability	oy <mark>√</mark> Ex ity eBoo		
NZ Physical items for CSU	+	try to r other o	recreate CALS_PR campuses	INT scope, elimi	nate e-resources from					
CSUN Electronic		Online	e sources for CSUN	N						
	En	abled	Search engine		Boost type		Settings			
	(Central Index		Deboost		Deboost fac	ctor: 0.1		
			Local		Boost		Boost record Boost factor	ds with r: 8		

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Exclude CDI Books

a medium score - Boost position: top - Number of results to boost: 5 - Boost



a medium score - Boost position: middle - Number of results to boost: 5 -

CSUN RANKING CONFIGURATIONS

Fields Boosting

1 - 7 of 7

	Field	Name	Boosting	Factor
1.	title	Title	3.5	
2.	creator	Creator	3.0	
3.	sub	Subject	2.5	
4.	toc	TOC	1.5	
5.	isbn	ISBN	1.0	Institution Boostin
6.	lang	Language	1.0	1 - 1 of 1
7.	addtitle	Additional title	0.01	Active
-			_	1





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Lord of the rings – the mechanism for oxidosqualene:lanosterol cyclase becomes

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The enzyme oxidosqualene:lanosterol cyclase (OSC) represents a novel target for the treatment of hypercholesterolemia. OSC catalyzes the cyclization of the linear 2,3monoepoxysqualene to lanosterol, the initial four-ringed sterol intermediate in the cholesterol biosynthetic pathway. OSC also catalyzes the formation of 24(S), 25epoxycholesterol, a ligand activator of the liver X receptor. Inhibition of OSC reduces cholesterol biosynthesis and selectively enhances 24(S),25-epoxycholesterol synthesi Through this dual mechanism, OSC inhibition decreases plasma levels of low-density lipoprotoin (IDI) abolastorol and provents abolastorol deposition within magrophad

5 Science	ARTICLE <u>Lord of the rings</u> Hand, Eric	77		*
	Science (American Association for the Advancement of Science), 2017-04, Vol.356 (6335), p.236-238 <i>A giant ring laser, sensitive to the spin of the planet and the twist of earthquakes, will open new windows in earth science</i> PEER REVIEWED <i>S</i> Full text available			
6 Science:	ARTICLE Lord of the rings Hand, Eric Science (American Association for the Advancement of Science), 2017-04, Vol.356 (6335), p.236-238 PEER REVIEWED V Full text available	A	gian of	it ri Feai
7 Science:	ARTICLE LORD OF THE RINGS Hand, Eric Science (American Association for the Advancement of Science), 2017-04, Vol.356 (6335), p.236-239 PEER REVIEWED PDF C > Read Online C > Full text available >	77		*
8 Fellowship white bing	DVD <u>The lord of the rings. The fellowship of the ring</u> ©2002 Roger Blunck Collection (Library of Congress) <u>M</u> Available at TCC / M&M Music & Media - Instructional Videos (11111) and other locations >	77		*
9 Return for	DVD <u>The lord of the rings. The return of the king</u> ©2004, ©2003 Roger Blunck Collection (Library of Congress) <u>M</u> Available at TCC / M&M Music & Media - Instructional Videos (11113) and other locations >	77		*
10	воок <u>The lord of the rings</u> Tolkien, J. R. R. (John Ronald Reuel), 1892-1973, author 1993	77		*

Available at Main Stacks Floor4 (PR6039.032 L6 1993) >

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RDOFTHERINGS ring laser, sensitive to the spin of the planet and the twist arthquakes, will open new windows in earth science

By Eric Hand

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JOURNAL ARTICLE Finding Woman's Role in "The Lord of the Rings"

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Naonori Kawamoto, Tomoyuki Fujita, Satsuki Fukushima, Hiroki Hata, Yusuke Shimahara, Koko Asakura, Junjiro Kobayashi

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📫 "Once in a lifetime." The phrase comes up over and over from the people who worked on Peter Jackson's The Lord of the Rings... 🛍

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Beardmore, A. P.; Willingale, R.; Kuulkers, E.; Altamirano, D.; Motta, S. E.; Osborne, J. P.; Page, K. L.; Sivakoff, G. R.

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ARTICLE Lord of the Rings – Return of the King: Swift-XRT observations of dust scattering rings around V404 Cygni Beardmore, A. P. ; Willingale, R. ; Kuulkers, E. ; Altamirano, D. ; Motta, S. E. ; Osborne, J. P. ; Page, K. L. ; Sivakoff, G. R. Monthly notices of the Royal Astronomical Society, 2016-10, Vol.462 (2), p.1847-1863

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воок The lord of the rings Evans, Robert C., 1955- editor 2022

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The economic impact of on-screen tourism: The case of The Lord of the Rings and the Hobbit

Li, ShiNa ; Li, Hengyun ; Song, Haiyan ; Lundberg, Christine ; Shen, Shujie

Tourism management, 2017-06, Vol.60, p.177-187

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ARTICLE

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Fenwick, James

Historical journal of film radio and television/Historical journal of film, radio and television, 2022-06, Vol.42 (2), p.261-285

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Let's compare with our other campuses!





The Lord of the rings. The fellowship of the ring Roger Blunck Collection (Library of Congress)

Widescreen version.; ©2002

▶ Available at University Library 1 NORTH Service Desk (DVD 001052)



▶ Available at University Library 4 NORTH (PR 6039.032 L63775 2004)

The lost road and other writings : language and legend before "The lord of the rings"

" 🗹

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Let's compare with our other campuses!



Search Configuration Timeline

Mellennium+Primo Primo Central 2011

- No ranking changes
- Primo Central Index
- Record issues address in metadata or via norm rules in Primo BO

Alma+Primo Primo Central 2013

- No ranking changes
- Primo Central Index
- Record issues address in metadata or via norm rules in Primo BO

 Title + institution boosting

ULMS Alma+Primo

Central Discovery

2017

- CDI created (PCI+Summon)
- More CDI records
- CDI title search analysis
- Record issues addressed by Ex Libris and ULMS working groups

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Primo VE Central Discovery 2019 Rapido Central Discovery Global Title 2022

- Migrated existing
- rankings
- CDI

•

- enhancements
- Adjustments to
 - blending
 - Adjustments to UI
 - Record issues
 - addressed by Ex
 - Libris and ULMS
 - working groups

- No ranking changes
- CDI + GTI
- More records from GTI
- Default expanded search
- Record issues addressed by Ex Libris and ULMS working groups

How to Cook

Basic Ingredients

• Each ingredient has its own flavor

Combine

• Ingredients are added together through a process

Season

• Add spices to enhance the overall flavor

Serve & Enjoy



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Image created using ChatGPT 3.5

Our Ingredients & How We Combine

	Name	Code	Description							
1	Central Index	CentralIndex	All records within yo profile	ur Central Index	Filter Availab	by ility	✓Exclude CDI eBooks	All CDI resource types	All CDI disciplin	Search in FT: No (Always)
2	Other CSU Physical	Other_CSU_Physical	-	Field		Name		Boosting Factor		
3	Sac State Library	Sac_State_Library		1. title		Title		20		
4	Esploro Theses and	Esploro Theses Dissertations	-	2. creator		Creator		3.0		
	Dissertations	Lopioro_incoco_biocontationio		3. sub	Subject			2.5		
				4. desc		Description		1.5		
	Active Name	Boosting Factor		5. isbn		ISBN		1.0		
	1 O Boost My Institution 20			6. lang		Language		1.0		
				7. toc		тос		0.01		
				8. addtitle		Additional titl	e	0.01		

The Seasoning

	Enabled	Search engine		Boost type		Settings				
1		Central Index		Deboost		Deboost factor: 0.01				
2		Local		Boost		Boost records with a high score - Boost position: middle - Number of results to boo factor: 2.5				
		Define Boost Type Choose boost type: Boost O Deboost					~			
		Define Parameters	e Parameters			~				
		Boost factor	2.5			0				
		Boost records with a score: Position of boosted records bottom (9th		ium Olow Onone d) Iniddle (5th record) record) Onone		Number of results to boost	5			

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Boost

Serve and Enjoy?

1 Clobal Warming	воок Global warming Miller, Debra A Author 2009 & Online access >	Query: Global Warming	1	and the second s	воок Artificial int Rich, Elaine 2nd ed.; ©199 Ш Available a
2	воок Global Warming. Faust, Daniel R 1st ed.; 2024 ⊘ Online access >		2	Contraction of the second seco	воок Artificial int [First edition] Ш Available a
3	воок Global warming Black, Brian, 1966- ©2010 ∂ Online access >		3	and a second sec	воок Artificial int Hunt, Earl B 1975 Ш Local copy

- Local records display over CDI resources
- Title boosting reflects top results with little variation in result set. (books over-represented)
- Date sorting issues

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Query: Artificial Intelligence telligence 91 at University Library 4 NORTH (Q 335 .R53 1990) > telligence .; 2018 at University Library 4 NORTH (Q334.7 .A78 2018) > telligence unavailable. Get it from other libraries >

• Articles not represented in the results unless filtered (disproportionately under-represented)

What Can Be Done

Relavancy Ranking Configuration

- Adjust title boosting to 3.5 •
- Remove institution boosting
- Add date range boost •

Blended Search Scope Boosting

- Remove local boosting •
- Adjust boosted record settings •
- Deboost CDI if needed •



PRIMO SEARCH API





CALORIES PER SERVING

550

SERVES 1	AMOUNT		%DV				
Total Fat	26 g		33%				
Saturated Fat	9 g	1	sort - title - title	sort - creationdat	control - score - sc	control - save score	control -
Trans Fat	0 g	2	Mental health.	1940	192.0889		
Cholesterol	180 mg	3	Mental Health Literacy	20120401	128.71213	0.04065678	article
Sodium	840 mg	4	Mental health (United States. Superintendent	1970	128.71213		
Total Carbohydrate	49 a	5	Right-Based Mental Health Care—Advantages	20220101	128.7113917	0.039918438	article
	4.5	6	International Olympic Committee (IOC) Sport	20210101	128.7111733	0.0397001	article
Dietary Fiber	4 g	7	Mental health (United States. Superintendent	2003	128.71109		
Total Sugars	3 g	8	Global Mental Health 1: No health without me	20070908	128.710576	0.039102744	article
Added Sugars	2 g	9	Barriers to mental health treatment: results fr	20140401	128.7102942	0.038820975	article
Protein	25 g	10	Mental Health,	2018	101.65857		
Vitamin D	1.9 mcg	11	Mental health	2007	93.25584		
	040	12	Mental health /	1996	92.86315		
Calcium	310 mg	13	Mental Health in the Workplace: A Call to Acti	201804	61.71288	0.038728934	article
Iron	4.8 mg	14	Mental health /	1999	61.71288		
Potassium	290 mg	15	The Youth Aware of Mental Health Intervention	20200701	61.71258022	0.038429156	article
		16	Different uses of Bronfenbrenner's ecological	20181101	61.71251448	0.038363412	article
		17	Mental health and well-being during the COVI	20210601	61.71250652	0.03835545	article
		18	Global Mental Health 2: Child and adolescent	20111022	61.71245382	0.038302757	article
		19	Mental Health	2023	39.915657		
		20	Mental health.		30.704351		

INSIGHTS FROM API DATA

LOOKING FORWARD

Set time for Analytics

Seek collaborators and establish period where no configuration changes will be made.

API Testing

Refine method and research framework to approach cross campus analysis of search configurations.

Make recommendations

Create best practices related to ranking and boosting configurations. Li, Cribbs, Ward, & Gardner, eCAUG 2024

Write scholarly article

Share findings and reproducible, collaborative approach – gap in literature on this topic.



ACKNOWLEDGMENTS

THANK YOU FOR ATTENDING OUR PRESENTATION

Special thank you to Christina Hennessey (CO), Jill Strykowski (SJSU),

and the UMLS Data Issues Task Force.

Any Questions?



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Ex Libris Documentation

- **Analytics Subject Areas for Primo** VE
- **Boosting Records in Blended Search Profiles**
- **Configuring Search Profiles for** Primo VE
- Configuring the Ranking of Search ۲ **Results in Primo VE**
- Primo API Docs: Primo Search

