

DURHAM COLLEGE

Table of Contents

Introduction i	
Categories of Generativ	re Al ii
Tool: AudioPen	1
Tool: BARD 6	
Tool: Bing Chat	7
Tool: ChatGPT	13
Tool: ChatPDF	19
Tool: Consensus	22
Tool: DALL-E 2	27
Tool: GitHub Copilot	31
Tool: GrammarlyG0	38
Tool: Paperpal	42
Tool: Research Rabbit	47
Tool: SciSpace	51
Tool: Scite Al	55
Tool: Sourcely	59
Tool: Speedwrite (Not R	ecommended) 62
Tool: Synthesia	66
Tool: TOME 69	
Tool: WordTune	72

Introduction

Generative AI (GenAI) is evolving at a rapid pace and colleges must adapt to the use of AI responsibly and with critical consideration. DC supports faculty in exploring GenAI, and evaluating the benefits of adopting it where it will enhance student learning and align with industry expectations. We are preparing learners for the future world of work, in which GenAI will be a cornerstone. Faculty are invited to explore and reference this guidebook for information pertaining benefits, challenges, opportunities and use cases for their potentially selected tool(s).

Disclaimer: The tools and information presented are curated for the purpose of showcasing potential applications within teaching and learning. The analyses were accurate at the time of publishing; however, due to the rapid pace of progress within the field of AI, revisions will be necessary and ongoing to provide the most up-to-date information. DC does not assume responsibility for tool performance or accuracy. Faculty should exercise their judgment before adopting any AI tools, including considering student privacy and data management.

Developed by the Durham College Generative AI Taskforce, the Generative AI Tools for Teaching and Learning Guidebook provides an overview of the reviewed tools as of June 2023.

Durham College Generative Al Taskforce

Abdelbaset Khalaf

Alvin (Ntibinyane) Mbaki

Amanda Maknyik

Brandon Carson

Callum MacKintosh

Craig Black

Danelle Driscoll

Jean Choi

Jennifer Bedford

Jonathan Carrigan

Kendra Hambly (Down)

Mary Helen Leddy

Morgan Chapman

Rogier Ten Kate

Tanya Wakelin

Teresa Goff

Tully Privett

Uzair Ahmad

Categories of Generative Al

Generative AI tools can be categorized by the types of data they generate (outputs) and the specific tasks each tool aims to accomplish. Consider the purpose of the tool and review the options available for the generative AI tools analyzed to guide your selection:

CODING	IMAGE OR PRESENTATION CREATION	VIDEO GENERATION
GitHub Copilot ChatGPT	Canva S DALL-E 2 tome	> synthesia
TEXT GENERATION, GRAMMAR, AND EDITING	INFORMATION GENERATION AND SYNTHESIS	RESEARCH
Bard ChatGPT grammarlyGO Paperpal wordtune	AudioPen Bard ChatGPT ChatGPT ChatGPT Calculate Copilot Paperpal SAV	consensus ResearchRabbit SCISPACE SCITE SOurcely

Note: These categories are not mutually exclusive, and many generative AI tools can overlap multiple categories.

Tool: AudioPen

AudioPen is an Al-powered web app that converts voice notes into clearly reworded text. It is like an assistant that summarizes and types out what is said, taking a stream of consciousness and creating a structured set of notes that are easy to read and understand.

Access AudioPen here

Recommended for

- ✓ Daily teaching activities
- **X** Assessment
- ✓ Student study support
- X Research

Benefits to Teaching and Learning

For both faculty and students, **AudioPen** organizes scattered thoughts into cohesive and digestible chunks.

Faculty can use AudioPen to organize what is taught in their courses, listing topics in a specific order.

For students, they can compare their spoken text to the organized text, encouraging meta-cognition and critical thinking. This could be done as an exercise in which students receive another's ideas, attempt to organize those thoughts, then compare them to what is produced by **AudioPen**.

Opportunities for Use in Teaching

- Organizing ideas for new course content
- Spoken text into written responses to student emails or for providing formative feedback
- Summarize Program meeting notes

Opportunities for Student Use

- Could be used as assistive technology
- Transform disorganized thoughts into polished text
- Understands most global languages if users click the settings button, they can choose a list of languages to write in
- Boost writing productivity
- Personal writing assistant
- Web app that can be downloaded and saved to home screen

• Copy transcript to clipboard in one click

Recommended Subject Areas

AudioPen can be used for any subject area.

Challenges

The written content is only as good as the spoken content provided by the user. Audio is clearer when using a headset. **AudioPen** converts unstructured voice notes into easy-to-read written content, therefore fine-tuning one's own thoughts and ideas, which may provide less concern for academic integrity.

Cost

As of March 2023, AudioPen is free with limitations, \$29 USD for a full license.

Accessibility

AudioPen is well suited for anyone who experiences difficulty with writing or typing.

Accessibility Assessment

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Accessibility	Accessibility Standards	Tool meets accessibility guidelines (e.g. local accessibility legislation and/or W3C WCAG 2.0 standards).	Tool has some capacity to meet accessibility guidelines with workaround solutions to accomplish accessibility guidelines.	Tool fails to meet accessibility guidelines, or no information of compliance has been made available for the tool.
	Required Equipment	Tool does not require equipment beyond what is typically available (computer with speakers, mic, internet connection, etc.).	Tool requires specialized equipment (e.g. unique device) that likely requires purchase at a low cost.	Tool requires specialized equipment requiring moderate to significant financial investment.

Financial Impact	All aspects of the tool can be used free of charge.	Aspects of the tool can be used for free with other elements requiring a fee, membership, or subscription by the institution.	Use of the tool requires a fee, membership, or subscription-and poses a financial burden on students.
M/CAG 20 co	mnliance is not noted in teri	ms and conditions	

Privacy, Data Security, and FIPPA

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Privacy, Data Protection, and Rights	Sign Up/ Sign In	Use of the tool does not require the creation of an external account or additional login, such that no personal user information is collected and shared.	The tool has been vetted through appropriate channels to ensure strict adherence to policies/standards for protecting the collection and use of personal data by a third-party group. • When using www.audiopen.ai (AudioPen), some personal information is collected. However, this site has been designed so that the information collected is minimal. • When registering, AudioPen only collects a valid email address.	Personal information to a third party in creating an account is required. There are some questions for protecting the collection and use of such data by the third-party group.

Data Privacy and Ownership

Users maintain ownership and copyright of their data; the user can keep data private and decide if /how data is to be shared.

- All content created during the use of AudioPen is not visible to other users. However, data stored on the servers is not encrypted, and is retrievable to the operators of AudioPen.
- AudioPen uses
 Bubble (Bubble.io)
 for its databases,
 and they use AWS
 RDS's AES-256
 encryption to
 encrypt data at rest.

Users maintain ownership and copyright of their data; data is shared publicly and cannot be made private.

Users forfeit
ownership and
copyright of data; data
is shared publicly and
cannot be made
private, or no details
provided.

Archiving, Saving, and Exporting Data

Users can archive, save, or import and export content or activity data in a variety of formats.

 If the user would like to export the content created by them on AudioPen, they can do so by clicking on the export button on their Account tab. A CSV file with the There are limitations to archiving, saving, or importing/exporting content or activity data.

Content and activity data cannot be archived, saved, or imported exported.

data will be downloaded to their system.

 If the user would like to delete the data associated with their account, they can do so in the account tab of their account.

Tool: **BARD**

As of August 16, 2023, BARD is not available within Canada.

Tool: Bing Chat

Bing Chat is a generative Al language platform that allows users to interact with Bing using natural language. It can answer questions, provide information, generate content, and offer suggestions based on user queries.

Access Bing Chat here

Recommended for

- ✓ Daily teaching activities
- ✓ Assessment
- ✓ Student study support
- ✓ Research

Benefit to Teaching and Learning

Bing Chat offers significant benefits to educators and students.

It can handle various tasks that would otherwise take hours of manual work, freeing up time and energy for educators to focus on more creative and engaging aspects of teaching.

It also enhances the learning experience for students by providing them with relevant and reliable information and feedback.

Opportunities for Use in Teaching

Bing Chat can be a useful tool for different scenarios:

Teaching

Bing Chat can help instructors save time and effort in preparing their lectures, assignments, quizzes, and feedback. For example, they can ask **Bing Chat**:

- o to summarize a research paper or article in minutes.
- o to create a quiz with questions and answers on any topic.
- o to generate personalized feedback for their students based on their performance or submissions.
- Learning

Bing Chat can help instructors enhance their own learning and professional development. For example, they can ask **Bing Chat**:

- o to find relevant and reliable information on any topic from various sources.
- to help them improve their writing skills by proofreading, rewriting, or improving their text.
- to help them unleash their creativity by creating case studies, practice activities, or interactive simulation games.

Assessment

Bing Chat can help instructors evaluate their students' learning outcomes and progress. For example, they can ask **Bing Chat**:

- to analyze their students' responses or submissions and provide them with insights and suggestions.
- to compare and contrast different sources or perspectives on any topic and put them in a table.
- o to help them create rubrics or criteria for grading their students' work.

Opportunities for Student Use

Bing Chat is a new feature that allows students to ask real questions and get complete answers from an Alpowered chatbot. It can help students with various tasks, such as finding information, creating content, planning projects, and more. Students can use Bing Chat to enhance their learning experience with the power of Al. It can also perform searches and answers in relation to the page they are viewing, making it easier to research and learn online.

Bing Chat can also benefit students who have teachers who use it in their classrooms. Teachers can use it to teach topics that are difficult to explain or demonstrate, and they can also use Bing Chat to engage students in interactive learning activities. Teachers can also use it to provide more in-depth feedback to students on their work than would otherwise be possible due to time constraints.

Recommended Subject Areas

Bing Chat can be used for any subject area.

Challenges

Bing Chat can help teachers and students, but it also has some challenges for academic integrity. Fortunately, there are also strategies to use it ethically and responsibly, and opportunities to enhance learning and teaching outcomes. Teachers and students should not see **Bing Chat** as a threat or a cheat tool but as a potential ally and a creative tool. Some of the challenges, and strategies to compensate for them, are:

Plagiarism

Students may use **Bing Chat** to write their assignments or copy their text without citation. This is plagiarism, which can lead to serious penalties. A possible strategy is to provide clear guidelines and expectations for academic honesty and to use citation tools and software to acknowledge sources.

Quality

Bing Chat may generate text that is wrong, incomplete, irrelevant, or nonsensical. It may also use outdated, biased, or unreliable data. Students should not trust **Bing Chat** as the only source of information or content. They should check the facts and sources and use their own thinking and creativity. A strategy is to encourage critical thinking and analysis skills and to use multiple and diverse sources of information.

Detection

Bing Chat's text may be hard to detect by plagiarism software, such as Turnitin. This is because it does not copy texts exactly but rephrases or synthesizes them. Teachers may need to use other methods to detect and prevent cheating using Bing Chat. These methods may include asking questions, requiring presentations or defenses, using drafts or revisions, or using stylometric analysis. A strategy is to design authentic and meaningful assignments that require students to apply their knowledge and skills in novel ways.

Cost

Free, only accessible using Microsoft's Edge browser (free download).

Accessibility

Accessibility concerns include:

- Perception
 - Text messages may not be perceivable by users with sensory impairments. Alternatives for auditory and visual information are needed.
- Expression
 - Typing messages may not be feasible for users with communication or motor impairments. Multiple ways of expression are needed.
- Representation
 Information may not be presented in multiple formats and modalities. Options for adjusting language level and complexity are needed.

Accessibility Assessment

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Accessibility	Accessibility Standards	Tool meets accessibility guidelines (e.g. local accessibility legislation and/or W3C WCAG 2.0 standards).	Tool has some capacity to meet accessibility guidelines with workaround solutions to accomplish accessibility guidelines	Tool fails to meet accessibility guidelines, or no information of compliance has been made available for the tool.

	Required Equipment	Tool does not require equipment beyond what is typically available (computer with speakers, mic, internet connection, etc.).	Tool requires specialized equipment (e.g. unique device) that likely requires purchase at a low cost. • Tool requires Microsoft's Edge browser, which is free to download and install.	Tool requires specialized equipment requiring moderate to significant financial investment.
	Financial Impact	All aspects of the tool can be used free of charge.	Aspects of the tool can be used for free with other elements requiring a fee, membership, or subscription by the institution.	Use of the tool requires a fee, membership, or subscription-and poses a financial burden on students.
Notes	WCAG 2.0 compliance is not noted in terms and conditions			

Privacy, Data Security, and FIPPA

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Privacy, Data Protection, and Rights	Sign Up/ Sign In	Use of the tool does not require the creation of an external account or additional login, such that no personal user information is collected and shared.	The tool has been vetted through appropriate channels to ensure strict adherence to policies/standards for protecting the collection and use of personal data by a third-party group. • Users need to sign in with their Microsoft account to access Bing	Personal information to a third party in creating an account is required. There are some questions for protecting the collection and use of such data by the third-party group.

Chat (https://www.bing.c om/new/termsofuse · Users may need to join a waitlist and wait for Microsoft's approval to access Bing Chat Users need to <u>use</u> Microsoft Edge browser to access Bing Chat **Data Privacy** Users maintain Users maintain and ownership and ownership and **Ownership** copyright of their copyright of their data; the user can data; data is shared keep data private and publicly and cannot decide if/how data is be made private to be shared Bing Chat may include advertising, which may collect and use user data for targeted ads · Users should be careful about what they tell Bing Chat, as it may reveal personal or sensitive information that could be used by cybercriminals or third parties. Archiving, Users can archive, There are limitations Saving, and to archiving, saving, save, or import and **Exporting** export content or or importing/exporting Data

11

activity data in a content or activity variety of formats. data.

Notes

Bing Chat was used to research these criteria.

Terms of Use

Additional Resources

- Prompt engineering for educators making generative AI work for you
- I Discovered The Perfect ChatGPT Prompt Formula

Tool: ChatGPT

The explanation below was created by **ChatGPT** in less than 60 seconds, copied and pasted in less than 2 minutes:

ChatGPT is an AI language model developed by OpenAI. It is based on the GPT (Generative Pre-trained Transformer) architecture, specifically GPT-3.5. It is designed to generate human-like responses and engage in conversational interactions with users.

ChatGPT has been trained on a vast amount of text data from the internet, which allows it to understand and generate coherent responses to a wide range of topics. It can answer questions, provide explanations, offer suggestions, and engage in dialogue on various subjects.

The model works by taking in a prompt or a series of messages from a user and generates a response based on its understanding of the context and knowledge it has acquired during training. It employs sophisticated natural language processing techniques to generate fluent and contextually relevant replies.

OpenAI has made efforts to make **ChatGPT** more useful and safe by incorporating reinforcement learning from human feedback during training, as well as deploying it with certain constraints to prevent the generation of inappropriate or harmful content.

ChatGPT has applications in a variety of domains, including customer service, virtual assistants, education, content generation, and more. It has the potential to provide personalized and interactive experiences for users seeking information, support, or engaging in conversational interactions.

Access ChatGPT here

Recommended for

- ✓ Daily teaching activities
- ✓ Assessment
- ✓ Student study support
- ✓ Research

Benefit to Teaching and Learning

Chat GPT can quickly build frameworks for course outlines, lectures, PowerPoints, assignments, essays, research papers. It can write introductions and summaries for weekly lessons based on course content.

It is also a good starting point for bigger projects. It streamlines and simplifies information searches and saves time on many tasks like summarizing a broad range of information and from a variety of information sources, allowing the user to get more in-depth and finish work faster.

Chat GPT can also write and correct code and manipulate data.

Opportunities for Student Use

- Information obtained is only as good as the questions asked by the user. Prior knowledge of subject being searched gets better results.
- Opportunity for focused, self-directed learning without the distraction of other search platforms. No advertisements to lure attention away from the task at hand.
- Enhance Student Learning with Personalized Tutoring.
- Leverage ChatGPT as an Effective Writing Tool: Empower students to utilize ChatGPT as a valuable
 resource for reviewing and refining their written work. This advanced tool can assist in identifying and
 rectifying grammatical errors, improving sentence structure, and addressing other typical writing pitfalls.
- Unleash the Power of ChatGPT for Comprehensive Knowledge Acquisition: Enable students to tap into
 ChatGPT's vast knowledge base to deepen their understanding of specific subjects or address challenging
 questions. By engaging with this innovative tool, students can broaden their comprehension and gain
 valuable insights into the desired topics.

Recommended Subject Areas

- Research
- Information Literacy
- Health Sciences
- Business

Challenges

- Responses can become repetitive and lack depth.
- Students and Faculty can use it to write content with the risk of not appraising the information for themselves before using/applying/submitting the information.
- Information obtained is only as good as the questions asked by the user. Prior knowledge of subject being searched gets better results.
- Creating potentially incorrect, oversimplified, unsophisticated, or biased responses to questions or prompts.
- OpenAl's documentation provides a resource on:
 - o Considerations for Educators
 - ChatGPT General FAQ

Cost

There is a free version and a paid version of **ChatGPT**. The paid version is \$20-\$42/month USD and includes GPT-4.

14

Accessibility

Accessibility concerns include:

Perception:

Text messages may not be perceivable by users with sensory impairments. Alternatives for auditory and visual information are needed.

• Expression:

Typing messages may not be feasible for users with communication or motor impairments. Multiple ways of expression are needed.

• Representation:

Information may not be presented in multiple formats and modalities. Options for adjusting language level and complexity are needed.

Accessibility Assessment

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Accessibility	Accessibility Standards	Tool meets accessibility guidelines (e.g. local accessibility legislation and/or W3C WCAG 2.0 standards).	Tool has some capacity to meet accessibility guidelines with workaround solutions to accomplish accessibility guidelines	Tool fails to meet accessibility guidelines, or no information of compliance has been made available for the tool.
	Required Equipment	Tool does not require equipment beyond what is typically available (computer with speakers, mic, internet connection, etc.).	Tool requires specialized equipment (e.g. unique device) that likely requires purchase at a low cost.	Tool requires specialized equipment requiring moderate to significant financial investment.
	Financial Impact	All aspects of the tool can be used free of charge.	Aspects of the tool can be used for free with other elements requiring a fee, membership, or	Use of the tool requires a fee, membership, or subscription-and poses a financial burden on students.

subscription by the institution

Notes

WCAG 2.0 compliance is not noted in terms and conditions

Privacy, Data Security, and FIPPA

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Privacy, Data Protection, and Rights	Sign Up/ Sign In	Use of the tool does not require the creation of an external account or additional login, such that no personal user information is collected and shared. • Users can log in with their OpenAl account or create one for free (https://www.zdnet.com/article/how-to-use-chatgpt/) • Users can access ChatGPT through a browser extension that can be launched with a keyboard shortcut or a floating icon (https://www.zdnet.com/article/how-to-use-chatgpt/)	The tool has been vetted through appropriate channels to ensure strict adherence to policies/standards for protecting the collection and use of personal data by a third-party group. • Users may need to request an API Key from OpenAI to integrate ChatGPT into their own applications (https://www.zdnet.com/article/how-to-use-chatgpt/)	Personal information to a third party in creating an account is required. There are some questions for protecting the collection and use of such data by the third-party group.

Data Privacy and Ownership

Users maintain ownership and copyright of their data; the user can keep data private and decide if /how data is to be shared.

- Users can keep their data private and decide if /how data is to be shared (https://chat.openai. com/privacy)
- Users can <u>delete</u>
 <u>their data</u> at any
 time

Users maintain ownership and copyright of their data; data is shared publicly and cannot be made private.

- ChatGPT may collect and use user data for research and improvement purposes (https://chat.openai. com/privacy)
- ChatGPT may share user data with third parties for service provision or legal compliance

Users forfeit ownership and copyright of data; data is shared publicly and cannot be made private, or no details provided.

Archiving, Saving, and Exporting Data

Users can archive, save, or import and export content or activity data in a variety of formats.

 Users can archive, save, or import and export content or activity data in a variety of formats There are limitations to archiving, saving, or importing/exporting content or activity data.

 There may be limitations to archiving, saving, or importing/exporting content or activity data depending on the size, format, or complexity of the data Content and activity data cannot be archived, saved, or imported exported.

Notes

Bing Chat was used to research these criteria.

Additional Resources

- Positive Uses for ChatGPT in the Higher Education Classroom
- Frequently Asked Questions: ChatGPT and generative AI in teaching and learning at the University of Waterloo
- ChatGPT and Artificial Intelligence in higher education
- Assigning Al: Seven Approaches for Students, with Prompts
- ChatGPT Advice Academics Can Use Now
- Embrace the Bot: Designing Writing Assignments in the Face of Al
- Al in Higher Education
- A Teacher's Prompt Guide to ChatGPT aligned with 'What Works Best'
- Unlocking the Potential of AI in Education: ChatGPT Prompts and Use Cases

18

Tool: ChatPDF

ChatPDF allows faculty to upload a PDF file and ask questions regarding the content within the file.

Access ChatPDF here

Recommended for

- ✓ Daily teaching activities
- **X** Assessment
- ✓ Student study support
- ✓ Research

Benefit to Teaching and Learning

ChatPDF can quickly help summarize or find specific areas/concepts within a PDF document. Examples include gathering specific details from a course outline, listing the methods/statistics used in research articles, summarizing major areas of a textbook chapter, etc. This would save time for both teachers and students when trying to find key information in a variety of documents (e.g., many research papers), within a large document (e.g., PDF of a full textbook), or getting key dates organized for the semester.

Opportunities for Use in Teaching

- Create quiz questions from PDF documents (e.g. articles)
- Generate key questions within a large document

Opportunities for Student Use

- Familiarize with key points within course outline
- Summarize and explore content from textbooks and articles
- Performing research related to course presentations, papers, etc.
- Summarize and find important information in college-level documents.

Recommended Subject Areas

As this generative AI can analyse any PDF document, any subject area that makes use of them can benefit. Any subject area dealing with research (e.g., science, social sciences, etc.) would benefit from this tool. Learning strategies and semester planning could also benefit from the use of this tool.

19

Challenges

There are cautions regarding the depth of use (i.e., assessing the response and looking for specific reference points in the document) as well as concerns for breaches of academic integrity (i.e., students copying the response and presenting it as an original thought).

Cost

There are both free and paid versions of the software. The differences are:

Free	Paid (\$5/month)	
• 120 pages/pdf	• 2,000 pages/pdf	
• 10 mb/pdf	• 32 mb/pdf	
• 3 pdfs/day	• 50 pdfs/day	
• 50 questions/day	• 1000 questions/day	

Accessibility Assessment

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Accessibility	Accessibility Standards	Tool meets accessibility guidelines (e.g. local accessibility legislation and/or W3C WCAG 2.0 standards).	Tool has some capacity to meet accessibility guidelines with workaround solutions to accomplish accessibility guidelines	Tool fails to meet accessibility guidelines, or no information of compliance has been made available for the tool.
	Required Equipment	Tool does not require equipment beyond what is typically available (computer with speakers, mic, internet	Tool requires specialized equipment (e.g. unique device) that likely requires purchase at a low cost.	Tool requires specialized equipment requiring moderate to significant financial investment.

		connection, etc.).		
	Financial Impact	All aspects of the tool can be used free of charge.	Aspects of the tool can be used for free with other elements requiring a fee, membership, or subscription by the institution	Use of the tool requires a fee, membership, or subscription-and poses a financial burden on students.
Notes	WCAG 2.0 complian	ce is not noted in tern	ns and conditions	

Privacy, Data Security, and FIPPA

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Privacy, Data Protection, and Rights	Sign Up/ Sign In	Use of the tool does not require the creation of an external account or additional login, such that no personal user information is collected and shared.	The tool has been vetted through appropriate channels to ensure strict adherence to policies/standards for protecting the collection and use of personal data by a third-party group.	Personal information to a third party in creating an account is required. There are some questions for protecting the collection and use of such data by the third-party group.
	Data Privacy and Ownership	Users maintain ownership and copyright of their data; the user can keep data private and decide if /how data is to be shared.	Users maintain ownership and copyright of their data; data is shared publicly and cannot be made private.	Users forfeit ownership and copyright of data; data is shared publicly and cannot be made private, or no details provided.
	Archiving, Saving, and Exporting Data	Users can archive, save, or import and export content or activity data in a variety of formats.	There are limitations to archiving, saving, or importing/exporting content or activity data.	Content and activity data cannot be archived, saved, or imported exported.

Tool: Consensus

Consensus is a platform specific to evidence-based research. It is a search engine that uses AI to extract and summarize findings directly from peer-reviewed scientific papers. It automates parts of the research process to make finding rigorous answers faster and easier.

Access Consensus here

Recommended for

- X Daily teaching activities
- **X** Assessment
- X Student study support
- ✓ Research

Benefit to Teaching and Learning

Consensus saves time when finding and compiling credible research articles. Your search results are improved in quality as they are from scientific articles not marketing teams. Also, your results are 100% ad-free, so there are no distractions allowing for improved focus.

This tool uses intuitive language for searches which improves accessibility. There is no need to learn or use more difficult search languages.

The AI extracts key findings making it faster and easier to find the truly useful papers.

Overall, using **Consensus** allows the user to spend more time with the important information of the articles, instead of so much time searching for the information.

Opportunities for Use in Teaching

- Researching a topic to determine if there is consensus
- Determining which topics may have more controversy for a student assignment
- Literature reviews

Opportunities for Student Use

- Improved depth of knowledge for research projects or papers
- With faster, cleaner initial searches allows for the elevation of expectations on quality of content for assignments

Recommended Subject Areas

- Health Sciences
- Education
- Business Management
- Marketing
- Any subject area that requires evidence-based research

Challenges

- The tool summarizes top rated papers and notes the most cited. However, it is unclear the process or method of how those papers are rated. The term 'most cited' does not necessarily mean the most up-todate or accurate. It would be beneficial to understand more about the know the rating criteria.
- Accuracy of information.
- The tool makes finding quality articles faster. However, a critical appraisal of articles is still a necessary step for users. It would be important for faculty to note this step in the assignment details.

Cost

The free version provides unlimited searches and quality indicators. It has restrictions of three summaries and consensus meters per month. The premium version allows for unlimited searches, quality indicators, summaries and consensus meters per month and is \$7.99 USD.

Accessibility Assessment

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Accessibility	Accessibility Standards	Tool meets accessibility guidelines (e.g. local accessibility legislation and/or W3C WCAG 2.0 standards).	Tool has some capacity to meet accessibility guidelines with workaround solutions to accomplish accessibility guidelines	Tool fails to meet accessibility guidelines, or no information of compliance has been made available for the tool.
	Required Equipment	Tool does not require equipment beyond what is typically available (computer with speakers, mic,	Tool requires specialized equipment (e.g. unique device) that likely requires	Tool requires specialized equipment requiring moderate to significant financial investment.

		internet connection, etc.).	purchase at a low cost.	
	Financial Impact	All aspects of the tool can be used free of charge.	Aspects of the tool can be used for free with other elements requiring a fee, membership, or subscription by the institution	Use of the tool requires a fee, membership, or subscription-and poses a financial burden on students.
Notes	WCAG 2.0 com	pliance is not noted in term	ns and conditions	

Privacy, Data Security, and FIPPA

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Privacy, Data Protection, and Rights	Sign Up/ Sign In	Use of the tool does not require the creation of an external account or additional login, such that no personal user information is collected and shared.	The tool has been vetted through appropriate channels to ensure strict adherence to policies/standards for protecting the collection and use of personal data by a third-party group. Consensus requires a valid email address to be used during the sign-up process. Depending upon the use of the site, Consensus might collect personal and non-personal information from the user when they visit, access, register with, subscribe to or use the Site; when they register for, subscribe	Personal information to a third party in creating an account is required. There are some questions for protecting the collection and use of such data by the third-party group.

to, order or purchase any products and/or services on, through or in relation to the site; when they "sign in," "log in," or the like to the site. Data Users maintain Users maintain Users forfeit **Privacy** ownership and ownership and copyright ownership and and copyright of their of their data: data is copyright of data; **Ownership** data is shared data; the user can shared publicly and publicly and cannot keep data private cannot be made private. and decide if /how • Users are unable to be made private, or no data is to be shared. import or create any details provided. type of original content on this platform, as it is an Al powered search tool. Ownership of "material" or "content" is not a concern here. • Consensus may collect personal and nonpersonal information about the user through the site. • Consensus reserves the right to use the users personal and non-personal information in good faith, including with third parties. Archiving, Users can archive, There are limitations to Content and activity Saving, and data cannot be save, or import and archiving, saving, or **Exporting** export content or importing/exporting archived, saved, or Data activity data in a content or activity data. imported exported.

> Consensus may retain the users personal

variety of formats.

information and nonpersonal information for as long as it is reasonably necessary for a legitimate business purpose. The only data collected by Consensus is personal and non-personal data. No other user generated data is stored in Consensus.

Notes

Data privacy (sign-in/sign-up) has not been evaluated.

Tool: DALL-E 2

DALL-E 2 is an AI image generator. The user would enter a text prompt—such as, "an oil painting of a monkey in a spacesuit on the moon"—and the AI generates an image that matches the inputted idea.

Access DALL-E 2 here

Recommended for

- ✓ Daily teaching activities
- **X** Assessment
- X Student study support
- X Research

Benefit to Teaching and Learning

Easy to use for development and creation of (stock) images for a faculty members presentation and delivery of materials in class that are unique.

Prompt

A Van Gosh style painting of an online class



Prompt

Image of people learning together online in cowboy hats



Opportunities for Use in Teaching

- Easy creating of images for presentations and courseware
- Interesting imagery for student discussions
- Analysis of imagery for media art and design courses.

Opportunities for Student Use

- Easy to use for students in their project and course work.
- Quick development of images that are specific to the topic they are dealing with.

Recommended Subject Areas

No specific recommendations for subject areas. It can be used in a general sense where students and faculty can create images that they can use in their course preparation and materials.

Challenges

As of June 2023, the quality of the images is not very good. Materials being used appear to be stock images that are altered based on the prompt. Images of people are very poor and do not look realistic. This will likely improve as the tool gets used more. This is a tool to monitor and see how it develops to create higher quality images.

There should be consideration of ethical bias when using imagery create (e.g., the image <u>perpetuates</u> <u>stereotypes</u>, ageism, sexism, and racism).

Cost

This application does not have a free version, there is a cost for credits.

Accessibility Assessment

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Accessibility	Accessibility Standards	Tool meets accessibility guidelines (e.g. local accessibility legislation and/or W3C WCAG 2.0 standards).	Tool has some capacity to meet accessibility guidelines with workaround solutions to accomplish accessibility guidelines	Tool fails to meet accessibility guidelines, or no information of compliance has been made available for the tool.
	Required Equipment	Tool does not require equipment beyond what is typically available (computer with speakers, mic,	Tool requires specialized equipment (e.g. unique device) that likely requires	Tool requires specialized equipment requiring moderate to significant financial investment.

		internet connection, etc.).	purchase at a low cost.	
	Financial Impact	All aspects of the tool can be used free of charge.	Aspects of the tool can be used for free with other elements requiring a fee, membership, or subscription by the institution	Use of the tool requires a fee, membership, or subscription-and poses a financial burden on students.
Notes	WCAG 2.0 com	pliance is not noted in term	ns and conditions	

Privacy, Data Security, and FIPPA

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Privacy, Data Protection, and Rights	Sign Up/ Sign In	Use of the tool does not require the creation of an external account or additional login, such that no personal user information is collected and shared.	The tool has been vetted through appropriate channels to ensure strict adherence to policies/standards for protecting the collection and use of personal data by a third-party group.	Personal information to a third party in creating an account is required. There are some questions for protecting the collection and use of such data by the third-party group.
	Data Privacy and Ownership	Users maintain ownership and copyright of their data; the user can keep data private and decide if /how data is to be shared.	Users maintain ownership and copyright of their data; data is shared publicly and cannot be made private.	Users forfeit ownership and copyright of data; data is shared publicly and cannot be made private, or no details provided.

Archiving,
Saving, and
Exporting
Data

Users can archive, save, or import and export content or activity data in a variety of formats.

There are limitations to archiving, saving, or importing/exporting content or activity data.

Content and activity data cannot be archived, saved, or imported exported.

Tool: Github Copilot

GitHub Copilot is an AI pair programmer that offers autocomplete-style suggestions as a faculty member codes. The user can receive suggestions from GitHub Copilot either by starting to write the code they want to use, or by writing a natural language comment describing what they want the code to do. GitHub Copilot analyzes the context in the file the faculty member is editing, as well as related files, and offers suggestions from within the text editor. GitHub Copilot is powered by OpenAI Codex, a new AI system created by OpenAI.

GitHub Copilot is trained on all languages that appear in public repositories. For each language, the quality of suggestions provided may depend on the volume and diversity of training data for that language. For example, JavaScript is well-represented in public repositories and is one of **GitHub Copilot**'s best supported languages. Languages with less representation in public repositories may produce fewer or less robust suggestions.

Access CoPilot here

Recommended for

- ✓ Daily teaching activities
- ✓ Assessment
- ✓ Student study support
- X Research

Benefit to Teaching and Learning

GitHub Copilot offers opportunities to enhance the teaching and learning experience. Below are some key opportunities:

- Real-time Assistance
 - **GitHub Copilot** provides students with real-time suggestions and auto-completion while they are writing code. This immediate feedback helps students catch syntax errors, identify potential bugs, and improve their code quality.
- Learning Efficiency
 - **GitHub Copilot** accelerates the learning process by offering relevant code examples and explanations. It helps students understand coding concepts, algorithms, and design patterns by generating code snippets and providing alternative solutions.
- Language Exploration
 - **GitHub Copilot** supports students in exploring and learning new programming languages and frameworks. It generates correct syntax and offers code examples specific to the language or framework being used.

Collaboration and Peer Learning

GitHub Copilot can be utilized in collaborative coding sessions where students work together or with faculty on projects. It assists in generating code suggestions, offering alternative approaches, and fostering discussions on different coding techniques. This fosters the overall learning, collaboration, and the exchange of ideas among students and faculty.

• Best Practices and Industry Standards

GitHub Copilot has been trained on a vast amount of open-source code, including industry-standard projects. Students can familiarize themselves with best coding practices and conventions followed in the industry.

Problem Solving and Creativity

GitHub Copilot encourages students to think critically and creatively by presenting alternative code solutions. This fosters problem-solving skills and cultivates a mindset of innovation and creativity.

Continuous Learning and Growth

GitHub Copilot helps students stay updated with new coding techniques, libraries, and frameworks. It exposes them to the latest advancements in the programming field and promotes a culture of lifelong learning.

Opportunities for Use in Teaching

Github Copilot offers several benefits for faculty. Below are some key benefits:

Time Savings

GitHub Copilot can save faculty significant time and effort in preparing coding examples, exercises, and projects.

Enhanced Teaching Resources

GitHub Copilot provides a vast library of code patterns, algorithms, and best practices derived from its training on open-source projects.

Adaptability and Customization

GitHub Copilot's code generation capabilities allow faculty to adapt and customize code examples to suit specific teaching objectives or scenarios.

Learning Assistance

GitHub Copilot can be used by faculty as a teaching tool during live coding sessions or demonstrations. They can showcase **GitHub Copilot's** suggestions and explanations to students, helping them understand code structure, syntax, and design patterns.

Promotion of Best Practices

Faculty can use GitHub Copilot to reinforce coding standards and best practices within their courses.

Encouragement of Critical Thinking
 Faculty can utilize GitHub Copilot to present multiple code solutions and discuss the trade-offs and considerations associated with each approach.

Professional Development

GitHub Copilot can serve as a tool for professional development among faculty themselves. By exploring **GitHub Copilot's** generated code, faculty can learn new coding techniques, discover innovative approaches, and stay updated with emerging trends and technologies.

Opportunities for Student Use

GitHub Copilot provides several opportunities for students, enhancing their coding experience and facilitating productivity. Here are some key benefits:

- Accelerated Coding
 - Students are assisted through code generation suggestions and completing code snippets, significantly speeding up the coding process.
- Increased Productivity
 - Students are more productive through real-time assistance and reducing the need to search for code examples or reference documentation. Students can quickly find relevant code patterns, algorithms, and best practices, allowing them to write code more efficiently and accurately.
- Learning and Skill Development
 - Provides educational assistance through offering code suggestions aligned with industry standards and best practices.
- Code Quality Improvement
 - Code suggestions align with established coding standards, helping students maintain code quality and consistency.
- Assistance with Complex Tasks
 - Assists complex coding tasks through suggesting alternative solutions, highlighting potential issues, and providing insights into different approaches.
- Language and Framework Support
 - Supports multiple programming languages and frameworks, offering students assistance across a wide range of development environments.
- Collaboration and Knowledge Sharing
 - Facilitates collaboration among students by suggesting code alternatives, offering multiple solutions, and encouraging discussions.
- Time Savings
 - GitHub Copilot saves students time by automating repetitive coding tasks.

Recommended Subject Areas

GitHub Copilot is primarily designed to assist with programming and coding tasks.

It is most applicable to subject areas within the field of computer science and software development.

Some more specific subject areas include:

- Programming Languages.
- Algorithms and Data Structures.
- Web Development.
- Machine Learning and Data Science.
- Mobile App Development.
- Game Development.
- Software Engineering.

Challenges

GitHub Copilot can be more useful in some programming languages than others.

It appeared to have limited use when working in HTML and CSS, although it is sometimes capable of correctly predicted repeated html structures, but other times it will suggest broken tags or continued body content.

These errors could be used as teachable moments and a way to engage for students to with the Al generator.

Another challenge would be that a user needs to use comments to help guide what it generates. A good understanding of how to write effective comments, which are then used as prompts is helpful to get the most out of this tool. Users with less experience in this area may find they are not saving time when using **GitHub Copilot**.

Another item to note is that its training data is primarily focused on open-source code repositories. Therefore, its assistance might be more limited in specialized or niche domains with less publicly available code.

Cost

CoPilot Individual is \$10/month USD.

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Accessibility	Accessibility Standards	Tool meets accessibility guidelines (e.g. local accessibility	Tool has some capacity to meet accessibility guidelines with	Tool fails to meet accessibility guidelines, or no information of

	legislation and/or W3C WCAG 2.0 standards).	workaround solutions to accomplish accessibility guidelines	compliance has been made available for the tool.
Required Equipment	Tool does not require equipment beyond what is typically available (computer with speakers, mic, internet connection, etc.).	Tool requires specialized equipment (e.g. unique device) that likely requires purchase at a low cost.	Tool requires specialized equipment requiring moderate to significant financial investment.
Financial Impact	All aspects of the tool can be used free of charge.	Aspects of the tool can be used for free with other elements requiring a fee, membership, or subscription by the institution	Use of the tool requires a fee, membership, or subscription-and poses a financial burden on students.

Notes WCAG 2.0 compliance is not noted in terms and conditions

Privacy, Data Security, and FIPPA

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Privacy, Data Protection, and Rights	Sign Up/ Sign In	Use of the tool does not require the creation of an external account or additional login, such that no personal user information is collected and shared.	The tool has been vetted through appropriate channels to ensure strict adherence to policies/standards for protecting the collection and use of personal data by a third-party group. • Registration information: Github Copilot collects	Personal information to a third party in creating an account is required. There are some questions for protecting the collection and use of such data by the third-party group.

information such as the users name and contact data, including username and email address, and credentials such as the users password, during account creation.

- Demographic information: In some cases, Github Copilot requests for the user to provide age, gender, and similar demographic details.
- Payment and billing information:
 If the user makes a purchase or other financial transaction, Github
 Copilot collects credit card numbers, financial account information, and other payment

Data Privacy and Ownership

Users maintain ownership and copyright of their data; the user can keep data private and decide if /how data is to be shared. Users maintain ownership and copyright of their data; data is shared publicly and cannot be made private.

details.

Users forfeit ownership and copyright of data; data is shared publicly and cannot be made private, or no details provided. Github Copilot
 follows responsible
 practices to ensure
 that neither
 Prompts or
 Suggestions will be
 shared or used as
 suggested code for
 other users of
 GitHub Copilot.

Archiving, Saving, and Exporting Data Users can archive, save, or import and export content or activity data in a variety of formats. There are limitations to archiving, saving, or importing/exporting content or activity data.

Content and activity data cannot be archived, saved, or imported exported.

Additional Resources

For more information, see **Getting started with GitHub Copilot**

37

Tool: **GrammarlyGO**

GrammarlyGO is a user-friendly, innovative writing assistant designed to enhance the users' writing skills on the go. With its intuitive and easy-to-use interface, **GrammarlyGO** empowers the user to write confidently and effectively across various digital platforms, including computers, smartphones, tablets, and other mobile devices. Whether a faculty member is composing an important email, crafting a social media post, or working on a document, **GrammarlyGO** analyzes the text in real time, providing suggestions and corrections for grammar, spelling, punctuation, clarity, and style. Its intelligent algorithms and vast database ensure accurate and contextually appropriate feedback, helping faculty members produce polished and error-free writing wherever they are.

Access **GrammarlyGo** here

Recommended for

- ✓ Daily teaching activities
- ✓ Assessment
- ✓ Student study support
- X Research

Benefit to Teaching and Learning

- Writing Assistance
 - **GrammarlyGO** serves as a reliable and comprehensive writing assistant, helping students improve their grammar, spelling, punctuation, and sentence structure.
- Error Identification
 - **GrammarlyGO's** advanced algorithms detect and highlight errors in students' writing, including both common mistakes and more nuanced issues.
- Style and Clarity Improvement
 GrammarlyGO not only focuses on grammar and mechanics but also provides suggestions for improving clarity, conciseness, and style.
- Learning Opportunities
 - As **GrammarlyGO** provides real-time feedback and suggestions, students can learn from their mistakes and gain a deeper understanding of grammar rules and writing conventions. By actively engaging with **GrammarlyGO**, students develop their writing skills and build a stronger foundation for future assignments and academic endeavors.

- Independence and Self-Editing Skills
 Grammarly60 encourages students to take ownership of their writing and develop self-editing skills.
- Idea Generation
 With a blank template and nothing to write, GrammarlyGO can generate ideas based on what type of writing faculty members are doing.

Opportunities for Use in Teaching

- Generating instruction/activities
- Giving feedback/marking
- Writing support for students in need
- Provide writing assistance demonstrations
- Peer editing and collaboration

Opportunities for Student Use

One of the main features of **GrammarlyGO** is that it uses an individual's own writing style, in combination with a guideline for the writing format, to generate text. If a student and faculty have different settings or implementations with the AI, it may result in varied outcomes that aren't desired.

While the benefits of **GrammarlyGO** are obvious to writing, faculty and students could work together to meet the requirements of the task.

Recommended Subject Areas

Any area where editing existing writing or generating thought provoking ideas may be useful but does not impact the goal of the work. Avoiding subjects where the content of the user's written work is part of the learning outcomes.

Challenges

Students can generate and edit content with the tool. Any content generated is based on the student, but is not their original work.

Cost

Free: 100 prompts monthly

Personal Premium: Unlimited prompts

Business Premium: 500 prompts per user

Accessibility

No accessibility concerns.

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Accessibility	Accessibility Standards	Tool meets accessibility guidelines (e.g. local accessibility legislation and/or W3C WCAG 2.0 standards).	Tool has some capacity to meet accessibility guidelines with workaround solutions to accomplish accessibility guidelines	Tool fails to meet accessibility guidelines, or no information of compliance has been made available for the tool.
	Required Equipment	Tool does not require equipment beyond what is typically available (computer with speakers, mic, internet connection, etc.).	Tool requires specialized equipment (e.g. unique device) that likely requires purchase at a low cost.	Tool requires specialized equipment requiring moderate to significant financial investment.
	Financial Impact	All aspects of the tool can be used free of charge.	Aspects of the tool can be used for free with other elements requiring a fee, membership, or subscription by the institution	Use of the tool requires a fee, membership, or subscription-and poses a financial burden on students.
Notes	_	essible and works with a i npts while paid versions n	majority of current equipm nay vary.	ent. Free membership

Privacy, Data Security, and FIPPA

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Privacy, Data Protection, and Rights	Sign Up/ Sign In	Use of the tool does not require the creation of an external account or additional login, such that no personal user information is collected and shared.	The tool has been vetted through appropriate channels to ensure strict adherence to policies/standards for protecting the collection and use of personal data by a third-party group.	Personal information to a third party in creating an account is required. There are some questions for protecting the collection and use of such data by the third-party group.
	Data Privacy and Ownership	Users maintain ownership and copyright of their data; the user can keep data private and decide if /how data is to be shared.	Users maintain ownership and copyright of their data; data is shared publicly and cannot be made private.	Users forfeit ownership and copyright of data; data is shared publicly and cannot be made private, or no details provided.
	Archiving, Saving, and Exporting Data	Users can archive, save, or import and export content or activity data in a variety of formats.	There are limitations to archiving, saving, or importing/exporting content or activity data.	Content and activity data cannot be archived, saved, or imported exported.
Notes		•	need to know basis to im nust be created to start us	•

Additional Resources

• GrammarlyGO: Al Writing Assistance promotional materials.

Tool: Paperpal

Paperpal is an AI tool that assists the user with spelling, grammar, sentence structure and selecting the best words to express ideas. The machine learning technology has been trained on millions of published academic papers, allowing faculty to learn from the scientific community as they write.

Paperpal helps the user write better and faster by:

- Integrating real-time suggestions into MS Word Paperpal works where the user works!
- Providing in-depth language feedback to improve clarity and flow of text.
- Rewriting and fixing complex sentences based on readability recommendations.
- Using the key concepts and topics in the paper to improve it in a meaningful way.

Paperpal has extensive experience preparing papers for publication, and it can also improve faculty members too. They are the go-to submission partner for Wolters Kluwer, IOP, IEEE, Royal Society, ASCO, and many others.

Access Paperpal here

Recommended for

- ✓ Daily teaching activities
- ✓ Assessment
- ✓ Student study support
- X Research

Benefit to Teaching and Learning

- Writing Assistance
 - **Paperpal** serves as a reliable and comprehensive writing assistant, helping students improve their grammar, spelling, punctuation, and sentence structure.
- Error Identification
 - Paperpal's advanced algorithms detect and highlight errors in students' writing, including both common mistakes and more nuanced issues.
- Style and Clarity Improvement
 - **Paperpal** not only focuses on grammar and mechanics but also provides suggestions for improving clarity, conciseness, and style.

Learning Opportunities

As **Paperpal** provides real-time feedback and suggestions, students can learn from their mistakes and gain a deeper understanding of grammar rules and writing conventions. By actively engaging with **Paperpal**, students develop their writing skills and build a stronger foundation for future assignments and academic endeavors.

- Independence and Self-Editing Skills
 Paperpal encourages students to take ownership of their writing and develop self-editing skills.
- Idea Generation
 With a blank template and nothing to write, Paperpal can generate ideas based on what type of writing the user is doing.

Opportunities for Use in Teaching

- Generating instruction/activities
- Giving feedback/marking
- Writing support for students in need
- Provide writing assistance demonstrations
- Peer editing and collaboration

Opportunities for Student Use

One of the main features of **Paperpal** is that it uses the users own writing style in combination with a guideline for the writing format to generate text. If a student and faculty have different settings or implementations with the AI, it may result in varied outcomes that aren't desired.

While the benefits of **Paperpal** are obvious to writing, faculty and students could work together to meet the requirements of the task.

Recommended Subject Areas

Areas where editing existing writing or generating thought provoking ideas may be useful but doesn't impact the goal of the work.

Avoiding subjects where the content of the written work is part of the learning outcomes.

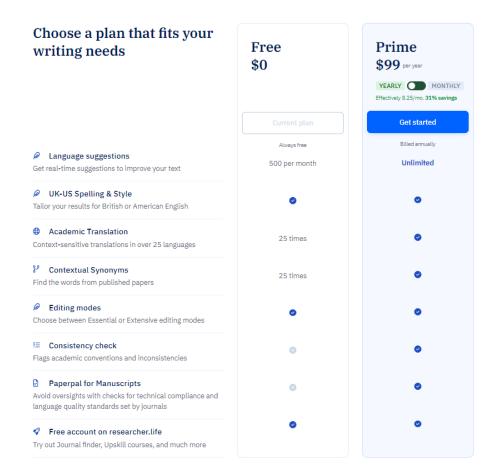
Challenges

Students can generate and edit content with the tool. Any content generated is based on the student but is not their original work.

Cost

There is a free and prime version. To summarize, the free version limits to 500 edits per month while prime is unlimited. Prime also offers bonus features like consistency checks, manuscript checking, and unlimited academic translations and contextual synonyms.

View the plan comparison here.



Accessibility

While the tool does have some built in functionality to assist with using accessibility tools, it is challenging to navigate with screen reading software. The main function, to edit text, does not work so well as to navigating the edits.

Accessibility Assessment

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Accessibility	Accessibility Standards	Tool meets accessibility guidelines (e.g. local accessibility legislation and/or W3C WCAG 2.0 standards).	Tool has some capacity to meet accessibility guidelines with workaround solutions to accomplish accessibility guidelines	Tool fails to meet accessibility guidelines, or no information of compliance has been made available for the tool.
	Required Equipment	Tool does not require equipment beyond what is typically available (computer with speakers, mic, internet connection, etc.).	Tool requires specialized equipment (e.g. unique device) that likely requires purchase at a low cost.	Tool requires specialized equipment requiring moderate to significant financial investment.
	Financial Impact	All aspects of the tool can be used free of charge.	Aspects of the tool can be used for free with other elements requiring a fee, membership, or subscription by the institution	Use of the tool requires a fee, membership, or subscription-and poses a financial burden on students.

Privacy, Data Security, and FIPPA

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Privacy, Data Protection, and Rights	Sign Up/ Sign In	Use of the tool does not require the creation of an external account or additional login, such that no personal user	The tool has been vetted through appropriate channels to ensure strict adherence to policies/standards for protecting the	Personal information to a third party in creating an account is required. There are some questions for protecting the collection and use of

	information is collected and shared.	collection and use of personal data by a third-party group.	such data by the third- party group.
Data Privacy and Ownership	Users maintain ownership and copyright of their data; the user can keep data private and decide if /how data is to be shared.	Users maintain ownership and copyright of their data; data is shared publicly and cannot be made private.	Users forfeit ownership and copyright of data; data is shared publicly and cannot be made private, or no details provided.
Archiving, Saving, and Exporting Data	Users can archive, save, or import and export content or activity data in a variety of formats.	There are limitations to archiving, saving, or importing/exporting content or activity data.	Content and activity data cannot be archived, saved, or imported exported.

46

Tool: Research Rabbit

ResearchRabbit is a tool developed to advance knowledge by building powerful, thoughtfully designed technologies for researchers around the world. With **ResearchRabbit**, users can explore and visualize papers/authors, receive notifications when highly relevant papers are published, generate increasingly relevant recommendations with usage, share and collaborate, and so much more.

Access Research Rabbit here

Recommended for

- ✓ Daily teaching activities
- ✓ Assessment
- X Student study support
- ✓ Research

Benefit to Teaching and Learning

ResearchRabbit is a large academic database and covers all subject areas, age, groups, and demographics. The tool helps in teaching and learning to access published articles that are necessary for an effective literature survey as an essential part of research projects and assignments.

Opportunities for Use in Teaching

ResearchRabbit will be useful in both faculty-facing and student-facing departments. Faculty may use the tool to explore ideas and topics of field-related assignments and generate search problems to assign to students. Its helps to confirm availability of resources that students need.

To use ResearchRabbit, a user account must be created, and the following steps must be followed:

- 1. Add some papers relevant to the project.
- 2. Based on those papers, ResearchRabbit generates a network of "recommended papers"
- 3. If any recommended papers are relevant, add those to the project.
- 4. ResearchRabbit then generates even better recommendations like a "feedback loop"
- 5. Finally, save the project so **ResearchRabbit** can send updates when relevant papers are published!

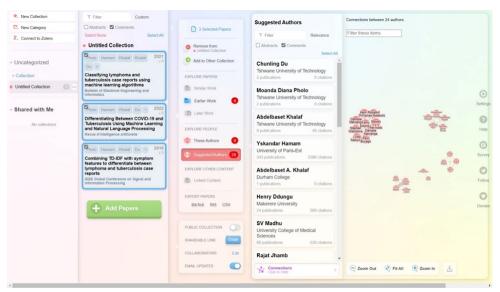


Figure 1. Web capture_researchrabbit

Opportunities for Use in Teaching and Student Use

Both students and faculty use the same tool to access a database and generate a guiding report on a topic of interest.

Recommended Subject Areas

Recommended for all subject areas.

Challenges

No challenges found. Only reliable sources are used by the tool. Proper citation and referencing must be followed to maintain academic integrity.

Cost

Free, accepts donation.

Accessibility

No accessibility concerns.

Accessibility Assessment

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Accessibility	Accessibility Standards	Tool meets accessibility guidelines (e.g. local accessibility legislation and/or W3C WCAG 2.0 standards).	Tool has some capacity to meet accessibility guidelines with workaround solutions to accomplish accessibility guidelines	Tool fails to meet accessibility guidelines, or no information of compliance has been made available for the tool.
	Required Equipment	Tool does not require equipment beyond what is typically available (computer with speakers, mic, internet connection, etc.).	Tool requires specialized equipment (e.g. unique device) that likely requires purchase at a low cost.	Tool requires specialized equipment requiring moderate to significant financial investment.
	Financial Impact	All aspects of the tool can be used free of charge.	Aspects of the tool can be used for free with other elements requiring a fee, membership, or subscription by the institution	Use of the tool requires a fee, membership, or subscription-and poses a financial burden on students.

Privacy, Data Security, and FIPPA

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Privacy, Data Protection, and Rights	Sign Up/ Sign In	Use of the tool does not require the creation of an external account or additional login, such that no personal user information is collected and shared.	The tool has been vetted through appropriate channels to ensure strict adherence to policies/standards for protecting the collection and use of	Personal information to a third party in creating an account is required. There are some questions for protecting the collection and use of

		personal data by a third-party group.	such data by the third- party group.
Data Privacy and Ownership	Users maintain ownership and copyright of their data; the user can keep data private and decide if /how data is to be shared.	Users maintain ownership and copyright of their data; data is shared publicly and cannot be made private.	Users forfeit ownership and copyright of data; data is shared publicly and cannot be made private, or no details provided.
Archiving, Saving, and Exporting Data	Users can archive, save, or import and export content or activity data in a variety of formats.	There are limitations to archiving, saving, or importing/exporting content or activity data.	Content and activity data cannot be archived, saved, or imported exported.

Tool: SciSpace

SciSpace is an advanced AI research assistant that helps researchers, academics, and students decode research papers. It utilizes artificial intelligence techniques to analyze and extract relevant information from scholarly articles worldwide. Described as a personal professor, **SciSpace** offers guidance and assistance beyond mere support.

With access to over 270 million research papers, **SciSpace** simplifies the navigation of scholarly literature, allowing users to conduct comprehensive searches and discover papers within their fields of interest. It aims to streamline the process of uncovering noteworthy studies through the power of artificial intelligence.

The tool comprises several components including the following:

Discover

A free platform providing access to scientific literature from various sources. Users can download full-text PDFs, follow experts, stay updated with trending topics, and receive personalized article suggestions. A better alternative to Google Scholar.

Co-Pilot

An Al application that helps users navigate scientific literature by explaining complex language, numbers, and tables. Users can ask questions and receive prompt responses, along with suggestions for related papers. This is perhaps the best part of the tool.

Al Detector

A tool designed to identify if a text was generated by artificial intelligence tools like ChatGPT.

Paraphraser

A software that assists users in rephrasing text without changing its meaning, helping writers avoid plagiarism when referring to other sources.

Access SciSpace here

Recommended for

- ✓ Daily teaching activities
- ✓ Assessment
- ✓ Student study support
- ✓ Research

Benefit to Teaching and Learning

With its ability to decode and extract information from research papers, **SciSpace** can assist students in understanding complex concepts, identifying key findings, and gaining insights from a wide range of scholarly

51

sources. **SciSpace's** Al-powered assistance can significantly reduce the time spent reading and understanding research papers.

Opportunities for Use in Teaching

- Teaching:
 - Instructors can use SciSpace to find peer-reviewed articles and other scholarly work to create lesson plans.
 - o The tool as such can increase productivity for instructors.
- Assessments:
 - o The **SciSpace** Al component can be used to grade assessments quickly and easily.

Opportunities for Student Use

- Learning:
 - Students can use SciSpace to find and access relevant peer-reviewed articles for their assignments, projects, and research.
 - They can also use the SciSpace Co-pilot to get simple explanations and summaries of complex papers and generate accurate citations and references.
 - The tool will save time for students.
 - The tool can also assist students with developing English as the second language skills.

Recommended Subject Areas

SciSpace is a versatile tool that proves beneficial not only for research-based courses and programs but also for students across various disciplines. While its primary focus is on aiding research endeavors, students from any field can leverage its capabilities.

With **SciSpace**, students have the ability to search for or upload PDFs and request explanations for challenging concepts they encounter. This functionality extends beyond research papers, allowing users to seek clarification on difficult topics from their coursework, regardless of their academic discipline or level of study.

Challenges

Instructors

While **SciSpace** offers a lot of features, the platform may require instructors to invest some time in familiarizing themselves with its various components. Also, this tool may not be attractive to instructors who are not interested in academic research.

Students

For students, learning how to navigate and utilize the platform can pose a significant challenge. It is not as straightforward as using ChatGPT, requiring a bit more effort to become proficient.

Cost

For now, **SciSpace's** Al Copilot and Al detector are completely free to use.

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Accessibility	Accessibility Standards	Tool meets accessibility guidelines (e.g. local accessibility legislation and/or W3C WCAG 2.0 standards).	Tool has some capacity to meet accessibility guidelines with workaround solutions to accomplish accessibility guidelines	Tool fails to meet accessibility guidelines, or no information of compliance has been made available for the tool.
	Required Equipment	Tool does not require equipment beyond what is typically available (computer with speakers, mic, internet connection, etc.).	Tool requires specialized equipment (e.g. unique device) that likely requires purchase at a low cost.	Tool requires specialized equipment requiring moderate to significant financial investment.
	Financial Impact	All aspects of the tool can be used free of charge.	Aspects of the tool can be used for free with other elements requiring a fee, membership, or subscription by the institution	Use of the tool requires a fee, membership, or subscription-and poses a financial burden on students.

Privacy, Data Security, and FIPPA

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Privacy, Data Protection, and Rights	Sign Up/ Sign In	Use of the tool does not require the creation of an external account or additional login, such that no personal user information is collected and shared.	The tool has been vetted through appropriate channels to ensure strict adherence to policies/standards for protecting the collection and use of personal data by a third-party group.	Personal information to a third party in creating an account is required. There are some questions for protecting the collection and use of such data by the third-party group.
	Data Privacy and Ownership	Users maintain ownership and copyright of their data; the user can keep data private and decide if /how data is to be shared.	Users maintain ownership and copyright of their data; data is shared publicly and cannot be made private.	Users forfeit ownership and copyright of data; data is shared publicly and cannot be made private, or no details provided.
	Archiving, Saving, and Exporting Data	Users can archive, save, or import and export content or activity data in a variety of formats.	There are limitations to archiving, saving, or importing/exporting content or activity data.	Content and activity data cannot be archived, saved, or imported exported.

Additional Resources

Introducing SciSpace — Discover, read, and understand scientific literature!

Tool: Scite Al

Scite AI allows faculty to find references and data when prompted with questions. It also allows the user to find appropriate references when authoring papers. Additionally, it allows the user to search how the articles found or uploaded have been referenced and evaluated by further research (agreed with or contrasted).

Access Scite Al here

Recommended for

- ✓ Daily teaching activities
- ✓ Assessment
- X Student study support
- ✓ Research

Benefit to Teaching and Learning

Scite AI can allow the user to assess references found by connecting them with further research in the area that is either consistent or conflicting with the findings in the paper. This can allow for a deeper dive into the topic without necessarily having prior knowledge and potentially avoid bias in the follow up research that has been performed.

Opportunities for Use in Teaching

As above, this would allow for in-class discussion about a topic and then being able to find specific, related publications to further study the area/topic.

Opportunities for Student Use

As above, this would allow for students to individually or in a group think about a topic and then be able to find specific, related publications to further study the area/topic. Further to this, it would provide a rounder view of the topic as it shows both consistent and conflicting research in the area searched. This would allow for deeper thinking about a topic of which the student(s) may not have had prior knowledge.

Recommended Subject Areas

Any subject area where research is required to complete an assessment (presentations, essays, reports, etc.) would be able to make use of this resource.

Challenges

One caution/limitation of **Scite AI** is the potential bias of the results. However, one benefit to **Scite AI** is there are links to 'Help me understand this research' that provide details about why the articles listed are there. Discussion in class about which articles to use as appropriate for the class should be considered. Although most of the 'see the article' links went to the article, some discussion with students as to how to find the articles using the college's library resources would be advisable.

There are minimal concerns for academic integrity; however, the usual discussions regarding plagiarism, academic integrity should occur, as copying of summaries or portions of the articles may occur, in addition to students not fully assessing whether the recommended resources are relevant to their assignment.

Additionally, discussions about bias in with the tool – specifically, related to how many articles agree with or refute the original articles findings – would be warranted.

Cost

There are both free and paid versions of the software. The differences are:

Free: Paid: (\$20.00 USD/month)

- Can search topics, articles, etc.
- Related references given.
- No analysis of smart citations or how the citation has been used is provided in the free version.
- Can search topics, articles, etc.
- Related reference given.
- Analysis of smart citations and how the citation has been used is provided.

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Accessibility	Accessibility Standards	Tool meets accessibility guidelines (e.g. local accessibility legislation and/or W3C WCAG 2.0 standards).	Tool has some capacity to meet accessibility guidelines with workaround solutions to accomplish accessibility guidelines	Tool fails to meet accessibility guidelines, or no information of compliance has been made available for the tool.

Required Equipment	Tool does not require equipment beyond what is typically available (computer with speakers, mic, internet connection, etc.).	Tool requires specialized equipment (e.g. unique device) that likely requires purchase at a low cost.	Tool requires specialized equipment requiring moderate to significant financial investment.
Financial Impact	All aspects of the tool can be used free of charge.	Aspects of the tool can be used for free with other elements requiring a fee, membership, or subscription by the institution	Use of the tool requires a fee, membership, or subscription-and poses a financial burden on students.

Privacy, Data Security, and FIPPA

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Privacy, Data Protection, and Rights	Sign Up/ Sign In	Use of the tool does not require the creation of an external account or additional login, such that no personal user information is collected and shared.	The tool has been vetted through appropriate channels to ensure strict adherence to policies/standards for protecting the collection and use of personal data by a third-party group.	Personal information to a third party in creating an account is required. There are some questions for protecting the collection and use of such data by the third-party group.
	Data Privacy and Ownership	Users maintain ownership and copyright of their data; the user can keep data private and decide if /how data is to be shared.	Users maintain ownership and copyright of their data; data is shared publicly and cannot be made private.	Users forfeit ownership and copyright of data; data is shared publicly and cannot be made private, or no details provided.

Archiving,	Users can archive,	There are limitations	Content and activity
Saving, and	save, or import and	to archiving, saving,	data cannot be
Exporting	export content or	or importing/exporting	archived, saved, or
Data	activity data in a variety of formats.	content or activity data.	imported exported.

Tool: Sourcely

Sourcely allows the user to place a brief description of the area of research they are interested in/working on and provides publications related to that area. There are filters to allow the user to limit the results to articles within a certain publication range (e.g., dates of publication, etc.).

Access Sourcely here

Recommended for

- ✓ Daily teaching activities
- ✓ Assessment
- ✓ Student study support
- ✓ Research

Benefit to Teaching and Learning

Sourcely could provide a great 'brainstorming start' to a research project. Once the overall topic is decided on, areas of research in that area can be found and investigated to help narrow down the idea and find resources related to it.

Opportunities for Use in Teaching

As above, this would allow for in-class discussion about a topic and then being able to find specific, related publications to further study the area/topic.

Opportunities for Student Use

As above, this would allow for students to individually or in a group think about a topic and then be able to find specific, related publications to further study the area/topic.

Recommended Subject Areas

Any subject area where research is required for any sort of assessment (presentations, essays, reports, etc.) would be able to make use of this resource.

Challenges

One caution/limitation of this Generative AI is the bias of the results in terms of the order they are presented in do not seem to have a reason to them. Sometimes newer articles are first, sometimes older ones. Discussion

about which articles to use as appropriate for the class should be considered. Additionally, with the free version, the links to the articles do not provide access to the articles, but the advertisement for the paid version. Discussion with students as to how to find the articles using the college's library resources would be important.

There are minimal concerns for academic integrity with the free version, as very little is provided to the user other than a short summary of the article. However, this may lead to students making assumptions about the article from the short summary provided and therefore reference inappropriately. As stated above, the links to the articles require the paid version. Awareness of the paid version perhaps bringing students to articles that then seem to need to be bought should be discussed as the library likely has free access to the articles for students.

Finally, usual discussions regarding plagiarism, academic integrity should occur, as copying of summaries or portions of the articles recommended may occur, in addition to students not fully assessing whether the recommended resources are relevant to their assignment.

Cost

There are both free and paid versions of the software. Free provides a summary and suitable sources; Paid is \$36.99/year with ability to paste an entire essay and other features.

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Accessibility	Accessibility Standards	Tool meets accessibility guidelines (e.g. local accessibility legislation and/or W3C WCAG 2.0 standards).	Tool has some capacity to meet accessibility guidelines with workaround solutions to accomplish accessibility guidelines	Tool fails to meet accessibility guidelines, or no information of compliance has been made available for the tool.
	Required Equipment	Tool does not require equipment beyond what is typically available (computer with speakers, mic, internet connection, etc.).	Tool requires specialized equipment (e.g. unique device) that likely requires purchase at a low cost.	Tool requires specialized equipment requiring moderate to significant financial investment.

Financial All aspects of the tool Impact can be used free of charge.	Aspects of the tool can be used for free with other elements requiring a fee, membership, or subscription by the institution	Use of the tool requires a fee, membership, or subscription-and poses a financial burden on students.
--	--	---

Privacy, Data Security, and FIPPA

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Privacy, Data Protection, and Rights	Sign Up/ Sign In	Use of the tool does not require the creation of an external account or additional login, such that no personal user information is collected and shared.	The tool has been vetted through appropriate channels to ensure strict adherence to policies/standards for protecting the collection and use of personal data by a third-party group.	Personal information to a third party in creating an account is required. There are some questions for protecting the collection and use of such data by the third-party group.
	Data Privacy and Ownership	Users maintain ownership and copyright of their data; the user can keep data private and decide if /how data is to be shared.	Users maintain ownership and copyright of their data; data is shared publicly and cannot be made private.	Users forfeit ownership and copyright of data; data is shared publicly and cannot be made private, or no details provided.
	Archiving, Saving, and Exporting Data	Users can archive, save, or import and export content or activity data in a variety of formats.	There are limitations to archiving, saving, or importing/exporting content or activity data.	Content and activity data cannot be archived, saved, or imported exported.

Tool: Speedwrite (Not Recommended)

Speedwrite is a paraphrasing tool (automatic text generator). To create the most accurate output, Speedwrite suggests the user inputs at least 5 paragraphs; these can be collated from different sources and in fact, this is encouraged. Speedwrite uses the word "predict" to refer to that output, as if the tool "predicts" how one might paraphrase the information. Speedwrite's claim to fame is that the output is truly unique and undetectable, as opposed to a tool like ChatGPT where there is no guarantee the output is unique. In addition, users can view various iterations of each "predict" output – it doesn't necessarily just stop at one. If the user wants to see another iteration, they will press "predict" again to see what it comes up with. Speedwrite also cautions its users throughout the tutorial process to check for accuracy. Speedwrite has other related tools available; Speedwrite Creative can complete a similar process using smaller pieces of text for more creative endeavors like writing copy. They also host Wordblast which is predictive text randomizer that allows for novelty in output statements.

Access Speedwrite here

Recommended for

- X Daily teaching activities
- **X** Assessment
- X Student study support
- X Research

Benefit to Teaching and Learning

- Speedwrite has the potential for applications for demonstrating the art of paraphrasing and perhaps for encouraging creativity.
- Speedwrite's branding is centered around obfuscating plagiarism detectors, so in that sense it is not
 necessarily suited to a teaching and learning application.

Opportunities for Use in Teaching

- **Speedwrite** might be used for demonstrating writing/grammar techniques, like how one might express the same statement in several different ways, using different words.
- In that sense, it demonstrates the idea of paraphrasing that may be supportive in student learning of research skills that demand academic integrity and formatting like APA or MLA.
- Further, faculty may also find **Speedwrite** useful to use when aiming to avoid significant repetition in their materials; alternative phrasing or descriptions embody UDL multiple means of representation.

Opportunities for Student Use

Students might also use **Speedwrite** as an instrument of UDL: multiple means of representation. If a student textbook or other resource provides a definition or explanation that is unclear, the student may benefit from seeing it stated in a different way. **Speedwrite** can provide an alternatively worded definition that may increase comprehension.

Recommended Subject Areas

Overall, this is a tool meant for obfuscating plagiarism detectors and is costly, so it is not recommended, however barring those concerns:

- Communications/writing
- Summarizing research
- Non-academic use

Challenges

- The biggest challenge is the cost. There are free alternatives out there that many would-be users likely rely
 on for this purpose instead. Users get one free input, and from there need to pay a costly subscription (\$20
 USD/mo).
- Features: There are various alternatives out there that do the same thing and more (such as grammar-checking, alter tone, etc.) with cleaner interfaces and for cheaper. See: Quillbot (a popular choice among our students).
- Significant concerns about Academic Integrity: it would be almost impossible to discriminate Speedwrite
 usage from natural student writing. The only potential red flag would be inaccuracies. Their branding is
 centered around this particular use ("use this tool to cheat AI detectors!"), so from a teaching and learning
 perspective, the messaging behind this tool and the company's overall tone is inappropriate and
 unprofessional in a teaching and learning environment.
- Outputs do alter tone/intention/tense in ways that make the message or clarity of the original text slightly
 off.
- Outputs depend entirely on what is input by the user; while the "predict" results may finesse the writing, it
 does not insert novel information or conclusions found outside of the original text. In this sense, it is not
 necessarily "smart" AI, but a writing tool or text-generator.

Cost

Users can try one "predict" for free. Essentially, there is no free version and subscriptions cost up to \$20 USD per month but can be prorated by paying annually.

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Accessibility	Accessibility Standards	Tool meets accessibility guidelines (e.g. local accessibility legislation and/or W3C WCAG 2.0 standards).	Tool has some capacity to meet accessibility guidelines with workaround solutions to accomplish accessibility guidelines	Tool fails to meet accessibility guidelines, or no information of compliance has been made available for the tool.
	Required Equipment	Tool does not require equipment beyond what is typically available (computer with speakers, mic, internet connection, etc.).	Tool requires specialized equipment (e.g. unique device) that likely requires purchase at a low cost.	Tool requires specialized equipment requiring moderate to significant financial investment.
	Financial Impact	All aspects of the tool can be used free of charge.	Aspects of the tool can be used for free with other elements requiring a fee, membership, or subscription by the institution	Use of the tool requires a fee, membership, or subscription-and poses a financial burden on students.

Privacy, Data Security, and FIPPA

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Privacy, Data Protection, and Rights	Sign Up/ Sign In	Use of the tool does not require the creation of an external account or additional login, such that no personal user information is collected and shared.	The tool has been vetted through appropriate channels to ensure strict adherence to policies/standards for protecting the collection and use of personal data by a third-party group.	Personal information to a third party in creating an account is required. There are some questions for protecting the collection and use of such data by the third-party group.
	Data Privacy and Ownership	Users maintain ownership and copyright of their data; the user can keep data private and decide if /how data is to be shared.	Users maintain ownership and copyright of their data; data is shared publicly and cannot be made private.	Users forfeit ownership and copyright of data; data is shared publicly and cannot be made private, or no details provided.
	Archiving, Saving, and Exporting Data	Users can archive, save, or import and export content or activity data in a variety of formats.	There are limitations to archiving, saving, or importing/exporting content or activity data.	Content and activity data cannot be archived, saved, or imported exported.
Notes	Speedwrite p	rivacy policy.		

Additional Resources

• THE 13 BEST SPEEDWRITE ALTERNATIVES IN 2023 (FREE & PAID)

Tool: Synthesia

Synthesia is an Al video generator that allows users to create engaging video content with human-like avatars by simply typing in text. In essence, a user can create a video from written video scripts in 5 minutes.

Access Synthesia here

Recommended for

- ✓ Daily teaching activities
- **X** Assessment
- X Student study support
- X Research

Benefit to Teaching and Learning

Synthesia will benefit the learning in a way that it makes it easy to translate a script into a supporting video. This can be handy when trying to explain certain lecture topics and wanting to us video instruction and or guidance for the students. As the development of the video is fairly easy it can be done fairly quickly without too much knowledge of the tool. At this point (June 2023) the operation of the tool is easy but the quality of the avatars and the translation to the script is not of high quality.

Opportunities for Use in Teaching

Opportunities for purposeful use in both/either teaching (faculty-facing) and/or learning (student-facing) and assessments, since **Synthesia** is in essence a video generating tool, it can be used to quickly develop video materials for students, whether this is content, or instruction based.

Opportunities for Student Use

For the students, **Synthesia** could be easy to use as they can work on a project for the course and if the assignment is due in a video format report that it can be produced easily into a professional video developing a script and completing a profession video for the project and the assignment.

Recommended Subject Areas

N/A

Challenges

No major concerns at this point. The avatars are freely available and there are no major issues. One potential challenge is that the tool allows for scripting, therefore faculty would not be able to ensure students developed and learned the CLO's.

Cost

There is a free version and paid version. The paid version allows quick access to the tools.

Accessibility

Synthesia is currently a paid service to access all the tools to develop a professional video.

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Accessibility	Accessibility Standards	Tool meets accessibility guidelines (e.g. local accessibility legislation and/or W3C WCAG 2.0 standards).	Tool has some capacity to meet accessibility guidelines with workaround solutions to accomplish accessibility guidelines	Tool fails to meet accessibility guidelines, or no information of compliance has been made available for the tool.
	Required Equipment	Tool does not require equipment beyond what is typically available (computer with speakers, mic, internet connection, etc.).	Tool requires specialized equipment (e.g. unique device) that likely requires purchase at a low cost.	Tool requires specialized equipment requiring moderate to significant financial investment.
	Financial Impact	All aspects of the tool can be used free of charge.	Aspects of the tool can be used for free with other elements requiring a fee, membership, or	Use of the tool requires a fee, membership, or subscription-and poses a financial burden on students.

subscription by the institution

Privacy, Data Security, and FIPPA

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Privacy, Data Protection, and Rights	Sign Up/ Sign In	Use of the tool does not require the creation of an external account or additional login, such that no personal user information is collected and shared.	The tool has been vetted through appropriate channels to ensure strict adherence to policies/standards for protecting the collection and use of personal data by a third-party group.	Personal information to a third party in creating an account is required. There are some questions for protecting the collection and use of such data by the third-party group.
	Data Privacy and Ownership	Users maintain ownership and copyright of their data; the user can keep data private and decide if /how data is to be shared.	Users maintain ownership and copyright of their data; data is shared publicly and cannot be made private.	Users forfeit ownership and copyright of data; data is shared publicly and cannot be made private, or no details provided.
	Archiving, Saving, and Exporting Data	Users can archive, save, or import and export content or activity data in a variety of formats.	There are limitations to archiving, saving, or importing/exporting content or activity data.	Content and activity data cannot be archived, saved, or imported exported.

Tool: TOME

Tome is an automated presentation creation tool that simplifies designing slides through AI. Tome can be used to generate presentation outlines, full presentations, and design portfolios. Tome generates slides, including text and images, and narratives in response to written prompts, but users can also upload a document and Tome will generate slides based on the document. Users can also embed tweets, gifs, and webpages into slides.

Tome contains ready-made presentation templates and themes and uses AI to generate text, images, and animations from textual instructions.

Access Tome AI here

Recommended for

- ✓ Daily teaching activities
- **X** Assessment
- X Student study support
- X Research

Benefit to Teaching and Learning

Students and instructors can generate engaging presentations with AI-generated text, images, and entire slides within a matter of minutes.

Opportunities for Use in Teaching

- Quick generation of presentations for lessons
- Develop slide decks for screen capture videos

Opportunities for Student Use

- Generate professional-looking presentations from outlines or reports
- Produce digital portfolios of student work for assessments or job-searching
- Slide decks can be shared and collaborated on for group tasks

Recommended Subject Areas

Subjects where students may need to digitally showcase their work (e.g. fine arts, marketing)

Challenges

• Al-generated text and images could be misrepresented as student-generated works

Cost

Free is unlimited for individuals; Pro is \$8 USD/month with additional features.

Accessibility

- No mention of accessibility on their website
- Keyboard access is not intuitive on the web version

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Accessibility	Accessibility Standards	Tool meets accessibility guidelines (e.g. local accessibility legislation and/or W3C WCAG 2.0 standards).	Tool has some capacity to meet accessibility guidelines with workaround solutions to accomplish accessibility guidelines	Tool fails to meet accessibility guidelines, or no information of compliance has been made available for the tool.
	Required Equipment	Tool does not require equipment beyond what is typically available (computer with speakers, mic, internet connection, etc.).	Tool requires specialized equipment (e.g. unique device) that likely requires purchase at a low cost.	Tool requires specialized equipment requiring moderate to significant financial investment.
	Financial Impact	All aspects of the tool can be used free of charge.	Aspects of the tool can be used for free with other elements requiring a fee, membership, or subscription by the institution	Use of the tool requires a fee, membership, or subscription-and poses a financial burden on students.

Privacy, Data Security, and FIPPA

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Privacy, Data Protection, and Rights	Sign Up/ Sign In	Use of the tool does not require the creation of an external account or additional login, such that no personal user information is collected and shared.	The tool has been vetted through appropriate channels to ensure strict adherence to policies/standards for protecting the collection and use of personal data by a third-party group.	Personal information to a third party in creating an account is required. There are some questions for protecting the collection and use of such data by the third-party group.
	Data Privacy and Ownership	Users maintain ownership and copyright of their data; the user can keep data private and decide if /how data is to be shared.	Users maintain ownership and copyright of their data; data is shared publicly and cannot be made private.	Users forfeit ownership and copyright of data; data is shared publicly and cannot be made private, or no details provided.
	Archiving, Saving, and Exporting Data	Users can archive, save, or import and export content or activity data in a variety of formats.	There are limitations to archiving, saving, or importing/exporting content or activity data.	Content and activity data cannot be archived, saved, or imported exported.
Notes	Terms of use and privacy policy did not indicate if users maintain copyright of their data.			

Tool: WordTune

WordTune is an Al-powered writing assistant that helps people create better, more engaging documents. It offers a range of features designed to improve writing quality, speed up the writing process, and make it easier to produce documents that match the needs of the reader.

WordTune uses natural language processing and machine learning to detect errors, suggest edits, reword content, and provide suggestions for improvement. It also provides a range of tools to help with research, formatting, and citation. **WordTune's** features are designed to help make writing easier and more efficient, so that users can create better documents in less time.

Access WordTune here

Recommended for

- ✓ Daily teaching activities
- **X** Assessment
- X Student study support
- ✓ Research

Benefit to Teaching and Learning

- Writing Assistance
 - **WordTune** serves as a reliable and comprehensive writing assistant, helping students improve their grammar, spelling, punctuation, and sentence structure.
- Error Identification
 - **WordTune** advanced algorithms detect and highlight errors in students' writing, including both common mistakes and more nuanced issues.
- Style and Clarity Improvement
 - **WordTune** not only focuses on grammar and mechanics but also provides suggestions for improving clarity, conciseness, and style.
- Learning Opportunities
 - As **WordTune** provides real-time feedback and suggestions, students can learn from their mistakes and gain a deeper understanding of grammar rules and writing conventions. By actively engaging with **WordTune**, students develop their writing skills and build a stronger foundation for future assignments and academic endeavors.
- Independence and Self-Editing Skills
 WordTune encourages students to take ownership of their writing and develop self-editing skills.

- Idea Generation
 - With a blank template and nothing to write, **WordTune** can generate ideas based on what type of writing the user is doing.
- Rewording reading
 - Providing text into **WordTune** has a special section for rewording content. This is especially helpful for people with reading exceptionalities.

Opportunities for Use in Teaching

- Generating instruction/activities
- Giving feedback/marking
- · Writing support for students in need
- Provide writing assistance demonstrations
- Peer editing and collaboration

Opportunities for Student Use

One of the main features of **WordTune** is that it uses the users own writing style in combination with a guideline for the writing format to generate text. If a student and faculty have different settings or implementations with the AI, it may result in varied outcomes that aren't desired.

While the benefits of **WordTune** are obvious to writing, faculty and students could work together to meet the requirements of the task.

Recommended Subject Areas

Areas where editing existing writing or generating thought provoking ideas may be useful but does not impact the goal of the work.

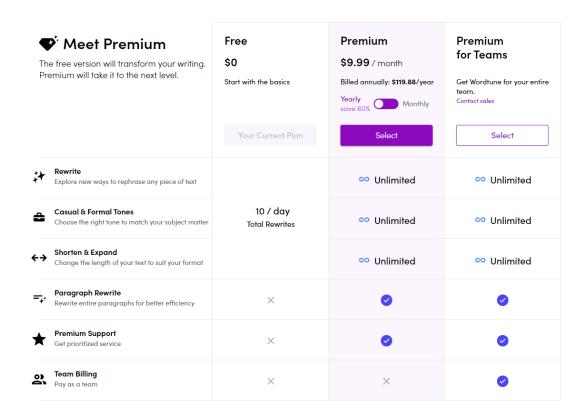
Avoiding subjects where the content of the written work is part of the learning outcomes.

Challenges

Students can generate and edit content with the tool. Any content generated is based on the student but is not their original work.

Cost

Free version is very limited while premium provides full support.



Accessibility

There is no mention of accessibility on their website aside from selling how their tool supports. Through manually testing with JAWS and NVDA, it was found that many items were not labelled properly. It is hard to navigate if completely visually impaired, but possible with keyboard tabbing.

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Accessibility	Accessibility Standards	Tool meets accessibility guidelines (e.g. local accessibility legislation and/or W3C WCAG 2.0 standards).	Tool has some capacity to meet accessibility guidelines with workaround solutions to accomplish accessibility guidelines	Tool fails to meet accessibility guidelines, or no information of compliance has been made available for the tool.

Required Equipment	Tool does not require equipment beyond what is typically available (computer with speakers, mic, internet connection, etc.).	Tool requires specialized equipment (e.g. unique device) that likely requires purchase at a low cost.	Tool requires specialized equipment requiring moderate to significant financial investment.
Financial Impact	All aspects of the tool can be used free of charge.	Aspects of the tool can be used for free with other elements requiring a fee, membership, or subscription by the institution	Use of the tool requires a fee, membership, or subscription-and poses a financial burden on students.

Privacy, Data Security, and FIPPA

Category	Criteria	Works Well	Minor Concerns	Serious Concerns
Protection, and Rights Data Priva and	Sign Up/ Sign In	Use of the tool does not require the creation of an external account or additional login, such that no personal user information is collected and shared.	The tool has been vetted through appropriate channels to ensure strict adherence to policies/standards for protecting the collection and use of personal data by a third-party group.	Personal information to a third party in creating an account is required. There are some questions for protecting the collection and use of such data by the third-party group.
	Privacy	Users maintain ownership and copyright of their data; the user can keep data private	Users maintain ownership and copyright of their data; data is shared publicly and cannot be made private.	Users forfeit ownership and copyright of data; data is shared publicly and cannot

	and decide if /how data is to be shared.		be made private, or no details provided.
Archiving, Saving, and Exporting Data	Users can archive, save, or import and export content or activity data in a variety of formats.	There are limitations to archiving, saving, or importing/exporting content or activity data.	Content and activity data cannot be archived, saved, or imported exported.

76

If you require an alternative format of this guide, contact ${\bf ctl}@durham college.ca.$



