



利用AI工具提升英文 期刊閱讀效率

熊宜君 台大寫作教學中心

What are Research Articles?

- There are three main types of articles you may engage with:

Empirical Articles

These articles report original research studies, usually with primary data and results from experiments.

Example: Trenholm, S., Alcock, L., & Robinson, C. (2015). An investigation of assessment and feedback practices in fully asynchronous online undergraduate mathematics courses. *International Journal of Mathematical Education in Science and Technology*, 46(8), 1197–1221.
<https://doi.org/10.1080/0020739X.2015.1036946>

Theoretical Articles

These articles usually contain and describe new theories, principles, and concepts related to a specific field of knowledge. They normally do not present empirical or experimental data.

Example: Yazan, B. (2018). A conceptual framework to understand language teacher identities. *Journal of Second Language Teacher Education*, 1(1), 21–48.

Review Articles

These articles summarize and analyze published work on a certain topic to 1) synthesize the previous research, 2) provide a critical overview of the previous research, 3) evaluate the state of research, and 4) suggest gaps in knowledge and future research directions.

Example: Lapkin, S., Mady, C., & Arnott, S. (2009). Research perspectives on core French: A literature review. *Canadian Journal of Applied Linguistics*, 12 (2). Retrieved from <https://journals.lib.unb.ca/index.php/CJAL/article/view/19936>

<https://www.oise.utoronto.ca/skillshub/resources/how-read-academic-articles>

Empirical Articles

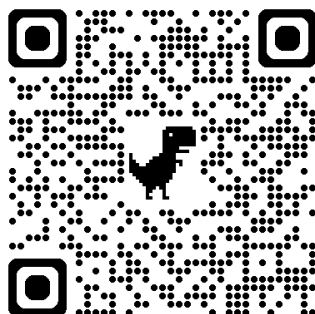
- **They** are perhaps the most common type of research articles, also often called by different names, such as **experimental reports** and **research reports**. There are two important features of these articles:
 1. **Predictable Structure.** Empirical articles typically follow a structure called **IMRD (Introduction – Methods – Results – Discussion)**
 2. **Predictable Language.** Empirical articles often employ standard vocabulary or phrases for certain purposes (e.g., to introduce the research objective and research questions).

Familiarizing with the structure and language of empirical articles will help you find the main points quickly and ultimately read more efficiently.

<https://www.oise.utoronto.ca/skillshub/resources/how-read-academic-articles>



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Search for topics across research papers...

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Topics > mass vocabulary learning vs. spaced vocabulary learning Pricing

Standard High Quality en

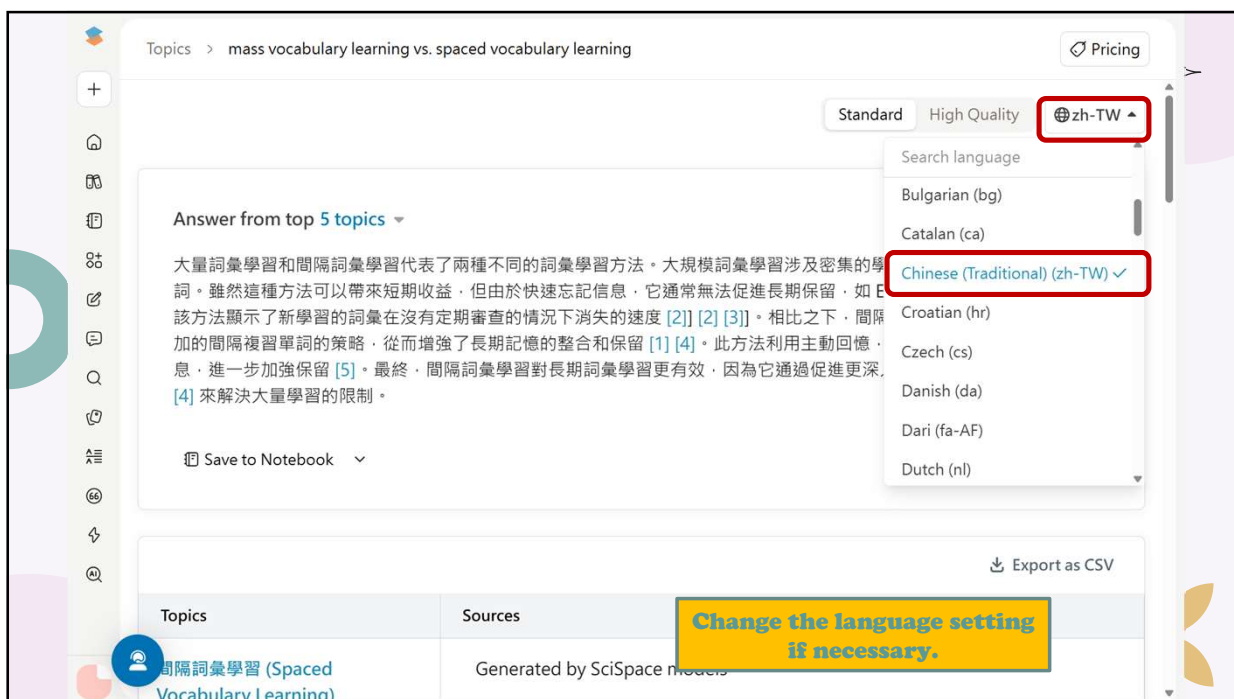
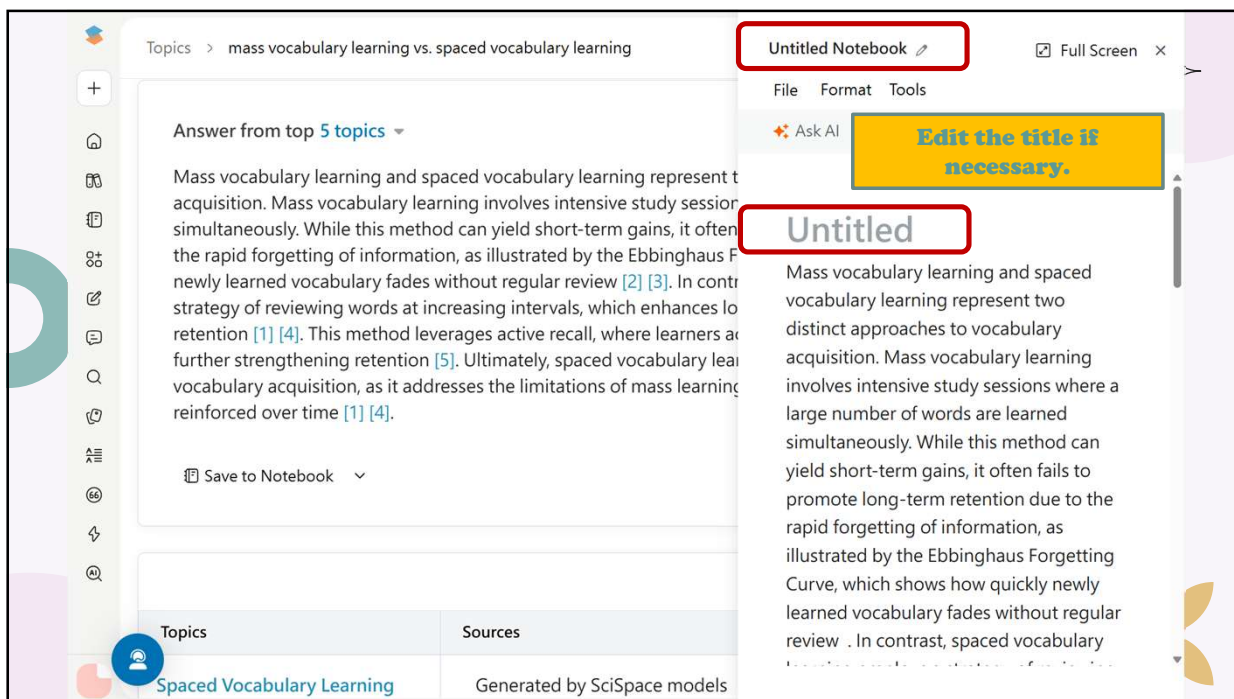
Answer from top 5 topics

Explore the related topics

Mass vocabulary learning and spaced vocabulary learning represent two distinct approaches to vocabulary acquisition. Mass vocabulary learning involves intensive study sessions where a large number of words are learned simultaneously. While this method can yield short-term gains, it often fails to promote long-term retention due to the rapid forgetting of information, as illustrated by the Ebbinghaus Forgetting Curve, which shows how quickly newly learned vocabulary fades without regular review [2] [3]. In contrast, spaced vocabulary learning employs a strategy of reviewing words at increasing intervals, which enhances long-term memory consolidation and retention [1] [4]. This method leverages active recall, where learners actively retrieve information from memory, further strengthening retention [5]. Ultimately, spaced vocabulary learning is more effective for long-term vocabulary acquisition, as it addresses the limitations of mass learning by ensuring that vocabulary is revisited and reinforced over time [1] [4].

Save the details to your Notebook.

Save to Notebook



Topics > mass vocabulary learning vs. spaced vocabulary learning Pricing

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Topics	Sources
<p>間隔詞彙學習 (Spaced Vocabulary Learning)</p> <p>間隔詞彙學習涉及以越來越長的間隔複習和練習詞彙，以幫助將它固定在長期記憶中。這種方法已被證明在長期保留方面非常有效，並且與查詢相關，因為它提供了大量詞彙學習的替代方法。它有助於了解間隔重複如何幫助學習詞彙。</p>	Generated by SciSpace models
<p>大規模詞彙學習 (Mass Vocabulary Learning)</p> <p>大規模詞彙學習涉及一次學習大量單詞，通常通過密集的學習課程。這種方法可以對短期收益有益，但可能不會導致長期保留。它與查詢</p>	Generated by SciSpace models

處理CVS檔亂碼

- 第一步：下載CVS檔，按滑鼠右鍵，選擇「開啟檔案」，用「記事本」開啟，並按下確定。
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- 第三步：開啟CVS檔，中文字體便能正常顯示。

Hands-on Practice

Explore new topics or concepts that you can learn about.



Literature Review

Literature Review Chinese (Traditional) (zh-TW)

mass vocabulary learning vs. spaced vocabulary learning

Search for key words or type in a question.

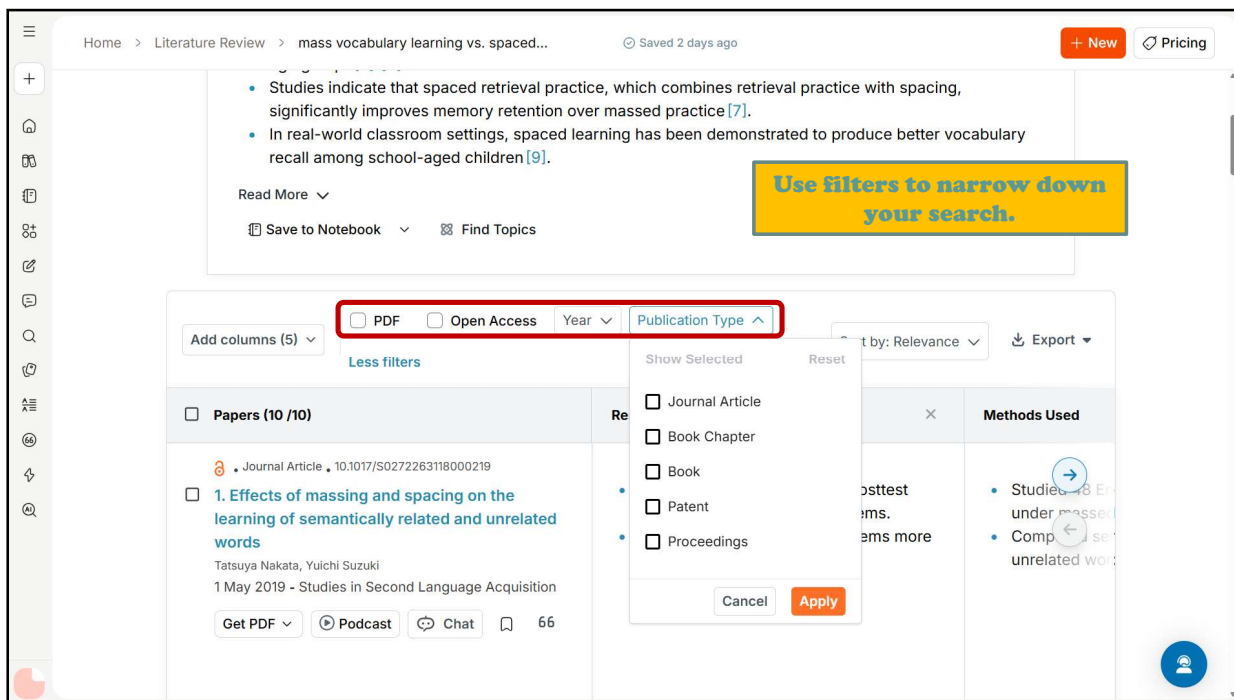
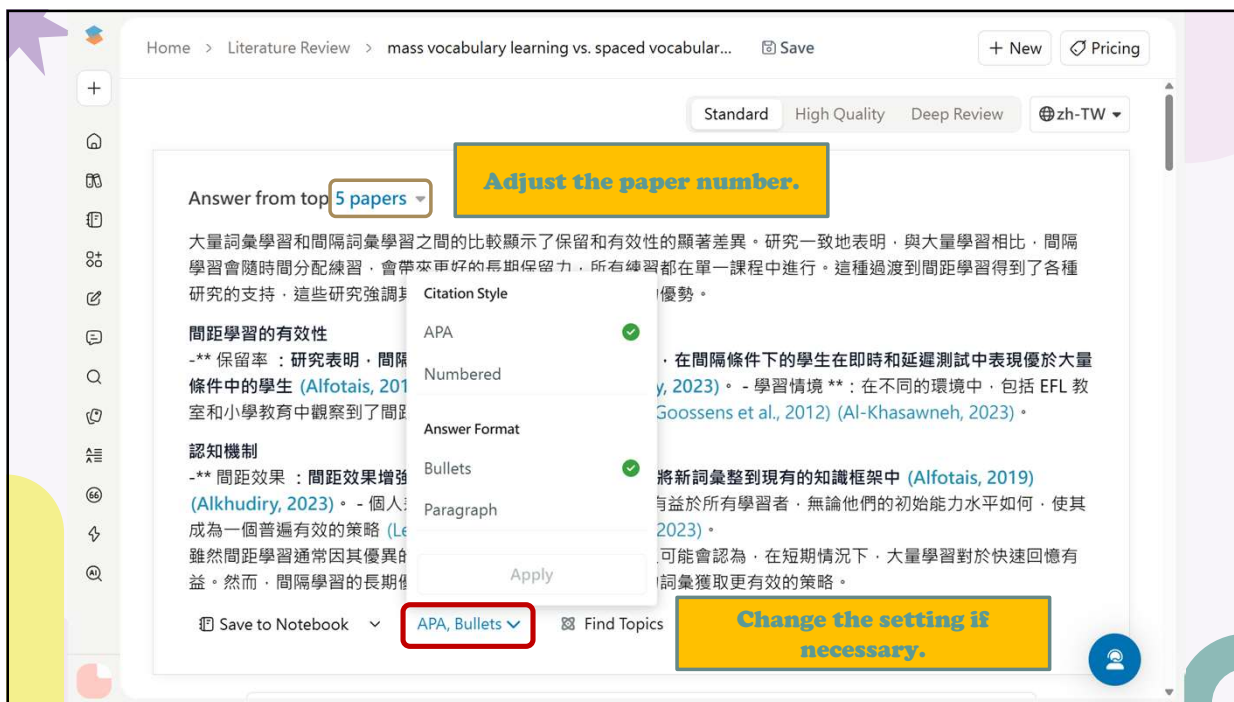
Standard High Quality Deep Review

Try searching for:

- Q literature Review are the differences between mass vocabulary learning and spaced vocabulary learning techniques in terms of retention and recall?
- Q How does spaced vocabulary learning compare to mass vocabulary learning in terms of long-term vocabulary acquisition and fluency?
- Q Can spaced vocabulary learning be more effective than mass vocabulary learning in reducing the forgetting curve and improving vocabulary retention over time?

Some relevant research questions are shown below.

Tip: If you're asking a question, add a question mark (?) at the end to get better results



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Add categories you would like to compare.

Papers (10/100) Practical Implications

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1. Neural correlates of the spacing effect in explicit verbal semantic encoding support the deficient-processing theory.

Daniel E. Callan, Nicolas Schweighofer
30 Oct 2009 - Human Brain Mapping

66 54 PDF Summary Podcast

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Journal Article • 10.1007/S11251-019-09483-4

Create new columns

Suggested columns

- + Insights
- + TL;DR
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- + Summarized Abstract
- + Summarized Introduction
- + Methods Used
- + Literature Survey
- + Limitations
- + Contributions
- + Objectives

Show 10 more

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1. Neural correlates of the spacing effect in explicit verbal semantic encoding support the deficient-processing theory.

Daniel E. Callan, Nicolas Schweighofer
30 Oct 2009 - Human Brain Mapping

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Scroll left or right to see different columns.

The findings support the use of spaced presentations in educational settings to enhance long-term retention of vocabulary and other verbal information.

The research suggests that incorporating spaced learning techniques could improve instructional design and learning strategies in both formal and informal educational environments.

The study highlights the importance of understanding neural mechanisms behind learning, which could inform cognitive training programs aimed at improving memory and learning efficiency.

The results may encourage further exploration of spaced learning in therapeutic contexts, such as rehabilitation for individuals with memory impairments.

The implications extend to the development of digital learning tools and applications that utilize spaced repetition algorithms to optimize learning outcomes.

Hands-on Practice

Compare and contrast the papers you have found.



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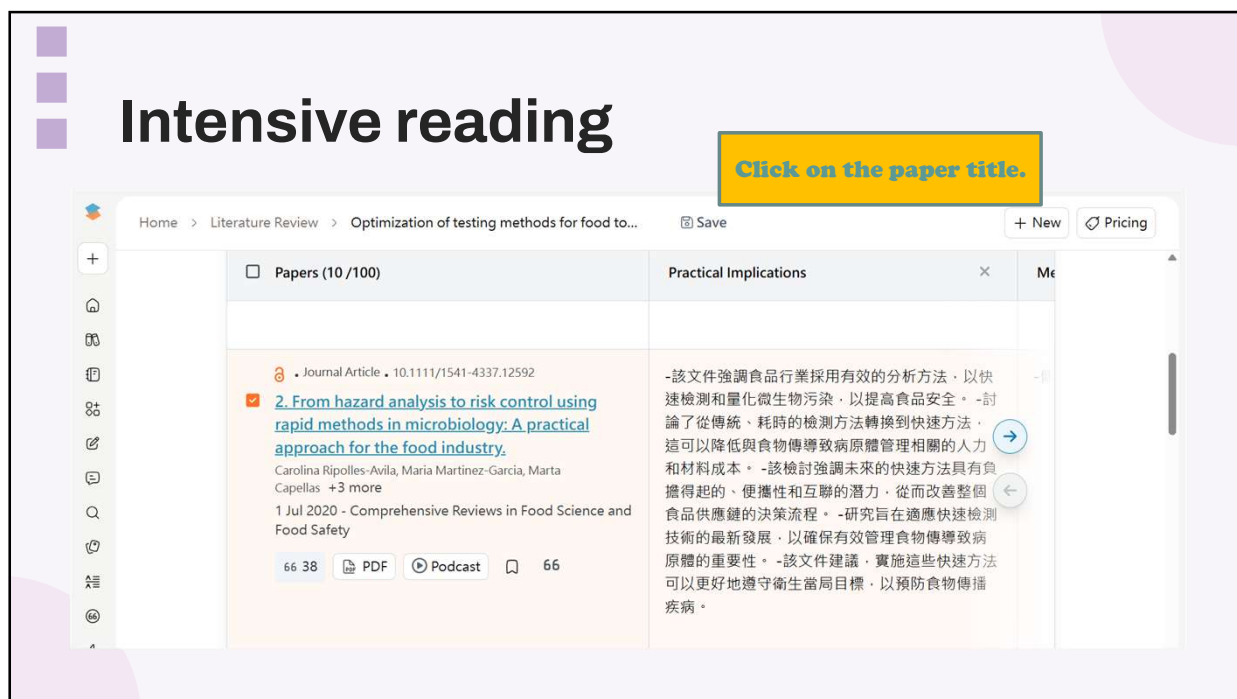
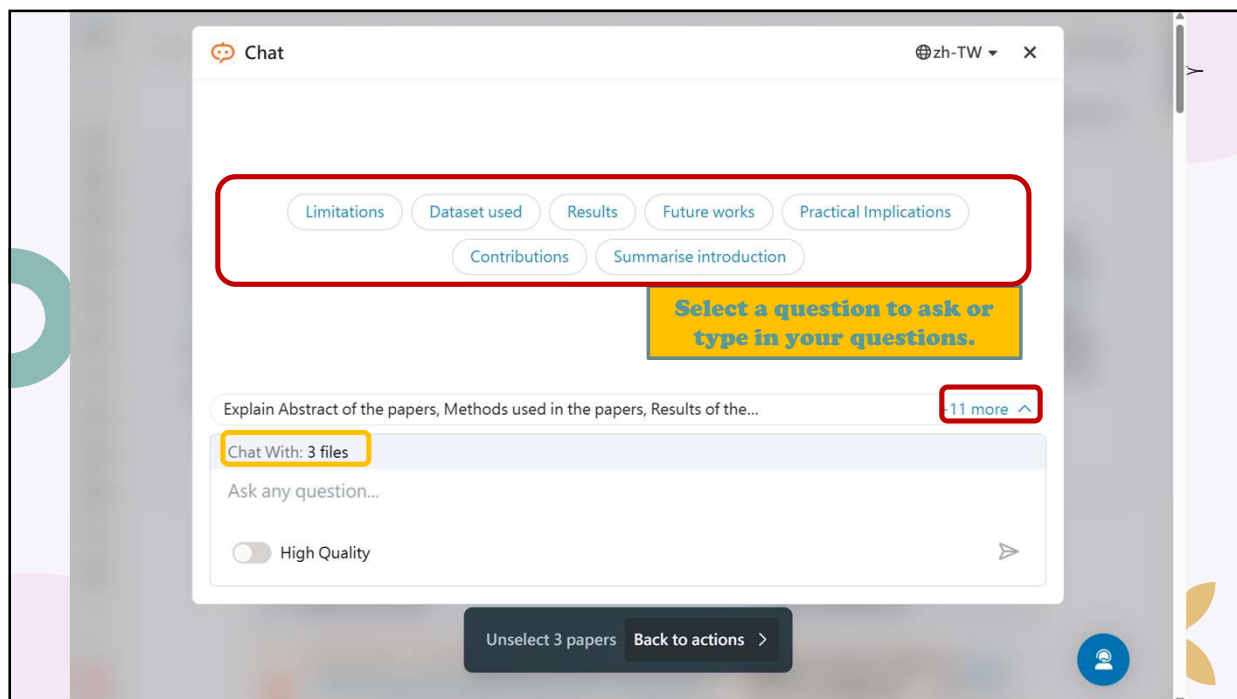
enhance vocabulary learning outcomes, suggesting that a combination of spaced learning and engaging methodologies may yield the best results (Teng & Zhang, 2023). Overall, spaced vocabulary learning emerges as a more effective strategy for long-term retention and engagement in language acquisition.

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3 papers selected Similar papers Chat with 3 papers Delete Export

Papers (10/100)	Results	Practical Implication
<input checked="" type="checkbox"/> Journal Article · 10.1177/0267658320927764 1. Effects of spacing on contextual vocabulary learning: Spacing facilitates the acquisition of explicit, but not tacit, vocabulary knowledge: Tatsuya Nakata, Irina Elgort 1 Apr 2021 - Second Language Research 66 41 PDF Summary Podcast	<ul style="list-style-type: none"> Spaced distribution enhances explicit vocabulary knowledge acquisition. No significant advantage for tacit knowledge acquisition observed. 	<ul style="list-style-type: none"> The study suggests more effective acquisition of explicit vocabulary, indicating that incorporating spaced learning into language instruction is beneficial. It emphasizes the importance of feedback after learning attempts, as this may not be realized in traditional classroom settings. The findings suggest that spaced vocabulary learning should be considered in the design of language learning scenarios. The research implies that spaced learning may be a more effective strategy for long-term retention and engagement in language acquisition.

Select some articles and decide the next step.



Home > Papers > From hazard analysis to risk control using rapid methods in microbiology: A practical approach for the food industry. Pricing

Open Access Journal Article | 10.1111/1541-4337.12592

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1

TL;DR: Improved and accurate methods already used in the food industry will be also affordable and portable and offer connectivity in near future, which improves decision-making and safety throughout the food chain.

Abstract: The prevention of foodborne diseases is one of the main objectives of health authorities To this effect, analytical techniques to detect and/or quantify the microbiological contamination of foods prior to their release onto the market are required Management and control of foodborne pathogens have generally been based on conventional detection methodologies, which are not only time-consuming and labor-intensive but also involve high consumable materials costs How read more

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Click on the links or type in your questions.

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From hazard analysis to risk control using rapid methods in microbiology: A practical approach for the food industry.

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2

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- Explain Abstract of this paper
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- What are the contributions of this paper
- Explain the practical implications of this paper
- Limitations of this paper
- Literature survey of this paper

Ask any question...

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Chat

enhanced connectivity. I these advancements are expected to significantly improve decision-making processes and overall safety throughout the food chain [4].

In summary, the paper highlights the transition from traditional, less efficient methods to modern rapid microbiological techniques in the food industry, emphasizing their current state and future potential to enhance food safety and control.

Quickly ask these questions

1. What are the limitations of rapid methods?
2. How do rapid methods improve decision-making processes?
3. Which pathogens are most relevant in detection?

More follow-up questions are listed below the responses.

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In summary, the paper highlights the transition from traditional, less efficient methods to modern rapid microbiological techniques in the food industry, emphasizing their current state and future potential to enhance food safety and control.

Quickly ask these questions

1. What are the limitations of rapid methods?
2. How do rapid methods improve decision-making processes?
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4 Sources

9:07 PM

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Save the responses to Notebook.

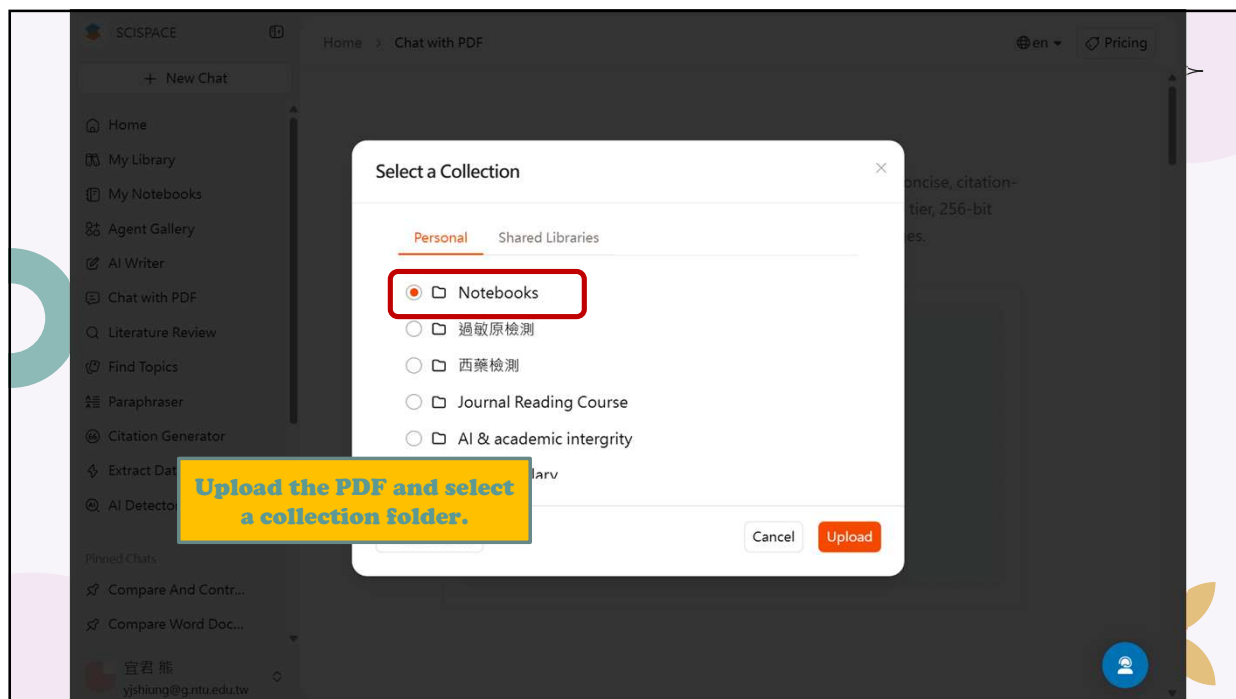
Hands-on Practice

Explore the functions designed for extensive and intensive reading.



Chat with PDF

The screenshot shows the SciSpace 'Chat with PDF' interface. On the left is a sidebar with navigation options: Home, My Library, My Notebooks, Agent Gallery, AI Writer, Chat with PDF (highlighted with a red box), Literature Review, Find Topics, Paraphraser, Citation Generator, Extract Data, and AI Detector. The main content area has a heading 'Chat with PDF' and a sub-heading 'Upload any PDF to SciSpace Chat PDF, ask a question, and get concise, citation-linked answers, summaries, and follow-ups in seconds—free tier, 256-bit encrypted, no data training, supports 75+ languages.' Below this is a large light blue box with a 'PDF' icon and the text 'Drag and drop or click here to browse' and 'Max. 100 MB per file'. At the bottom of this box is a red 'Upload PDFs' button and a link 'Or Try a sample pdf'. The top of the interface shows 'SCISPSPACE', 'Home > Chat with PDF', and 'en Pricing'.



drug substance-related impurity (NDSRI) which is a class of GTIs, and since, Diltiazem hydrochloride contains secondary amine functional groups, which can react with nitrosating agents to form nitrosamines (NAs). Specifically, the secondary amine group in diltiazem hydrochloride can undergo nitrosation to yield N-nitroso diltiazem, and it may undergo further degradation or transformation to yield NNDD (Figure 1), necessitating stringent monitoring during drug formulations. Diltiazem hydrochloride is widely used drug product for the treatment of hypertension [1,2], angina pectoris [3-5] and cardiac arrhythmia, cardiovascular conditions, as this drug primarily acts by blocking L-type calcium channels (calcium channel blocker(CCB)) [6-10] in cardiac and smoothens muscle cells by inhibiting calcium influx, it reduces myocardial contractility, decreases systemic vascular resistance and dilates coronary arteries, which results in reduction of blood pressure [11] due to vasodilation, decreased myocardial oxygen demand by reducing cardiac workload, prevention of coronary artery spasm, making it useful in the treatment of angina, thus diltiazem hydrochloride drug product to meet stringent regulatory limit to meet regulatory guidelines.

Pharmaceutical companies continue to work on strategies for controlling NAs in human consumption to meet acceptable intake (AI) as recommended by the International Agency for Research on Cancer (IARC) for Drug Evaluation and Research, the United States Food and Drug Administration (FDA) and the European Medicines Agency (EMA). These agencies aim to manage the risks associated with NAs in medicinal products. In addition, regulatory agencies have also issued guidance for the control of NAs in pharmaceutical products.

This framework provides a systematic approach to estimate the potential risk of genotoxic impurities (GTIs) in pharmaceutical ingredients. The application of the threshold toxicological concept defines an impurity as presenting a minimal risk to human health. This framework provides a systematic approach to estimate the potential risk of genotoxic impurities (GTIs) in pharmaceutical ingredients. The application of the threshold toxicological concept defines an impurity as presenting a minimal risk to human health. This framework provides a systematic approach to estimate the potential risk of genotoxic impurities (GTIs) in pharmaceutical ingredients. The application of the threshold toxicological concept defines an impurity as presenting a minimal risk to human health.

Select "Explain text."

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Explain the text
Genotoxic impurities (GTIs) pose a significant challenge in pharmaceutical development and manufacturing due to their potential to cause mutations, carcinogenicity, or other genetic damage even at trace levels. Among these...

Genotoxic Impurities in Diltiazem Hydrochloride
Main Idea
Genotoxic impurities (GTIs), particularly N-nitroso compounds like N-nitroso desmethyl diltiazem (NNDD), pose a significant health risk due to their potential to cause mutations and cancer. Therefore, stringent monitoring and control of these impurities in pharmaceutical products like diltiazem hydrochloride are crucial for patient safety and regulatory compliance [1].

Explanation of Details

- Nature of Genotoxic Impurities (GTIs)

Read the responses and ask more follow-up questions.

High Quality

potential to cause mutations, carcinogenicity, or other genetic damage even at trace levels. Among these, N-nitroso compounds have garnered particular attention due to their established mutagenic risks. N-nitroso desmethyl diltiazem (NNDD), a derivative impurity of diltiazem hydrochloride, is classified as a nitrosamine drug substance-related impurity (NDSRI) which is a class of GTIs, and since, Diltiazem hydrochloride contains secondary amine functional groups, which can react with nitrosating agents to form nitrosamines (NAs). Specifically, the secondary amine group in diltiazem hydrochloride can undergo nitrosation to yield N-nitroso diltiazem, and it may undergo further degradation or transformation to yield NNDD (Figure 1), necessitating stringent monitoring during drug formulations. Diltiazem hydrochloride is widely used drug product for the treatment of hypertension [1,2], angina pectoris [3-5] and cardiac arrhythmia, cardiovascular conditions, as this drug primarily acts by blocking L-type calcium channels (calcium channel blocker(CCB)) [6-10] in cardiac and smoothens muscle cells by inhibiting calcium influx, it reduces myocardial contractility, decreases systemic vascular resistance and dilates coronary arteries, which results in reduction in blood pressure [11] due to vasodilation, decreased myocardial oxygen demand by reducing cardiac workload, prevention of coronary artery spasm, making it useful in the treatment of angina, thus diltiazem hydrochloride drug product to meet stringent regulatory limit to meet regulatory guidelines.

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Summarize the text
Genotoxic impurities (GTIs) pose a significant challenge in pharmaceutical development and manufacturing due to their potential to cause mutations, carcinogenicity, or other genetic damage even at trace levels. Among these...

Genotoxic Impurities in Diltiazem Hydrochloride

- Genotoxic impurities (GTIs) are a significant concern in pharmaceutical development because they can cause mutations, carcinogenicity, or other genetic damage, even at very low levels.
- N-nitroso compounds, a type of GTI, are particularly concerning due to their known mutagenic risks.

Read the responses and ask more follow-up questions.

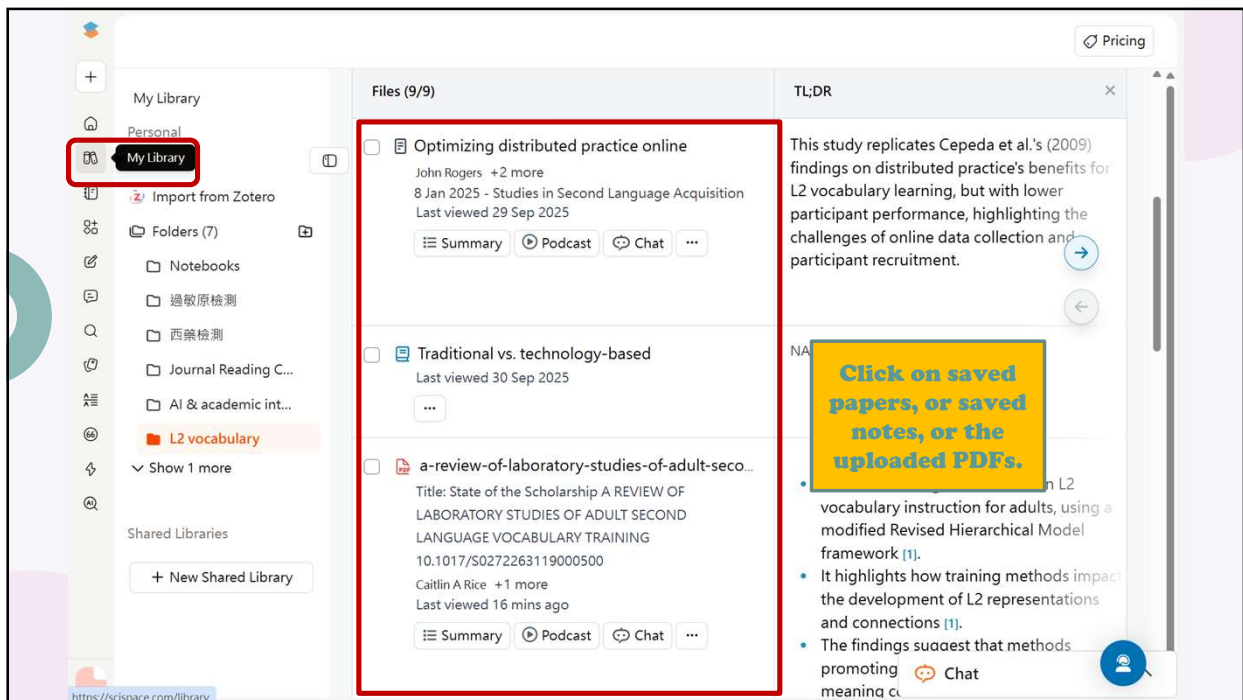
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The screenshot displays a digital reading application interface. On the left is a sidebar with various tool icons. The main area is split into two panes. The left pane shows a PDF document titled "Summary" with a search bar containing "Explain math & table" and a zoom level of "132%". A search menu is open over the text, with the option "Get Related papers" highlighted in a red box. A yellow callout box points to this option with the text "Select 'Get Related papers.'". The right pane is a chat window titled "Chat" showing a message from "Heuven, 1998; Jiang, 2000; Kroll & Stewart, 1994" and a list of three related papers. A yellow callout box at the bottom of the chat window says "Read the responses and ask more follow-up questions."

The slide features a light purple background with decorative elements like a star at the top and a yellow flower at the bottom right. The main title is "Hands-on Practice" in a large, bold, black font. Below the title is a light purple rectangular box containing the text "Explore a paper that interests you using the chat feature." To the right of this box is a dark blue square icon with a glowing magnifying glass and the word "EXPLORATION" written in a circular path around it.

The screenshot shows a document viewer on the left and a chat sidebar on the right. The document viewer has a menu with options like 'Explain text', 'Summarize', 'Get Related papers', 'Highlight', 'Save to "vocabulary learning"', and 'Select a notebook'. A red box highlights 'Select a notebook' and a yellow box says 'Save to a notebook.' The chat sidebar shows a 'Save to Notebook' button and a message about related papers.

The screenshot shows a 'Your library' interface. It features a search bar with a red box around it and a yellow box saying 'Ask questions regarding the files.' Below the search bar are filters for 'L2 vocabulary', 'Premium Quality', and 'en'. There are also options for 'Sort by different criteria' and 'Sort by: Newest First'. A table of files is shown with columns for 'Files (9/9)' and 'TL;DR'. A yellow box highlights the 'Sort by different criteria' button.



Hands-on Practice

Check your library to see the uploaded PDFs, saved papers, or saved notes. Ask questions or sort files.



Home > My Library > L2 vocabulary > a-review-of-laboratory-studies-of-adult-second-language-vocabulary-training.pdf Pricing

PDF file **Summary** **Podcast**

Search: Explain math & table 137%

Studies in Second Language Acquisition 42 (2020), 439-470
doi:10.1017/S0272263119000500

State of the Scholarship

A REVIEW OF LABORATORY STUDIES OF ADULT SECOND LANGUAGE VOCABULARY TRAINING

Caitlin A. Rice
University of Pittsburgh

Natasha Tokowicz
University of Pittsburgh

Abstract
This review examines and integrates studies of second language (L2) vocabulary instruction with adult learners in a laboratory setting, using a framework provided by a modified version of the Revised Hierarchical Model (Kroll & Stewart, 1994), the Revised Hierarchical Model-Repetition Elaboration Retrieval. By examining how various training methods promote or fail to promote the development of high-quality orthographic, phonological, and meaning representations, and strong connections between these representations, we reconceptualize the current body of knowledge, and highlight gaps in the existing literature. We review evidence that training methods that only promote L1 to L2 form connections (e.g., massed repetition) are generally ineffective, but can become highly effective when paired with methods that also strengthen L2 form-meaning connections (e.g., spaced repetition training with retrieval practice or semantic elaboration requiring user-generated responses). We discuss the implications of

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The Dual Aims of the Review on Adult L2 Vocabulary Learning
This excerpt introduces the two primary objectives of the review paper: first, to systematically organize and integrate the extensive research on adult second language (L2) vocabulary learning, and second ...Read more

1 Source

19 11月 2025

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Ask any question...

High Quality

Home > My Library > L2 vocabulary > a-review-of-laboratory-studies-of-adult-second-language-vocabulary-training.pdf Pricing

PDF file **Summary** **Read the Summary.** **Podcast**

Search: Explain math & table 137%

State of the Scholarship: A Review of Laboratory Studies of Adult Second Language Vocabulary Training
This review paper delves into studies focusing on adult second language (L2) vocabulary training within laboratory settings. It employs a modified version of the Revised Hierarchical Model, specifically the Revised Hierarchical Model-Repetition Elaboration Retrieval, to assess how different training methods impact the development of orthographic, phonological, and meaning representations, as well as the connections between them. The paper underscores the inefficacy of methods solely emphasizing L1 to L2 form connections, such as massed repetition, compared to approaches integrating L2 form-meaning connections, like spaced repetition training with retrieval practice. By reconceptualizing existing knowledge and pinpointing gaps in the literature, this review offers valuable insights for researchers and educators seeking to enhance L2 vocabulary learning outcomes.

FORM AND MEANING REPRESENTATIONS
Low-quality representations occur when there are incomplete connections between form and meaning in second language (L2) vocabulary learning. For instance:

- Incomplete phonological or orthographic form learning leads to low-quality representations.
- Incorrect pronunciation or spelling contributes to partially learned forms.
- Partial connections between forms and meanings result in

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research has examined adult L2 vocabulary learning, but few reviews have organized the knowledge that has accumulated over the past few decades (but see Bjork & Kroll, 2015; de C...Read more

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The Dual Aims of the Review on Adult L2 Vocabulary Learning
This excerpt introduces the two primary objectives of the review paper: first, to systematically organize and integrate the extensive research on adult second language (L2) vocabulary learning, and second ...Read more

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19 11月 2025

Generate summary of this paper, Result... +13 more

Ask any question...

High Quality

The screenshot shows a digital library interface. At the top, the breadcrumb trail reads: Home > My Library > L2 vocabulary > a-review-of-laboratory-studies-of-adult-second-language-vocabulary-training.pdf. A red box highlights a podcast player window titled "a-review-of-laboratory-studies-of-adult-second-languag...". The player shows a progress bar from 0:06 to 4:52, with a play button on the left and "Feedback" and "Download" options on the right. Below the player, a yellow callout box says "Listen to the podcast." The main document area displays the title "State of the Scholarship" and the subtitle "A REVIEW OF LABORATORY STUDIES OF ADULT SECOND LANGUAGE VOCABULARY TRAINING". The authors listed are Caitlin A. Rice and Natasha Tokowicz, both from the University of Pittsburgh. An abstract is visible at the bottom of the page. On the right side, there are interactive features: a "Generate summary of this paper, Result..." button with "+13 more" options, and a "High Quality" toggle switch.

The slide is titled "Hands-on Practice" in a large, bold, black font. Below the title, a light purple rectangular box contains the text "Try out the summary and podcast features." To the right of the text box is a photograph of a small, white, humanoid robot with glowing blue eyes and chest, standing in a library aisle with bookshelves. The slide is decorated with purple and yellow geometric shapes and starburst icons.

Explain math & table

1 / 16
Σ Explain math & table
112%
Chat

Article

Larger and more instructable language models become less reliable

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 Accepted: 6 August 2024
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 Open access
 Check for updates

Lexin Zhou^{1,2}, Wout Schellaert^{1,2}, Fernando Martínez-Plumed¹, Yael Moros-Davai¹, César Ferr¹ & José Hernández-Orallo^{1,2,4,5}

The prevailing methods to make large language models more powerful and amenable have been based on continuous scaling up (that is, increasing their size, data volume and computational resources) and bespoke shaping up (including post-filtering^{1,2}, fine tuning or use of human feedback^{3,4}). However, larger and more instructable large language models may have become less reliable. By studying the relationship between difficulty concordance, task avoidance and prompting stability of several language model families, here we show that easy instances for human participants are also easy for the models, but scaled-up, shaped-up models do not secure areas of low difficulty in which either the model does not err or human supervision can spot the errors. We also find that early models often avoid user questions but scaled-up, shaped-up models tend to give an apparently sensible yet wrong answer much more often, including errors on difficult questions that human supervisors frequently overlook. Moreover, we observe that stability to different natural phrasings of the same question is improved by scaling-up and shaping-up interventions, but pockets of variability persist across difficulty levels. These findings highlight the need for a fundamental shift in the design and development of general purpose artificial intelligence, particularly in high-stakes areas for which a predictable distribution of errors is paramount.

Millions of people are using general-purpose artificial intelligence (AI) simple prompt such as 'Add 3913 and 92'. The user-driven reliability is...

- **BLOOM Family (Right Chart):** Follows the same pattern, where 'BLOOMz' (shaped-up) models generally outperform raw 'BLOOM' models in correctness and stability but show less prudence and difficulty concordance [3].

In summary, while scaling and shaping interventions have made LLMs more capable and instructable, they have also introduced complexities in their reliability. The shift from avoidant to incorrect responses, coupled with a lack of consistent difficulty concordance, suggests that current LLMs may not always be reliable in a human-centric way, especially in high-stakes applications where predictable error distributions are crucial [1].

Key Terms Glossary

- **Correctness:** The proportion of responses from a language model that are factually accurate and directly answer the given prompt.
- **Prudence:** The proportion of responses that are either correct or avoidant, indicating the model's cautiousness in not providing potentially incorrect

2 / 16
Σ Explain math & table
112%
Chat

Table 1 | Ten GPT, ten LLaMA and twelve BLOOM models

Model	Release year	Scaling Size (no. of parameters)	Data (no. of tokens)	Compute (no. of FLOPs)	Shaping Instruction	Alignment
GPT-3 ada	2020	350M	300B	6.41 × 10 ²⁰	None	None
GPT-3 babbage	2020	1.3B	300B	2.38 × 10 ²¹	None	None
GPT-3 curie	2020	6.7B	300B	1.20 × 10 ²²	None	None
GPT-3 davinci	2020	175B	300B	1.34 × 10 ²³	None	None
text-davinci-001	2021	175B	—	—	FeedME	None
text-davinci-002	2022	175B	—	—	FeedME	None
text-davinci-003	2022	175B	—	—	RLHF (PPG)	None
GPT-3.5-turbo	2022	175B*	—	—	RLHF*	S-FT and moderation
GPT-4 v1	2023	—	—	—	RLHF*	S-RLHF, RRBMs and moderation
GPT-4 v2	2023	—	—	—	RLHF*	S-RLHF, RRBMs and moderation
LLaMA-7b	2023	6.7B	1.0T	4.02 × 10 ²⁰	None	None
LLaMA-13b	2023	13B	1.0T	4.55 × 10 ²⁰	None	None
LLaMA-33b	2023	32.5B	1.4T	2.73 × 10 ²¹	None	None
LLaMA-65b	2023	65.2B	1.4T	5.50 × 10 ²¹	None	None
LLaMA-2-7b	2023	7B	2.0T	8.40 × 10 ²¹	None	None
LLaMA-2-13b	2023	13B	2.0T	1.60 × 10 ²²	None	None
LLaMA-2-70b	2023	70B	2.0T	8.10 × 10 ²²	None	None
LLaMA-2-7b-chat	2023	7B	2.0T	8.40 × 10 ²¹	RLHF (PPG and RS FT)	Supervised S-FT, S-RLHF and S-CD
LLaMA-2-13b-chat	2023	13B	2.0T	1.60 × 10 ²²	RLHF (PPG and RS FT)	Supervised S-FT, S-RLHF and S-CD
LLaMA-2-70b-chat	2023	70B	2.0T	8.10 × 10 ²²	RLHF (PPG and RS FT)	Supervised S-FT, S-RLHF and S-CD
BLOOM-560m	2022	559M	350B	1.83 × 10 ²¹	None	None
BLOOM-1b1	2022	1.07B	350B	3.60 × 10 ²¹	None	None
BLOOM-1b7	2022	1.72B	350B	5.57 × 10 ²¹	None	None
BLOOM-3b	2022	3.00B	350B	8.83 × 10 ²¹	None	None
BLOOM-7b	2022	7.07B	350B	2.32 × 10 ²²	None	None
BLOOM-175b	2022	176.25B	366B	5.77 × 10 ²³	None	None
BLOOMz-560m	2022	559M	353.67B	1.87 × 10 ²¹	Multitask FT	None
BLOOMz-1b1	2022	1.07B	350.5B	3.69 × 10 ²¹	Multitask FT	None
BLOOMz-1b7	2022	1.72B	358.4B	5.70 × 10 ²¹	Multitask FT	None
BLOOMz-3b	2022	3.00B	354.4B	1.00 × 10 ²²	Multitask FT	None
BLOOMz-7b	2022	7.07B	364.2B	2.38 × 10 ²²	Multitask FT	None
BLOOMz-175b	2022	176.25B	368B	5.91 × 10 ²³	Multitask FT	None

Key abbreviations include the following: FeedME, a supervised fine-tuning method using human-written demonstrations and top-quality model samples; PPO, a reinforcement learning approach with reward models trained through human comparisons; RRBMs, rule-based reward models that enhance a GPT-4 policy model by promoting safe content generation and discouraging harmful content during RLHF fine-tuning; FT, fine-tuning; CD, content distillation; and RS, reaction sampling. * indicates the method incorporates safety alignment. The sources of the specifications in the table are available in Supplementary Note 1.

*It is understood that GPT-3.5-turbo is an improvement on text-davinci-003 as described in ref. 44 and thus should have 175B parameters, but this information is not explicitly declared by OpenAI in any official sources.

*Specific method is unknown.

the same time. Table 1 summarizes the details of models in these three families. Scaling (increasing the number of parameters, data size and compute) has been identified as a key predictor for overall performance⁵, and shaping (modifying the trained systems) has improved correctness, at the cost of being less concordant with human difficulty, and having more overall failures (less prudent). The indicators summarize the behaviour of five carefully selected benchmarks in the domains of simple numeracy (‘addition’), vocabulary reshuffle (‘anagram’)

Drag the cursor over an area containing a table or a diagram.

Generating response in 27 seconds

Generate summary of this paper; Result... +13 more

Ask any question...

High Quality

23

2 / 16
Search Explain math & table
112%
Chat

Article

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BLOOM-176b	2022	176.25B	368B	5.91×10^{22}	Multitask FT	None

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Overview of Large Language Model Families and Their Characteristics

This table provides a comprehensive overview of various large language models (LLMs) from the GPT, LLaMA, and BLOOM families, highlighting their scaling parameters and shaping techniques. The authors use this c...Read more

2 Sources

- Table 1 | Ten GPT, ten LLaMA and twelve BLOOM models Model Release year Scaling Shaping Size (no. of p...read more from this PDF [Locate in PDF](#)
- the same time. Table 1 summarizes the details of models in these three families. Scaling (increasing the number of...


Read the explanations and locate the details in PDF.

Ask any question...

High Quality

Hands-on Practice

Use the Explain math & table feature.



24

AI agent

Solutions Pricing 1052 Credits

How can I help with your research?

Connect apps and import data for your research

Give me any task to work on...

Select a model you prefer to use.

- Auto (highlighted)
- Deep Review
- Biomedical

Use ready-made prompts to build multiple tasks.

I WANT TO **and/or** USE **and/or** MAKE A

- Review Literature
- Deep Review
- Word document

Scientific Review Crustacean Allergen

Pricing ...

Perform a scientific literature review on crustacean allergen detection using PubMed. Include papers that are published between 2023-2025. Create a Word document summarizing the findings. **and + and + and**

I'll help you conduct a scientific literature review on crustacean allergen detection using PubMed, focusing on papers from 2023-2025, and create a Word document with the findings.

Starting comprehensive literature search on crustacean allergen detection

Let me search PubMed for relevant papers published between 2023-2025 on this topic.

Completed Literature Search

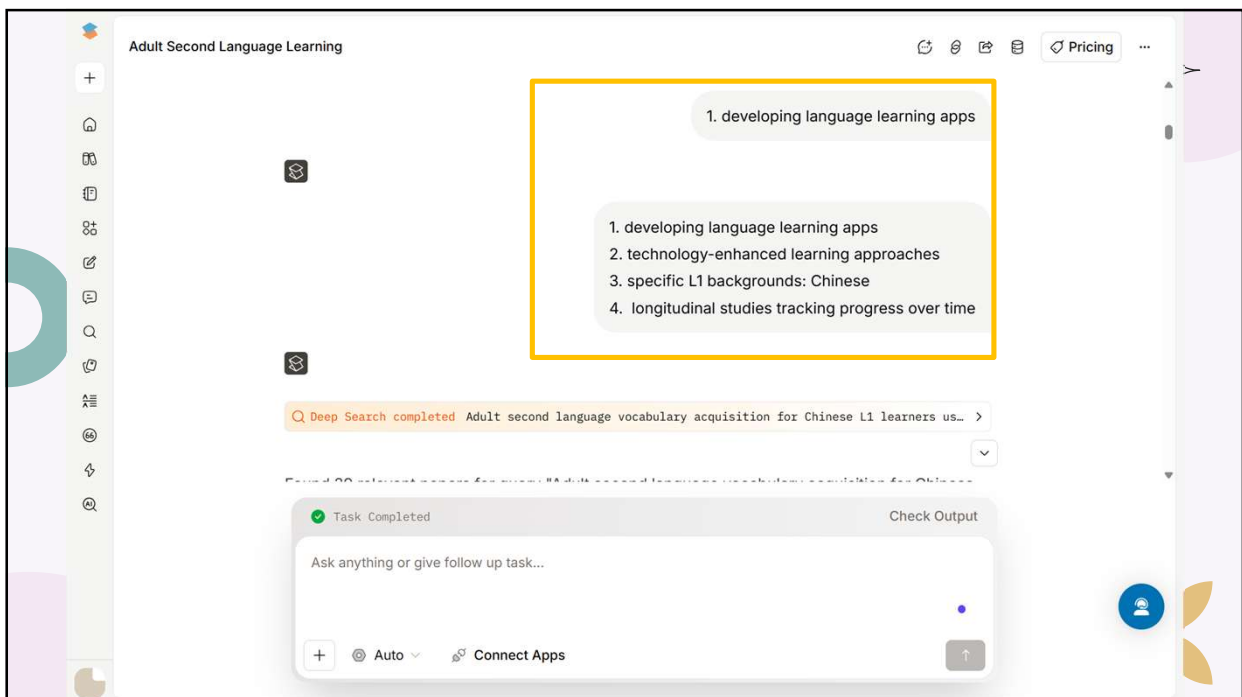
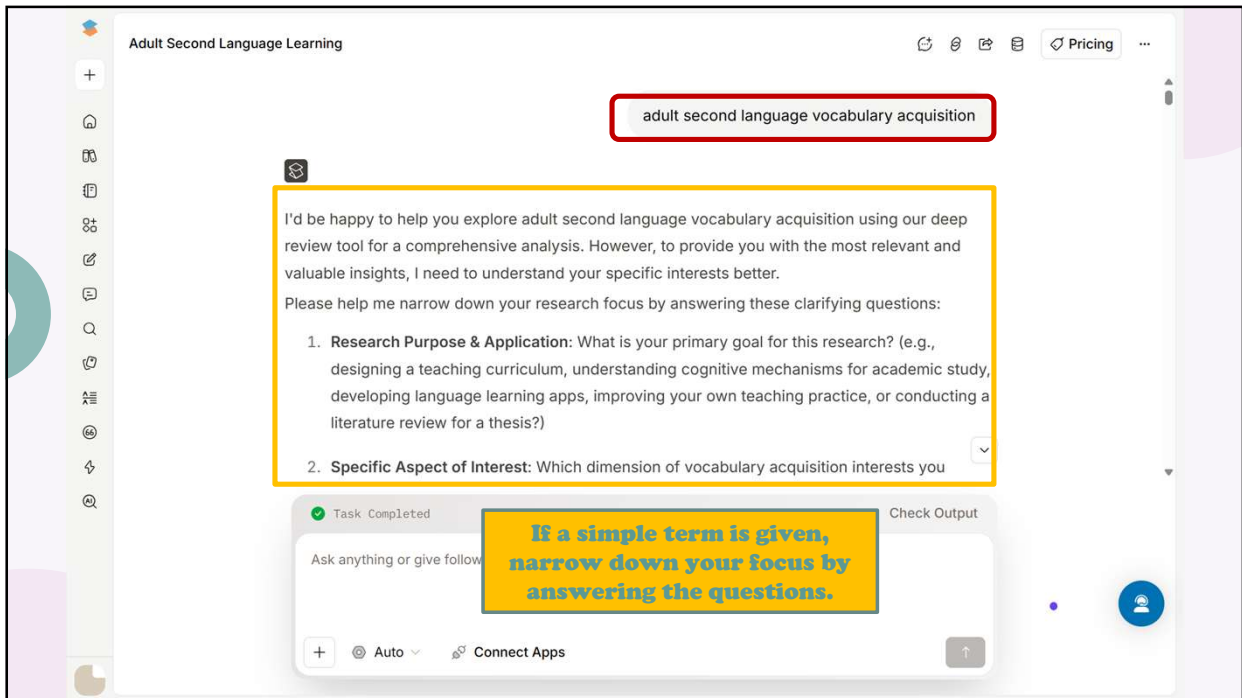
I'll search PubMed for papers on crustacean allergen detection published between 2023-2025.

Searched PubMed Advanced (crustacean allergen detection OR seafood allergen testing OR shellf...

Task Completed Check Output

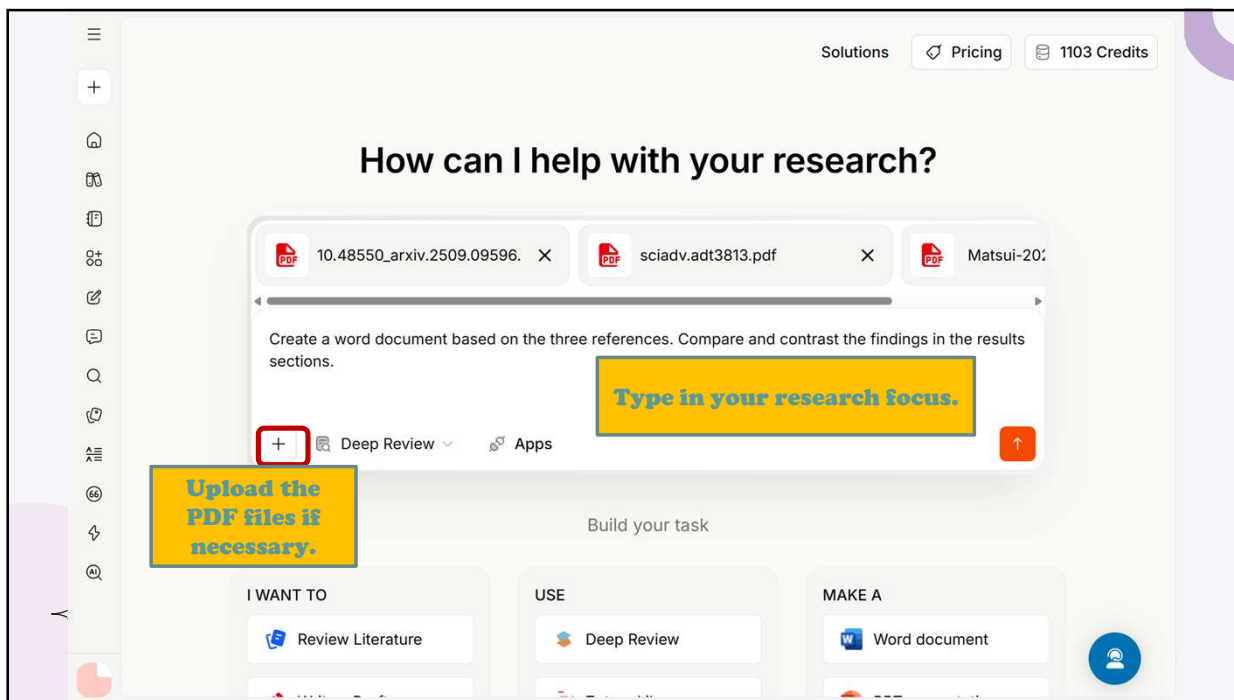
Ask anything or give follow up task...

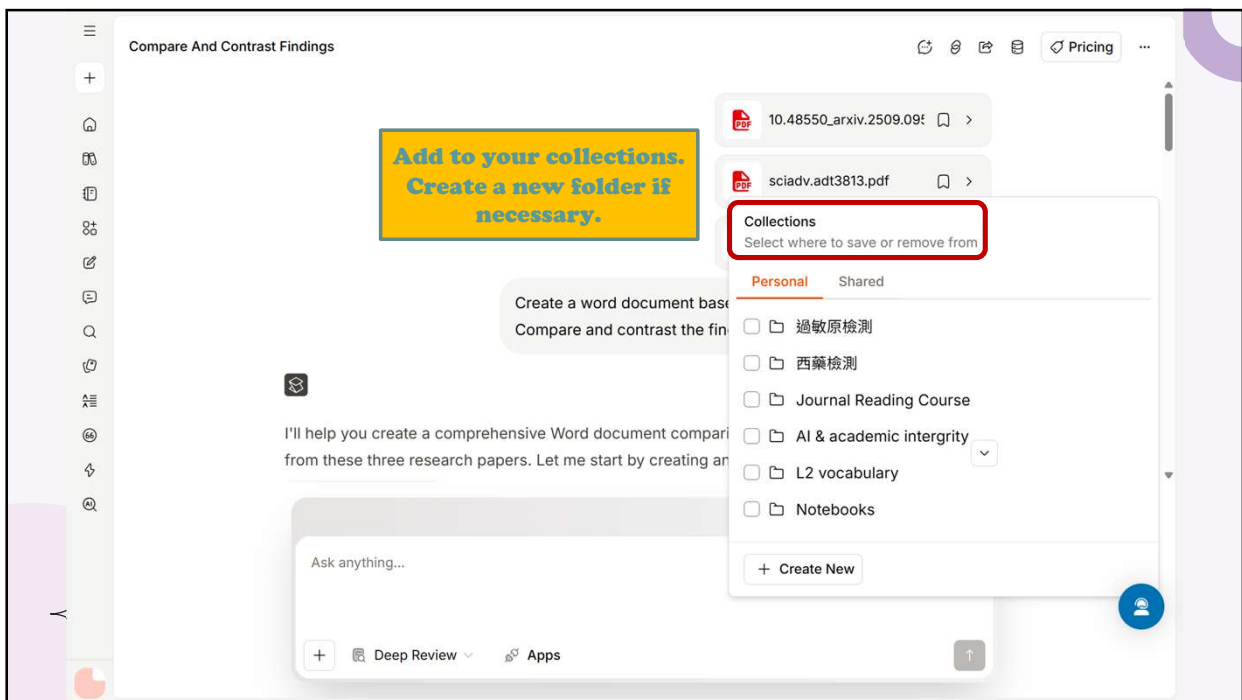
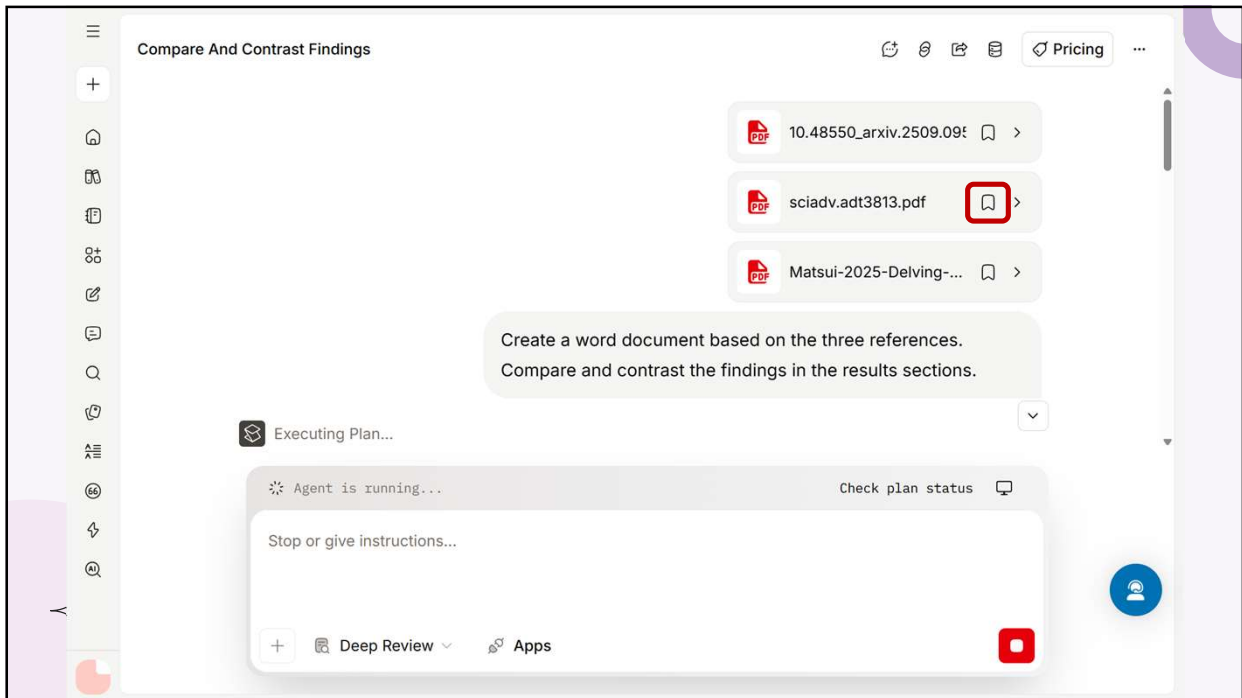
Deep Review Connect Apps

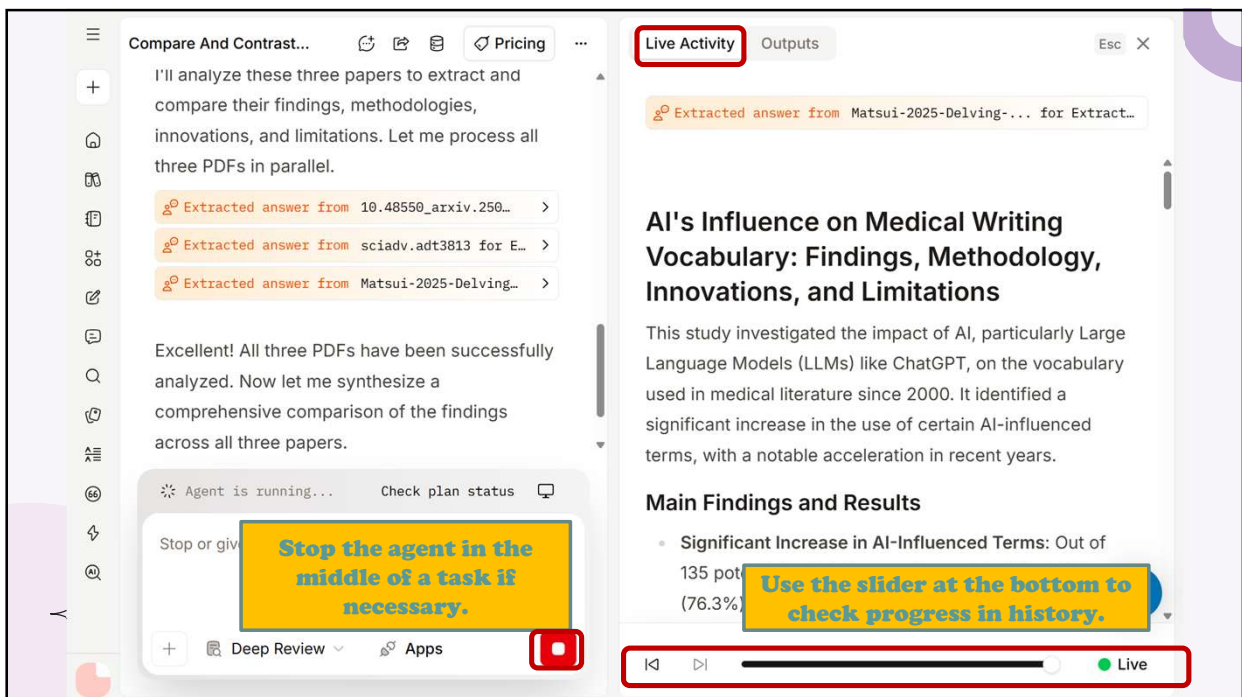
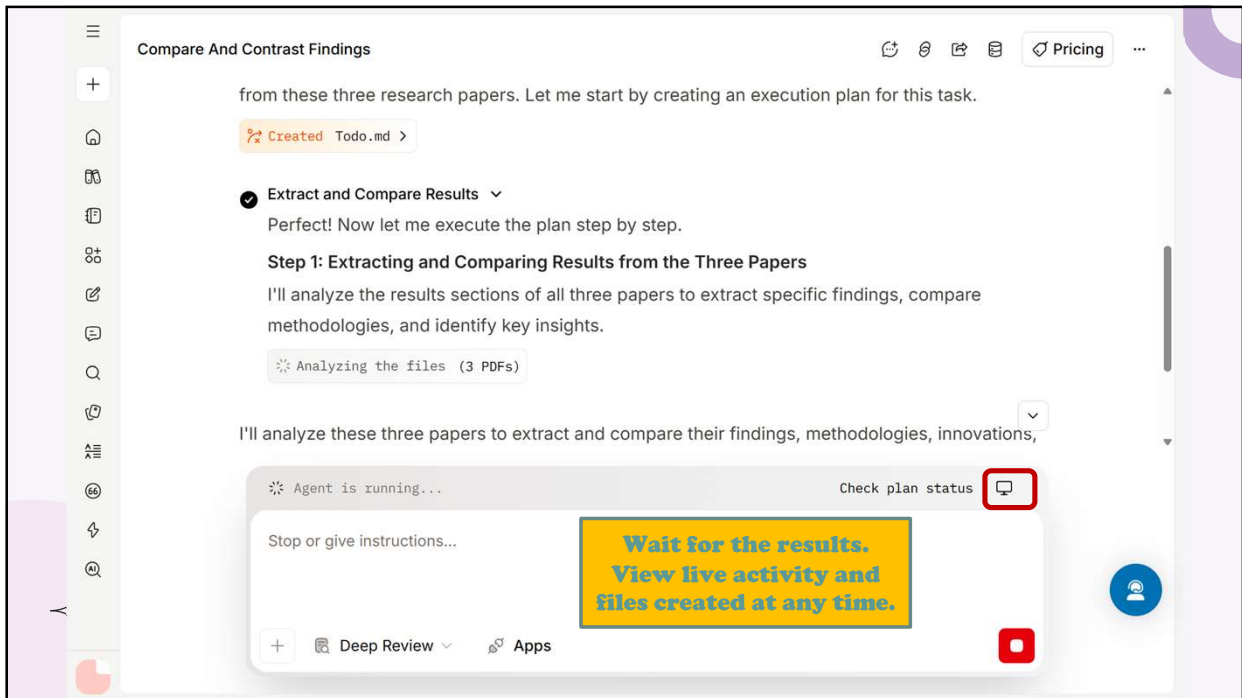


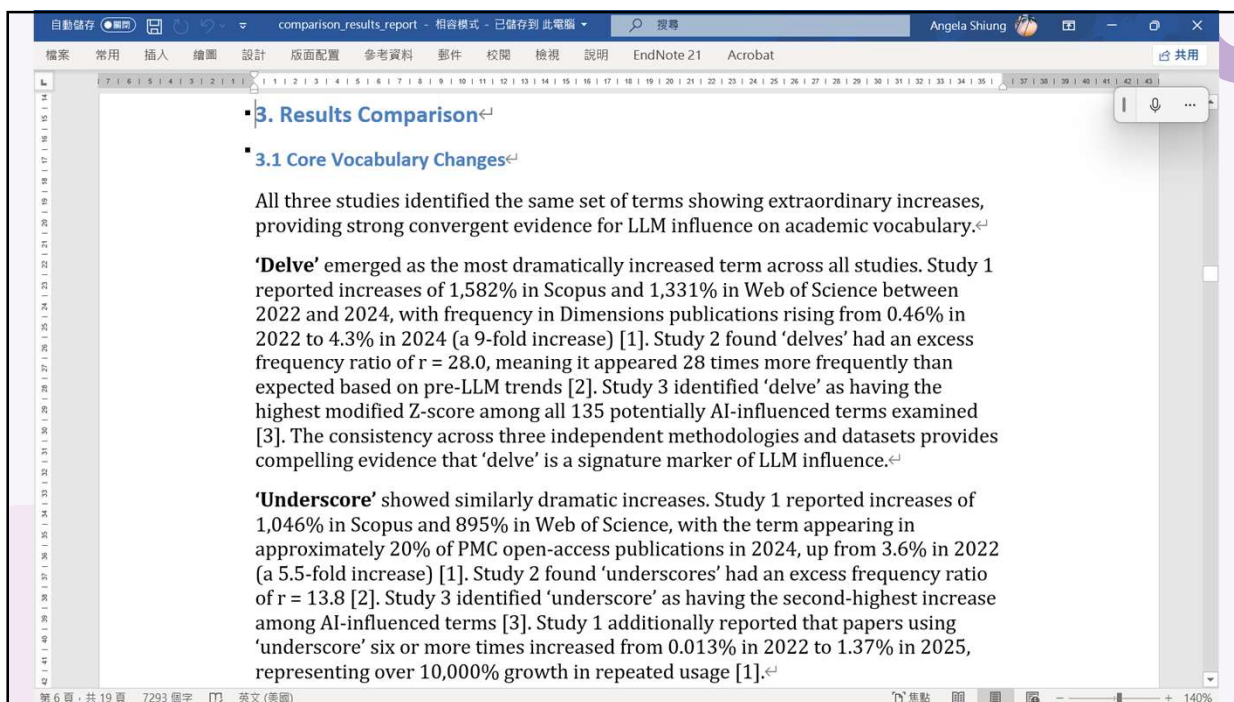
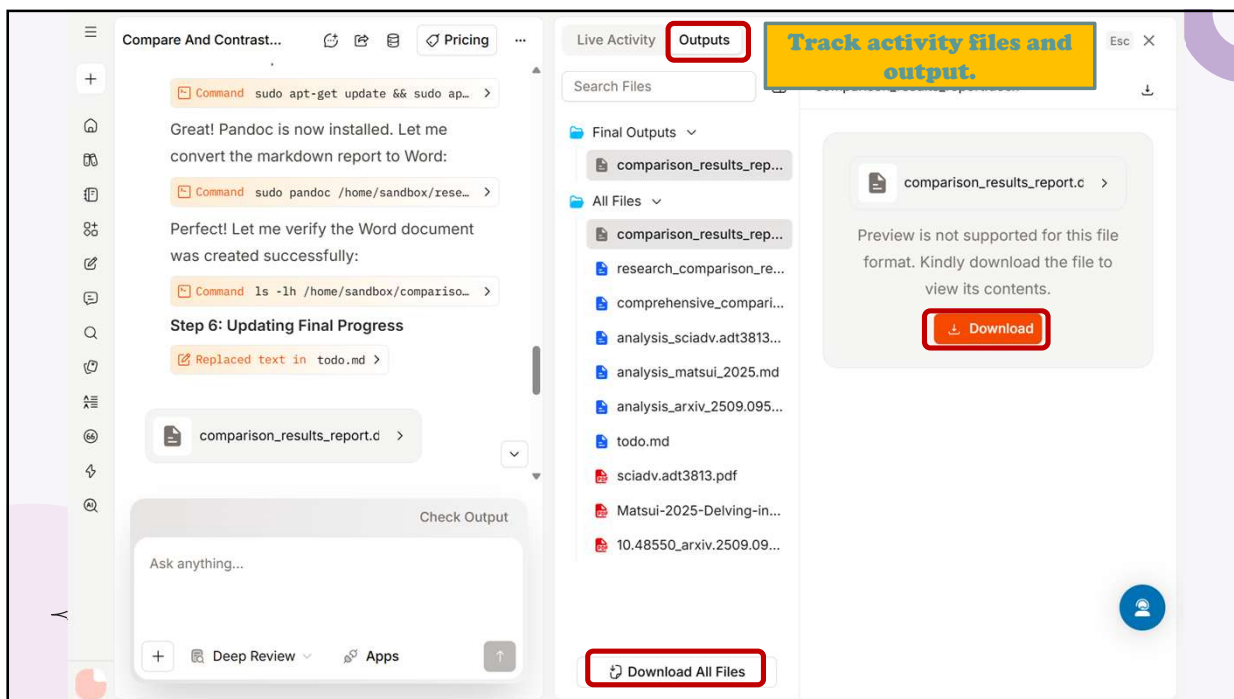
AI 文章特性

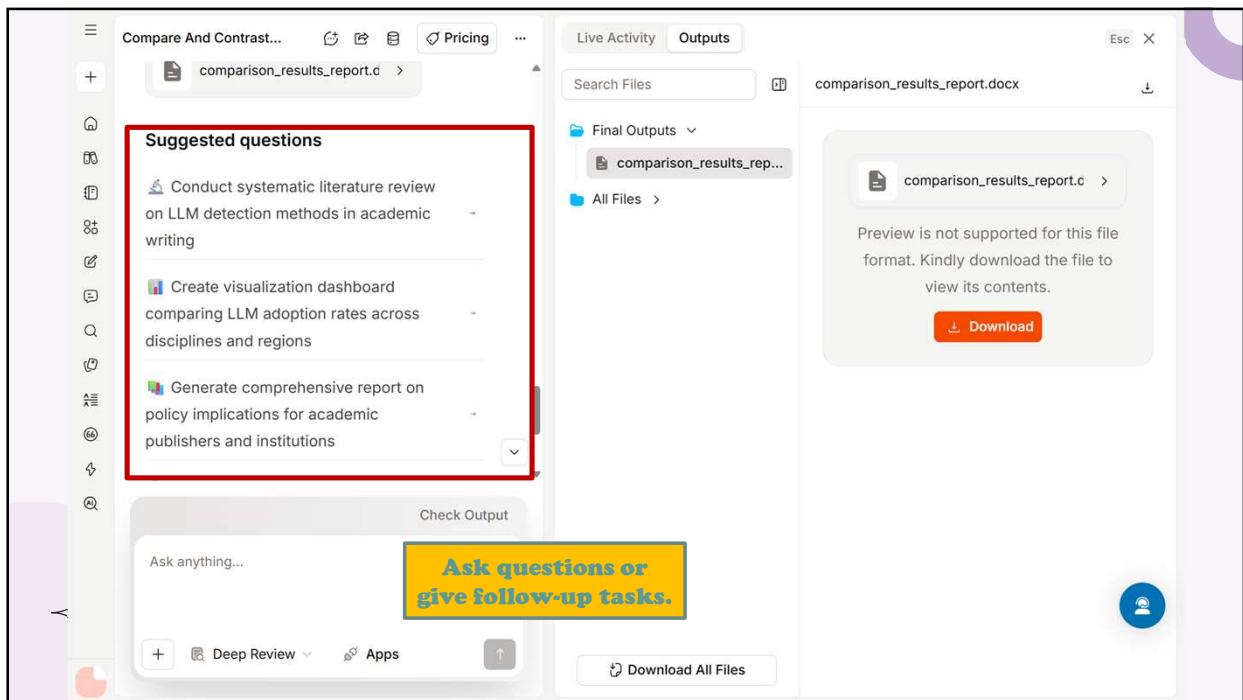
查找範例





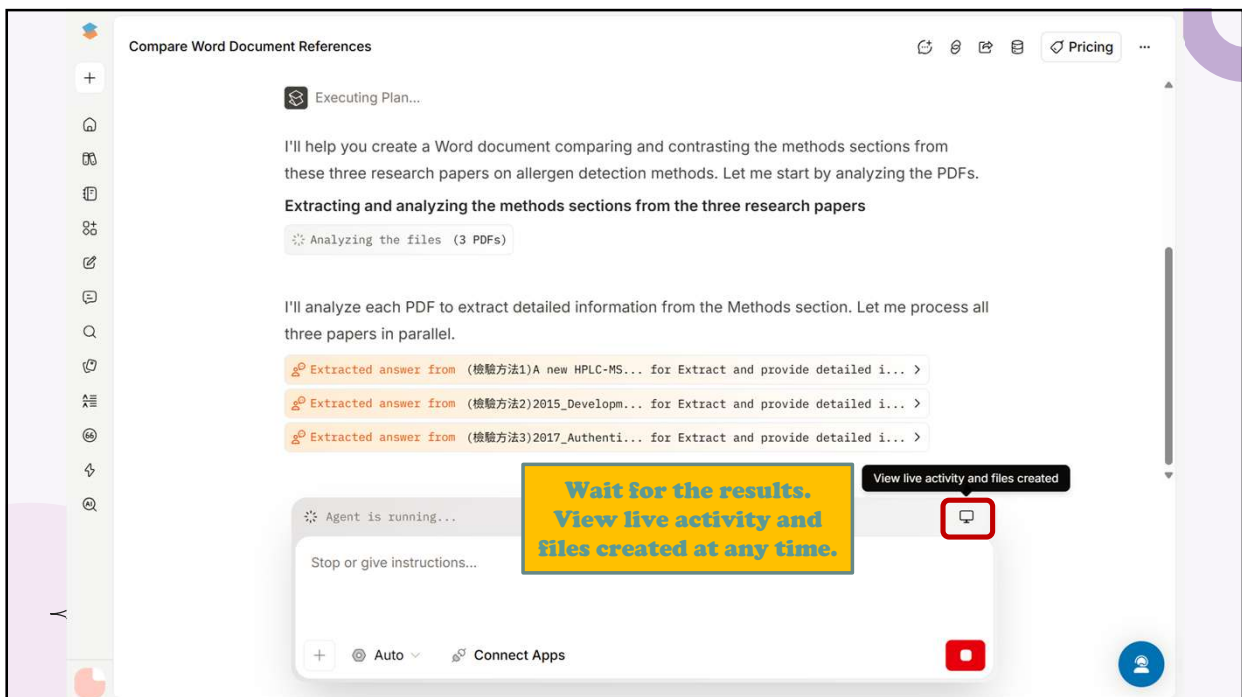
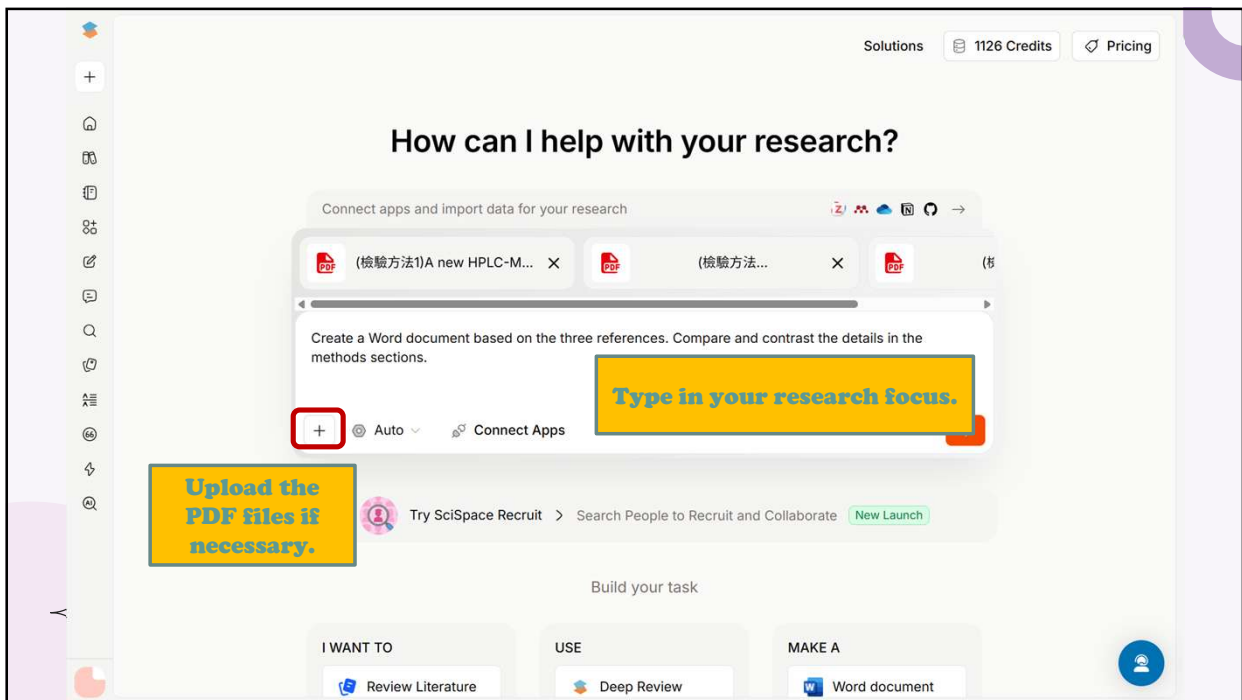


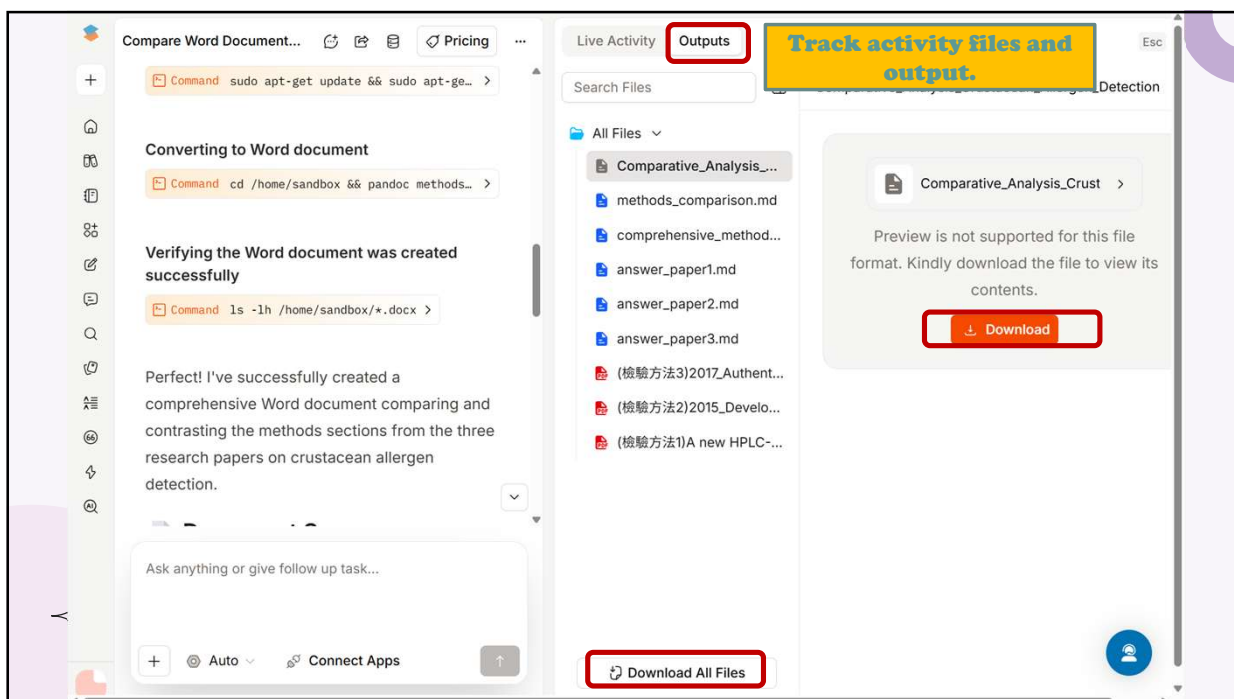
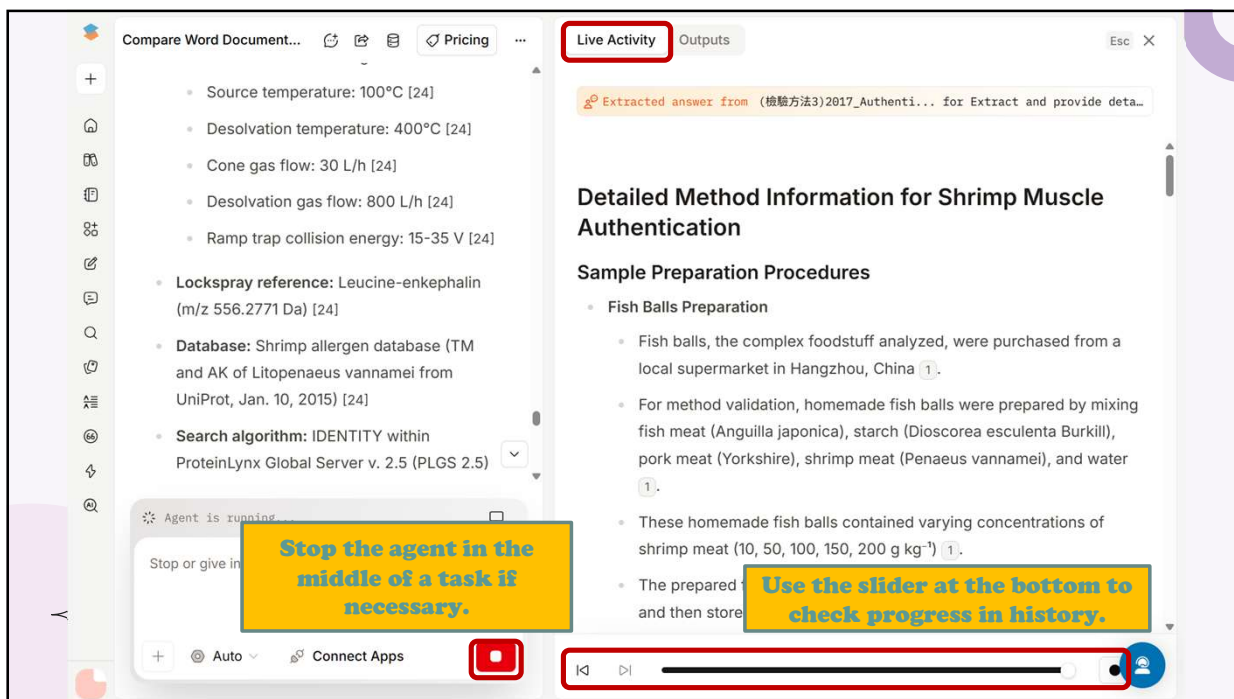




過敏原檢測

查找範例

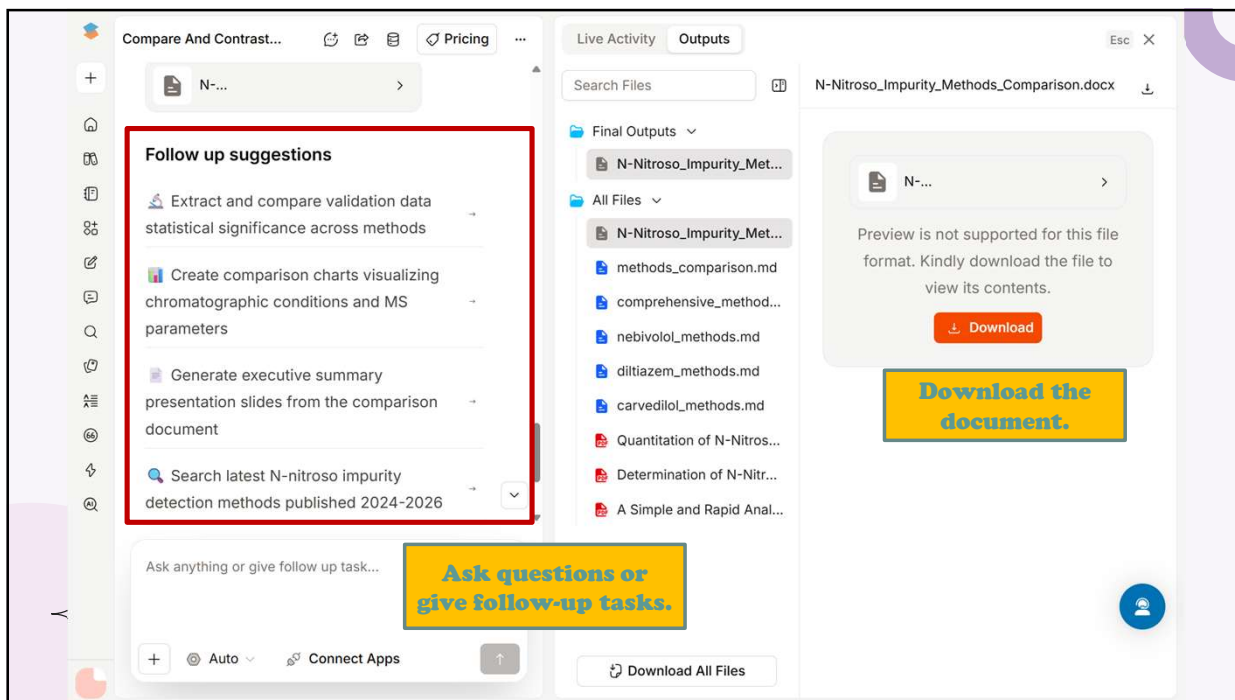
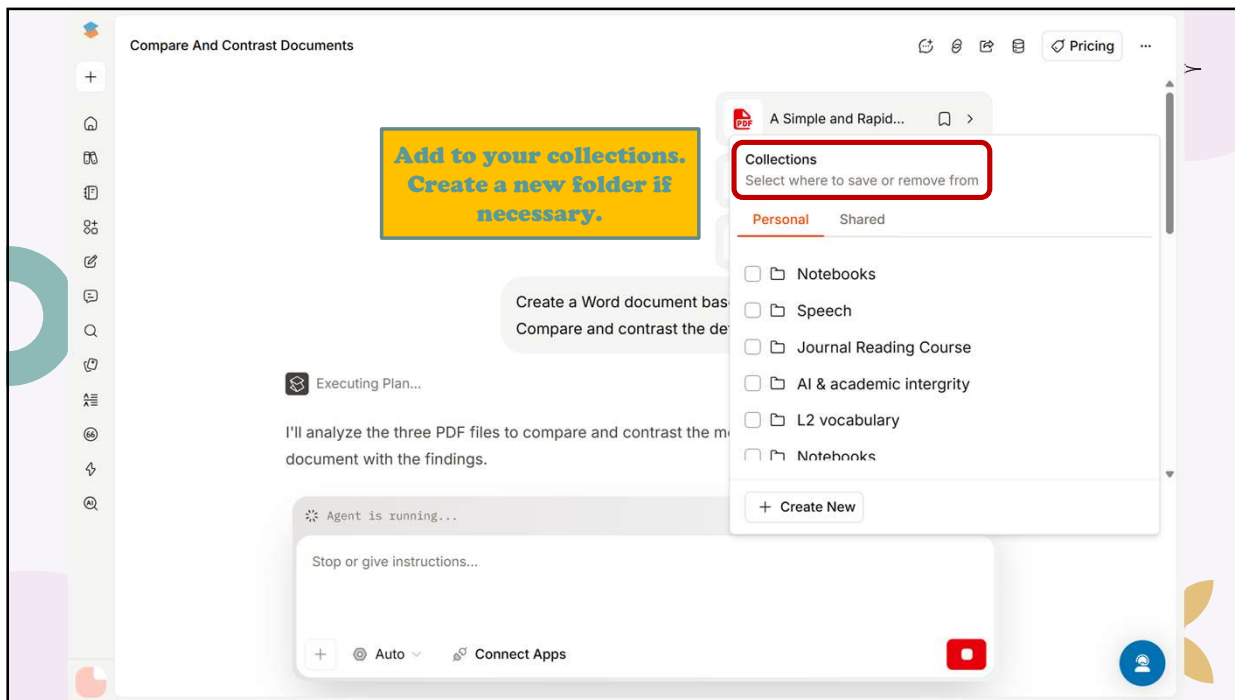




西藥檢測

查找範例

The screenshot shows a software interface titled "Compare And Contrast Documents". At the top right, there are icons for share, print, and a "Pricing" button. Below the title, three PDF documents are listed: "A Simple and Rapid...", "Determination of N-...", and "Quantitation of N-...". The third document has a red square highlighting its bookmark icon. A central instruction box says: "Create a Word document based on the three references. Compare and contrast the details in the methods sections." Below this, a status bar indicates "Executing Plan...". A text box contains the instruction: "I'll analyze the three PDF files to compare and contrast the methods sections, then create a Word document with the findings." At the bottom, there is a chat window titled "Agent is running..." with a text input field containing "Stop or give instructions...". The interface also features a left sidebar with various tool icons and a bottom navigation bar with "Auto" and "Connect Apps" options.



自動儲存 ● 關閉 N-Nitroso_Impurity_Methods_Comparison - 相容模式 - Word 搜尋 Angela Shuang

檔案 常用 插入 繪圖 設計 版面配置 參考資料 郵件 校閱 檢視 說明 EndNote 21 Acrobat

Calibri (標題) 16 A⁺ A⁻ Aa 中 A

貼上 剪貼簿 字型 段落 樣式 編輯 Adobe Acrobat

1. SAMPLE PREPARATION PROCEDURES

1.1 Similarities

All three methods employed: - **Volumetric dilution techniques** using organic solvents - **Filtration steps** (0.22 µm nylon filters) to ensure particulate-free samples - **Centrifugation** to separate matrix components - **Serial dilution strategies** to prepare calibration standards



1.2 Differences

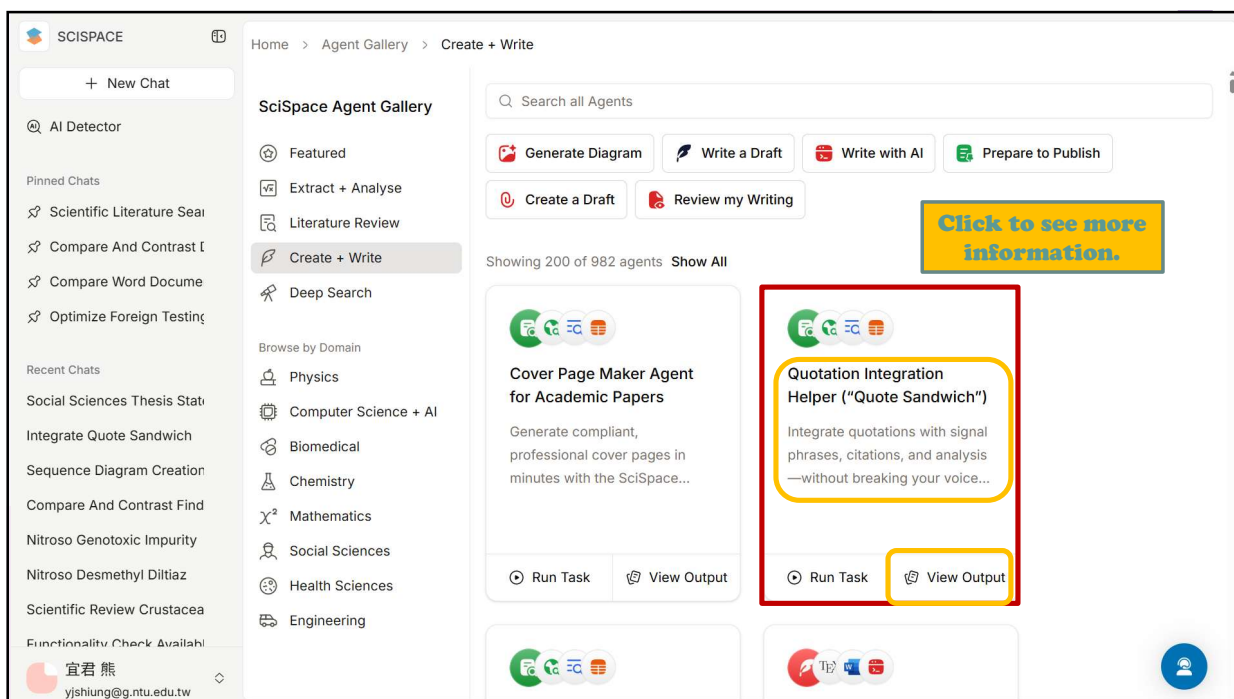
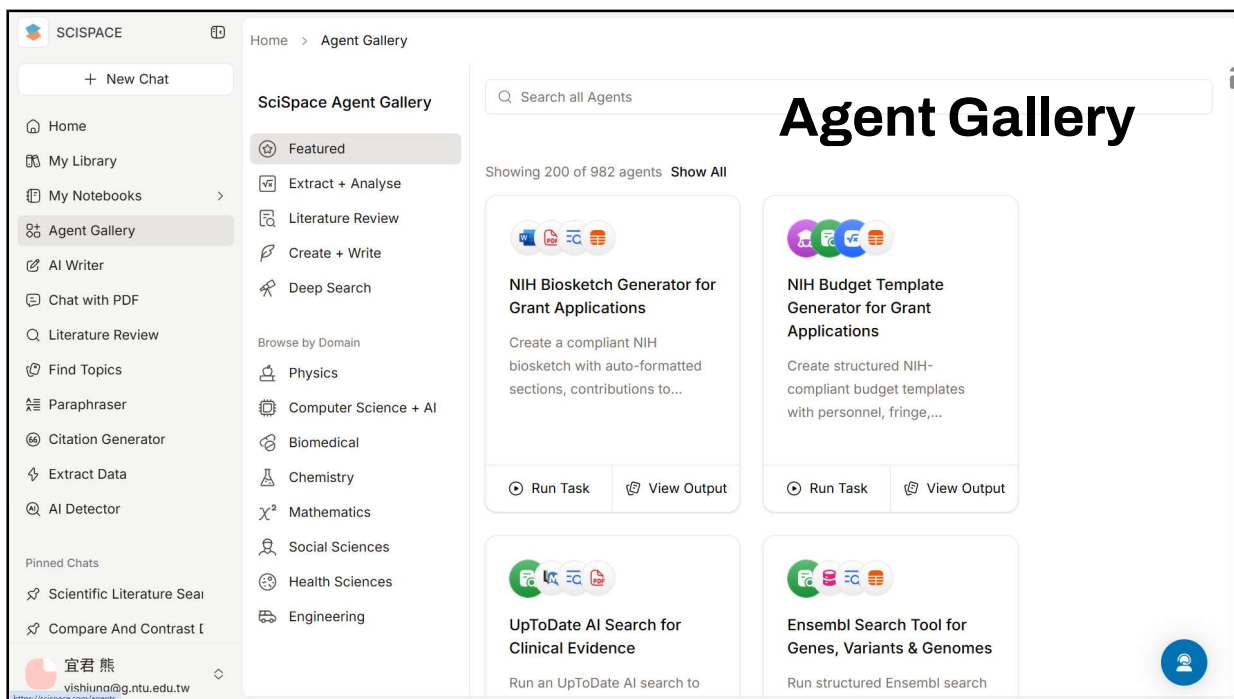
Aspect	Diltiazem Method	Nebivolol Method	Carvedilol Method
Sample Matrix	Capsule formulation (crushed powder)	Pure drug substance	Pure drug substance
Initial Sample Weight	500 mg API equivalent	0.5 mg nebivolol	5.0 mg carvedilol
Primary Solvent	Isopropyl alcohol/methanol	50% methanol-water	Methanol + 5% acetic acid

第 1 頁, 共 11 頁 2710 個字 英文(美國) 150%

Hands-on Practice

Explore the deep review feature.



SCISPSPACE Home > Agent Gallery > Quotation Integration Helper ("Quote Sandwich")

+ New Chat

- Home
- My Library
- My Notebooks
- Agent Gallery
- AI Writer
- Chat with PDF
- Literature Review
- Find Topics
- Paraphraser
- Citation Generator
- Extract Data
- AI Detector

Pinned Chats

- Scientific Literature Search
- Compare And Contrast

宜君熊
yjshiang@g.ntu.edu.tw

Quotation Integration Helper ("Quote Sandwich")

Integrate quotations with signal phrases, citations, and analysis—without breaking your voice or style.

01 RUN THIS

Integrate this quotation smoothly ("quote sandwich"): lead-in, quote, and analysis. Return the integrated paragraph.

Run Task

02 AGENT WORKS FOR YOU

Add quote Lead-in Analysis Export para

SCISPSPACE Enterprise Pricing 1200 Credits

+ New Chat

- Home
- My Library
- My Notebooks
- Agent Gallery
- AI Writer
- Chat with PDF
- Literature Review
- Find Topics
- Paraphraser
- Citation Generator
- Extract Data
- AI Detector

Pinned Chats

- Scientific Literature Search
- Compare And Contrast

宜君熊
yjshiang@g.ntu.edu.tw

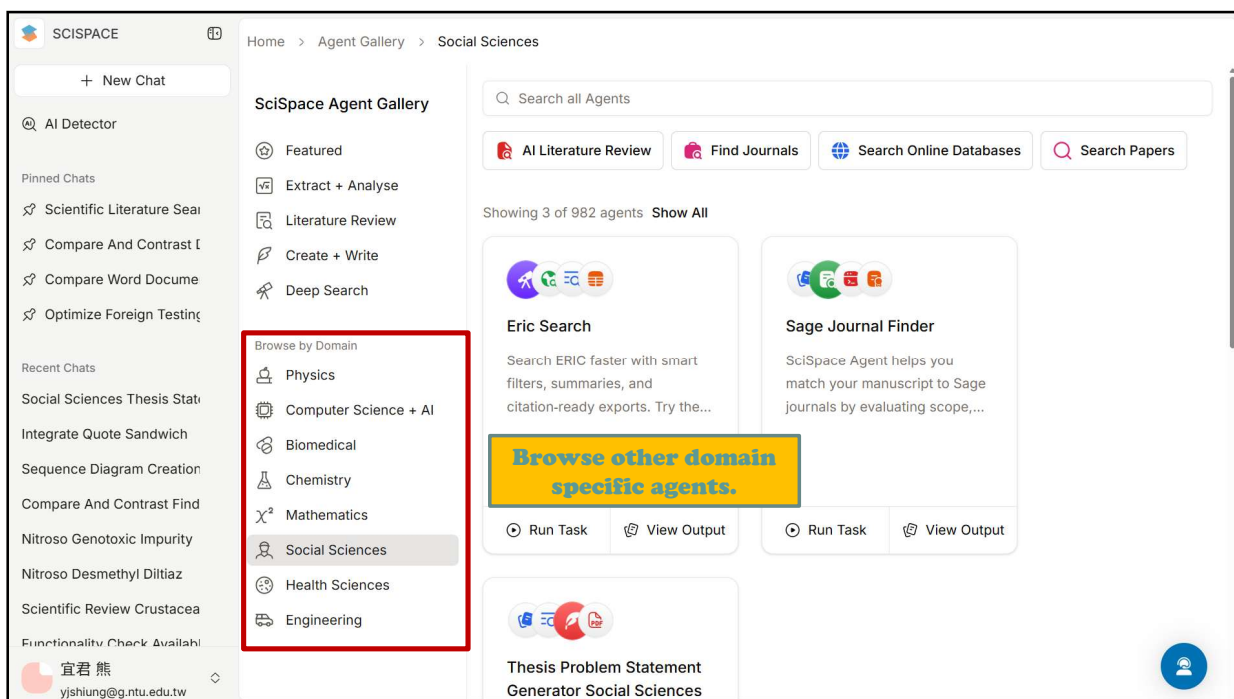
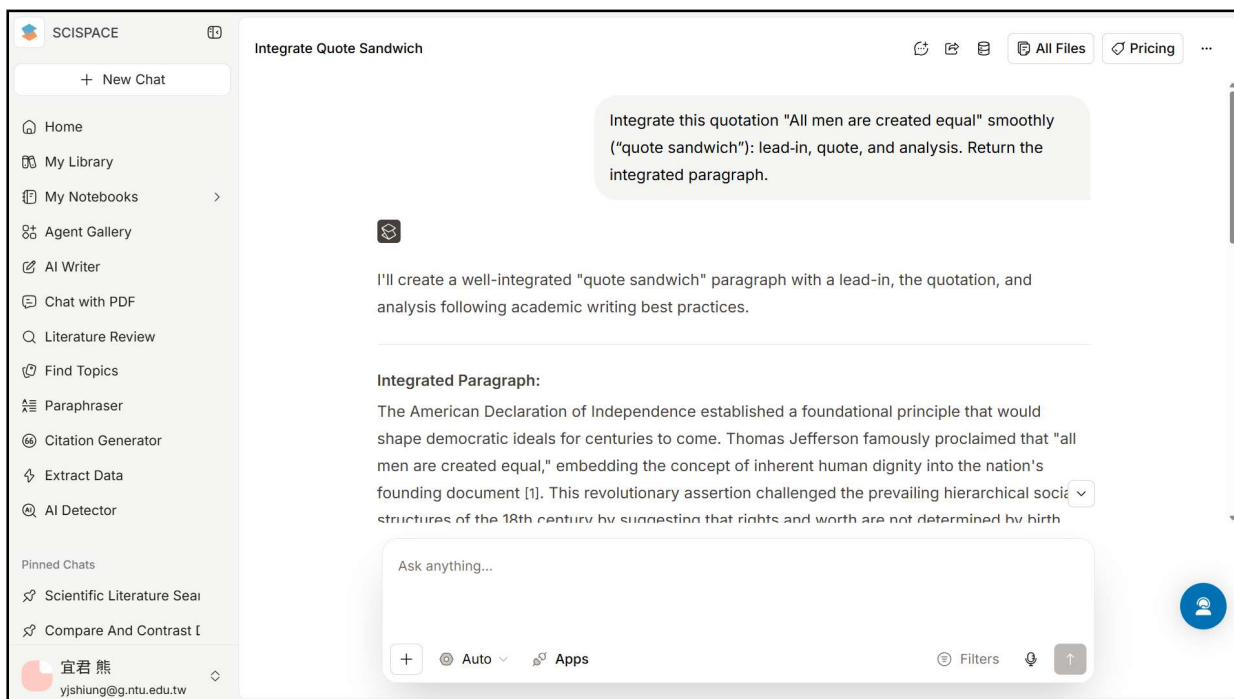
How can I help with your research?

Integrate this quotation smoothly ("quote sandwich"): lead-in, quote, and analysis. Return the integrated paragraph.

Modify the prompt as needed.

Build your task

I WANT TO	USE	MAKE A
Review Literature	Deep Review	Word document
Write a Draft	Zotero Library	PPT presentation
Generate Diagram	Mendeley Library	LaTeX Manuscript
Systematic Review	Pubmed	LaTeX Poster



Final Notes

“The AI tools should help you to think and write, not think or write for you.”

- **Use your judgment.**
 - Do not mindlessly accept the information AI provides. AI Tools may provide inaccurate or biased information.
- **Maintain Academic Integrity.**
 - Do not copy and paste a text generated entirely from AI into your own paper and treat it as your own writing.
- **Safeguard your personal information**
 - Do not input any private personal information. This includes identifying information related to your participants in a research study.

[https://researchguides.library.wisc.edu/c.php?g=1334141&p=9825297;](https://researchguides.library.wisc.edu/c.php?g=1334141&p=9825297)
<https://writingcenter.unc.edu/tips-and-tools/generative-ai-in-academic-writing/>

Thanks!

Do you have any questions?
yjshiung@ntu.edu.tw



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