



Meet your Research Assistant

IGeLU, Sept 10, 2024

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Agenda

- Meet Primo Research Assistant
- A Peek Behind the Scenes
- Solution Evaluation
- Beta Testing Program Overview
- How Beta Feedback Fine-tuned the Research Assistant
- Future Ideas for the Research Assistant



Meet Primo Research Assistant

impact of social media on children's mental health

Semantic search, natural language query

Searching for relevant resources

Generating overview for 5 most relevant sources

Overview

Overview of top ranked 5 sources

Social media has a significant impact on children's mental health, with various studies highlighting both positive and negative aspects. The use of social media among adolescents with eating disorders can exacerbate their condition, as platforms often promote harmful content related to body image and weight ². This unsupervised sharing of content can trigger individuals already struggling with eating disorders, emphasizing the need for safer online environments ². Additionally, social media can influence parents' anxiety and depression, which in turn can affect their children's mental health ⁴. Factors such as behavioral intention to use social media, enjoyment, trust, ease of use, usefulness, and social influences play a role in this relationship ⁴. On the positive side, social media can provide a sense of belonging and facilitate help-seeking behaviors among youth struggling with mental health issues ⁵. However, current content moderation practices on social media platforms may hinder these positive impacts by censoring mental health-related content ⁵. This censorship can lead to the isolation of at-risk youth and limit access to valuable resources and support networks ⁵.

   Copy  Try again

Sources

Top ranked 5 sources

1

EBOOK

Social Media and Mental Health

Edwards, Claire 2018

2

JOURNAL ARTICLE

Social media use among adolescents with eating disorders: a double-edged sword

Nawaz, Faisal A et al. 2024

3

JOURNAL ARTICLE

Synthesizing perspectives: Crafting an Interdisciplinary view of social media's impact on young people's mental health

Nage, Antara et al. 2024

4

JOURNAL ARTICLE

Factors Affecting the Use of Social Networks and Its Effect on Anxiety and Depression among Parents and Their Children: Predictors Using ML, SEM and Extended TAM

Khwaldeh, Sufian et al. 2022

5

JOURNAL ARTICLE

Debate: Social media content moderation may do more harm than good for youth mental health

Robillard, Julie M. et al. 2024



View more results from your library search

Related research questions

Suggested questions



effects of social media usage on children's mental health



strategies to mitigate the negative impact of social media on children's mental health

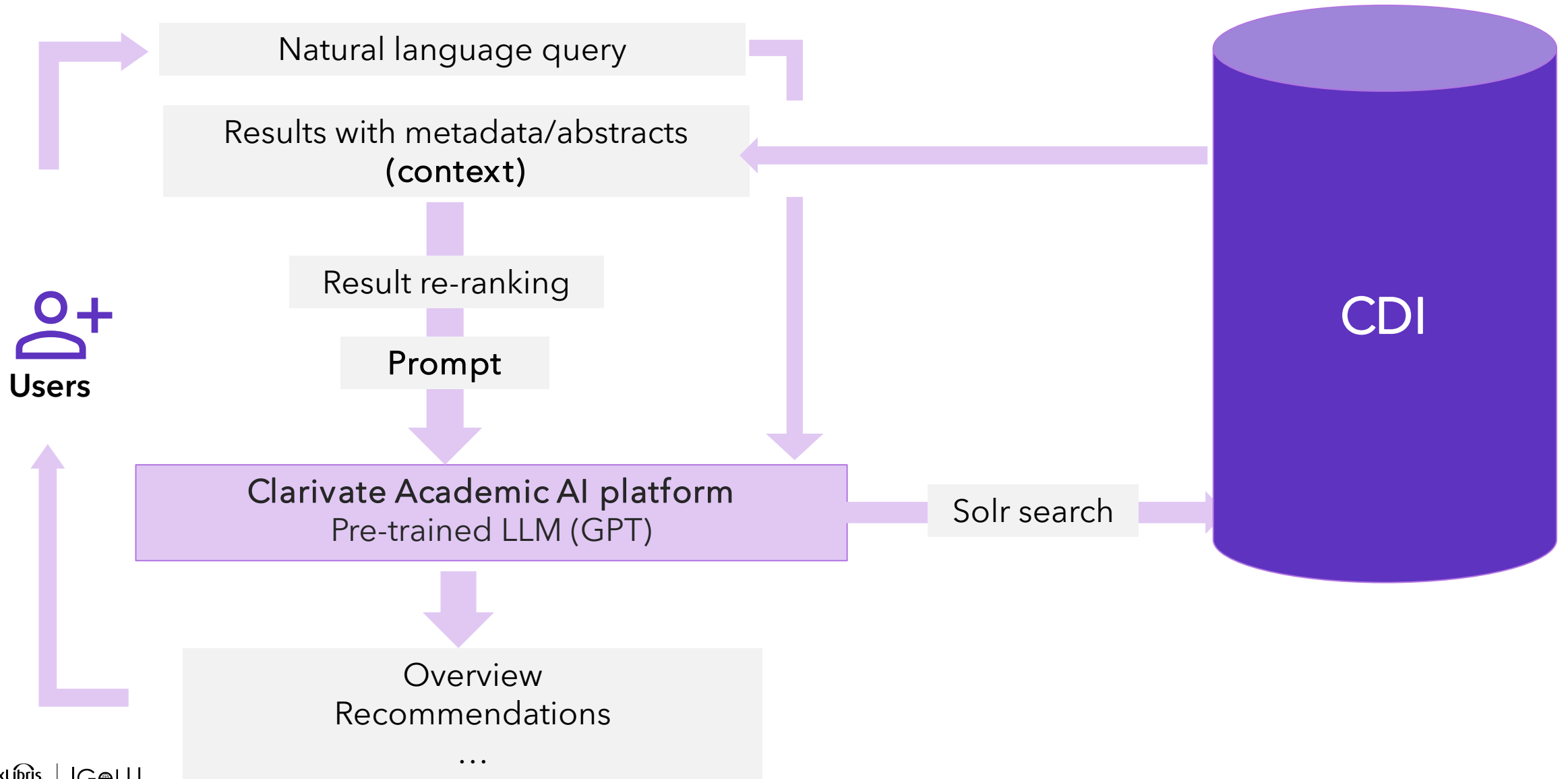


relationship between social media use and anxiety in children



role of parents in monitoring and managing children's social media usage for mental health

The Primo RA architecture and flow: Retrieval Augmented Generation



In more detail

Step 1: User query to search conversion

User search

what is the effect of vitamin D deficiency

LLM creates SoLR query

(vitamin D deficiency effects) OR (impact of low vitamin D levels) OR (vitamin D insufficiency consequences) OR (health implications of vitamin D deficiency) OR (vitamin D inadequacy outcomes) OR (significance of vitamin D insufficiency) OR (consequences of vitamin D deficiency) OR (effects of low vitamin D levels on health) OR (vitamin D deficiency health risks) OR (importance of vitamin D levels for health) OR (what is the effect vitamin D efficiency)

In more detail

Step 1: User query to search conversion

Step 2: Search execution in CDI

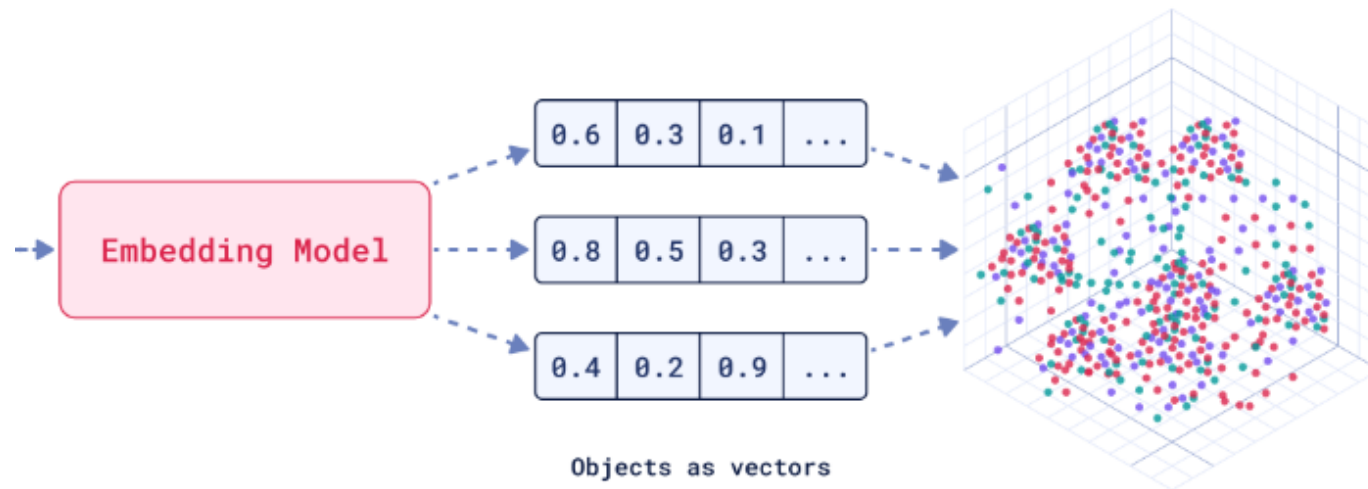
In more detail

Step 1: User query to search conversion

Step 2: Search execution in CDI

Step 3: Re-ranking of top 30 search results to identify the 5 best fitting the user query

- *User query is converted into numeric representations*
- *Title/Abstract of the top 30 results are converted into numeric representations*
- *Both are mapped and the top 5 identified*



In more detail

Step 1: User query to search conversion

Step 2: Search execution in CDI

Step 3: Re-ranking of top 30 search results to identify the 5 best fitting the user query

Step 4: Original user query, top 5 results, instructions (Prompt) are sent to the LLM

In more detail

Step 1: User query to search conversion

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Step 4: Original user query, top 5 results, instructions (Prompt) are sent to the LLM

Step 5: LLM generates output according to instructions, based on the context

- Structured answer with inline references to 1-5 sources
- Using the user's language

我们如何改善临床试验中的多样性?

Searching for relevant resources
Generating summary for 5 most relevant sources

Summary

在临床试验中改善多样性是一个重要的议题。历史性的临床试验数据以及流行病学数据可以为制定多样性目标和背后的理由提供基准¹。研究机构必须对如何构想和实施临床试验进行系统性改变，以实现临床试验中多样性和包容性的可持续支持²。了解少数族裔群体的需求，建立与这些群体和研究人员之间的关系和信任，有助于克服招募研究对象的障碍³。研究机构应该实施组织层面的方法，以改善临床试验中患者的平等获取和多样化参与⁴。此外，应该采用多样性计划、社区参与和教育、文化能力培训、基于生物学合理而非模板化的资格标准、允许在试验过程中扩大资格标准的自适应设计，以及减少研究参与者负担的物流和实际调整等方法来提高多发性硬化症临床试验人群的多样性和包容性⁵。这些建议为赞助者和研究人员提供了改善临床试验人群多样性和包容性的方法⁶。通过采取这些措施，可以促进健康公平，确保新医疗产品对所有需要的人都有益处，同时减少或消除现有群体之间的不平等或新的不平等⁷。

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Sources

- 1 JOURNAL ARTICLE**
Improving Diversity in Clinical Trials
2024
- 2 JOURNAL ARTICLE**
Enhancing Diversity and Inclusion in Clinical Trials
Johnson, Tesheia et al. 2023
- 3 JOURNAL ARTICLE**
Diversity, equity, and inclusion (DEI) champions: Lessons learned and implications for future programming to support...
Caban-Holt, Allison et al. 2023
- 4 JOURNAL ARTICLE**
Improving Clinical Trial Patient Diversity: Can Central Imaging Play a Role?
Klane, Lindsey 2021
- 5 JOURNAL ARTICLE**
Enhancing diversity of clinical trial populations in multiple sclerosis
Sormani, Maria Pia et al. 2023

View more results from your library search

Related research questions

- ? 如何提高临床试验中的多样性?
- ? 临床试验中多样性的重要性是什么?
- ? 多样性在临床试验中的影响有哪些?
- ? 如何评估临床试验中的多样性?

Internal quality evaluation

Retrieved documents (context)

- Context - Relevance
- Accuracy and Comprehensiveness
- Diversity

Output (Overview)

- Usefulness
- Relevancy
- Faithfulness / Accuracy
- Bias, offense
- Noise robustness
- Negative Rejection
- Comprehensiveness
- Consistency

Human testing

- Semi-automated with tools to automating time-consuming repetitive tasks
- Incl. some European languages, Japanese and Chinese

In development: Automatic scoring using an LLM (LLM-as-a-Judge)

- Examples*
- Alignment user query - document (**context relevance**)
 - Alignment user query - output (**relevancy, faithfulness**)

For later: Reverse output testing (LLM)

Remaining important: The Human in the loop

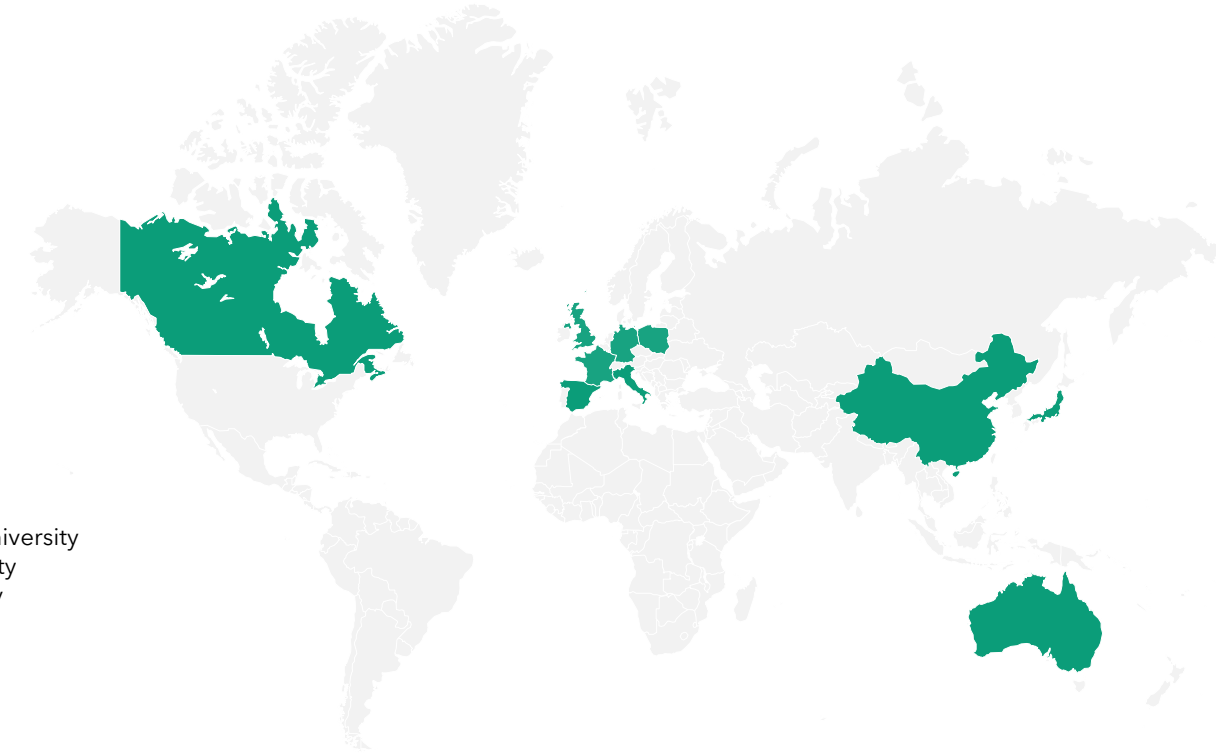
Beta Testing Program Overview

18 discovery customers:

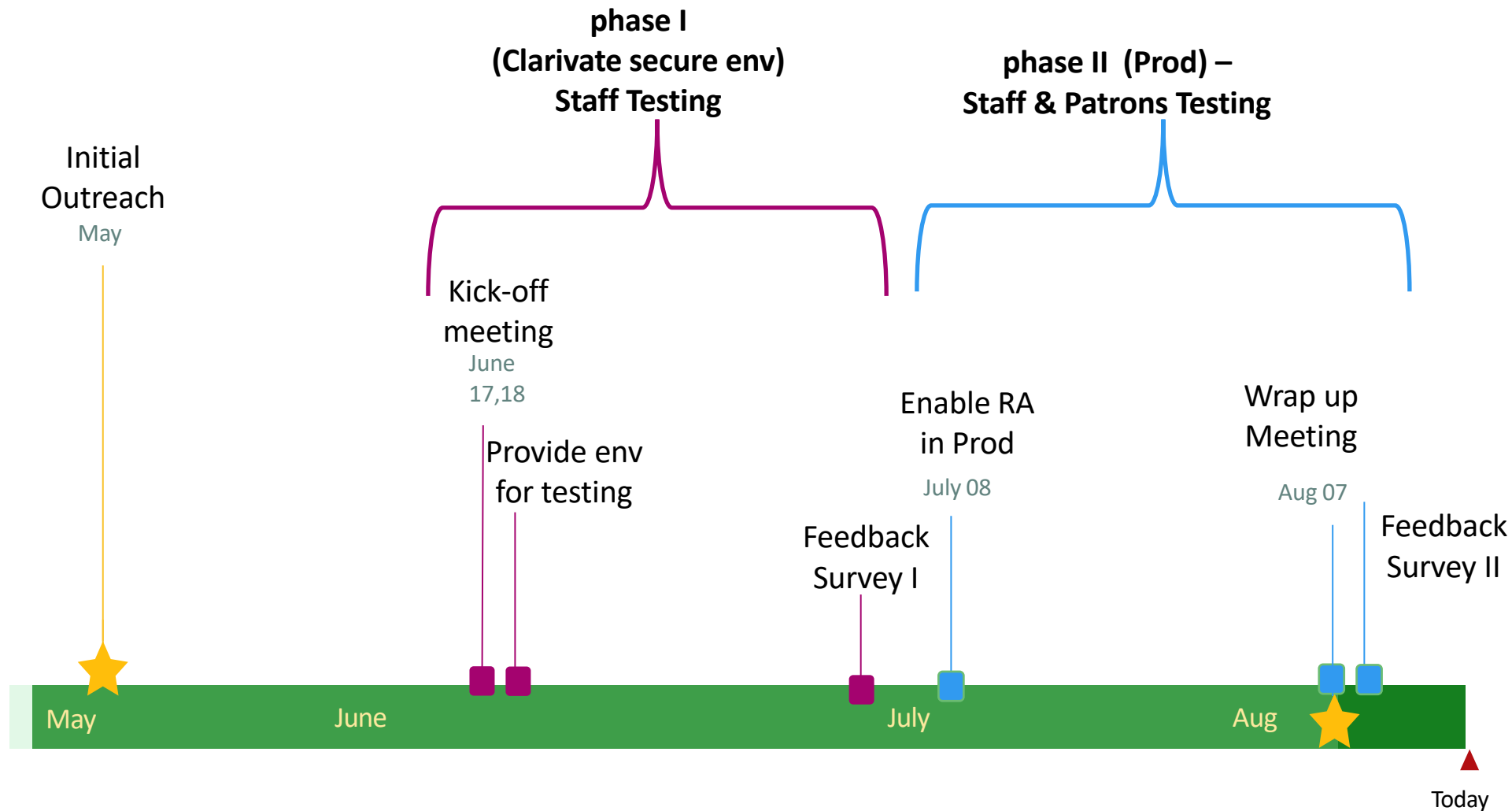
- ✓ 16 Primo VE, 2 Summon
- ✓ 2 consortia
- ✓ Worldwide & multilingual

Country	# of Customers
Australia	1
Belgium	1
China	1
France	1
Italy	1
Japan	2
Spain	1
Switzerland	1
UK	3
US	6 (4 VE, 2 Summon)

- Beijing Normal University
- Ball State University
- Bolzano University
- Cardiff University
- Keio University
- Liege University
- New School
- SLSP
- SUNY (central office & Buffalo University)
- Sorbonne University
- Swansea University
- Tulane University
- University College London
- Universitat Oberta de Catalunya
- University of Arkansas
- UNSW
- Waseda University
- Yale University



Beta Testing Program Overview





Beta Testing Program Feedback – on screen

Overview

Social media has a significant impact on children's mental health, with various studies highlighting both positive and negative aspects. The use of social media among adolescents with eating disorders can exacerbate their condition, as platforms often promote harmful content related to body image and weight ². This unsupervised sharing of content can trigger individuals already struggling with eating disorders, emphasizing the need for safer online environments ². Additionally, social media can influence parents' anxiety and depression, which in turn can affect their children's mental health ⁴. Factors such as behavioral intention to use social media, enjoyment, trust, ease of use, usefulness, and social influences play a role in this relationship ⁴. On the positive side, social media can provide a sense of belonging and facilitate help-seeking behaviors among youth struggling with mental health issues ⁵. However, current content moderation practices on social media platforms may hinder these positive impacts by censoring mental health-related content ⁵. This censorship can lead to the isolation of at-risk youth and limit access to valuable resources and support networks ⁵.



		Comment
<ul style="list-style-type: none"> • Answered my question/request • Gave me accurate information • Sources met my expectations • Made my research task easier • Other 	<ul style="list-style-type: none"> • Didn't answer my question/request • Was offensive, inappropriate or biased • Gave me inaccurate information • Sources didn't meet my expectations • Other 	Free text

Beta Testing Program Feedback – on screen

Overview

Social media has a significant impact on children's mental health, with various studies highlighting both positive and negative aspects. The use of social media among adolescents with eating disorders can exacerbate their condition, as platforms often promote harmful content related to body image and weight ². This unsupervised sharing of content can trigger individuals already struggling with eating disorders, emphasizing the need for safer online environments ². Additionally, social media can influence parents' anxiety and depression, which in turn can affect their children's mental health ⁴. Factors such as behavioral intention to use social media, enjoyment, trust, ease of use, usefulness, and social influences play a role in this relationship ⁴. On the positive side, social media can provide a sense of belonging and facilitate help-seeking behaviors among youth struggling with mental health issues ⁵. However, current content moderation practices on social media platforms may hinder these positive impacts by censoring mental health-related content ⁵. This censorship can lead to the isolation of at-risk youth and limit access to valuable resources and support networks ⁵.



Total activity

Queries	4997
With thumbs up	339
With thumbs down	276

Key reasons given for Thumbs down

Didn't answer my question/request	40%
Sources didn't meet my expectations	30%

Beta Testing Program Feedback

Source selection and Overview

- ✓ Ranking of sources
- ✓ Overview structure and length
- ✓ *Noise robustness and negative rejection - upcoming*

Functionality:

- ✓ Using widget in the first time didn't include the query
- ✓ Some languages were not supported
- ✓ "View More Records" was looking for 'CentralIndex' tab
- ✓ Union view - redirection was not working

UX:

- ✓ Icon and widget UX
- ✓ make "View More Results" more prominent
- ✓ Widget visibility was based on screen size
- ✓ RA Copy action enhancements
- ✓ Mobile
- ✓ Privacy Statement
- ✓ *Better user guidance (labels)*
- ✓ *Reorder of Overview and Sources*

General Feedback



"We are really excited about the opportunity for **natural language search** and the **restated questions** are very helpful."

University of Arkansas



"List of things that we liked:

- **Intuitive tool** to use and worked well to retrieve results, it's a good starting point for searching
- The **Related Research Questions feature** is useful. Even if I wouldn't use the exact wording of the related research questions, they gave me phrasing to consider to further refine my research question.
- I like that when you click **Try Again** it runs another search without overwriting the search you've just done so **you can compare.**"

NHS Wales e-Library



"We've just discovered here that we can ask the Research Assistant a **question in Welsh** and it replies in Welsh. I have some very impressed people here. We knew it would do French, German, Spanish, etc., but we never expect things to just work in Welsh. And this does. **And in good Welsh too..**"

Cardiff University



"I like the answers provided by the AI, the **top 5 sources used seem relevant in answering the questions** - I prefer the answers in this than ChatGPT for natural language questions, as it seems **more accurate**, the referencing is more accurate and better linked, so the answers seem more evidence based."

UNSW

Future Ideas for the Research Assistant

- Local content (as far as it has abstracts)
- Advanced search
- Document insights
- Other recommendations (e.g. topics)
- Connections/Graphs
- ...

A **key takeaway** allows users to quickly determine relevance

Users are guided to useful next steps such as exploring the **key concepts** discussed in the document...

...or choosing from **suggested research topics** based on the document

The screenshot shows the 'Research Assistant BETA' interface with three panels of insights for a document about COVID-19 and academic stress. Each panel is preceded by a grey callout box with an arrow pointing to it.

Panel 1: Key Takeaway

Here is the **key takeaway** of the document.

The COVID-19 pandemic has increased academic stress among college students, leading to a high level of depression. The article also discusses the role of coping style, sleep quality, and interpersonal relationships, including social isolation, in influencing depression.

This relates to your search as it provides insight into the impact of the pandemic on mental health, with a focus on the role of social isolation.

Panel 2: Important Concepts

Describe the important concepts in this document.

Here are important **concepts** discussed in this document and why they are important.

1. **COVID-19**: A global public health crisis caused by the novel coronavirus, which is the main topic of the text and has a significant impact on depression and mental health.
2. **Academic stress**: Stress experienced in the educational environment related to academic issues, which is a key factor influencing depression among college students in the context of the COVID-19 pandemic.

Panel 3: Suggested Research Topics

Brainstorm five research topics based on this document.

Here are five **research topics** based on this document

1. The impact of academic stress on depression among college students during the COVID-19 pandemic
2. The role of coping style in managing academic stress and depression among college students

Enable the Research Assistant for your Users!

If you haven't activated the Research Assistant yet:

Go to Configure Views > General

✓ Enable Research Assistant Using Icon

✓ Enable Research Assistant Using Widget

Enable recent scopes search	<input checked="" type="checkbox"/>	Enable QR On Top	<input checked="" type="checkbox"/>
Display Unpaywall Links	<input checked="" type="checkbox"/>	Display Quick Links	<input checked="" type="checkbox"/>
Display all links in View Online section	<input checked="" type="checkbox"/>	Display Favorites Warning Message for Guests	<input checked="" type="checkbox"/>
Enable Barcode Search	<input checked="" type="checkbox"/>	Use normalized CDI subjects	<input checked="" type="checkbox"/>
Allow direct login to other institutions	<input type="checkbox"/>	Display CDI document attributes	<input checked="" type="checkbox"/>
Enable Research Assistant Using Icon	<input checked="" type="checkbox"/>	Enable Research Assistant Using Widget	<input checked="" type="checkbox"/>





Your Voice Matters!

Register now for our
Voice of Customer survey launching
October 22nd



Don't miss your chance to win a prize at IGeLU 2024 by registering for our survey!



[Sign up now](#)



Thank You

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