Academic Integrity Tool Pilot Report

Approved by Academic Technology and Instructional Spaces Subcommittee, Fall 2023

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Purpose

Software to identify plagiarized writing is considered a "staple" tool in academic software portfolios. Since at least 2016, the Center for Teaching and Academic Technology (CTET) at Sonoma State University (SSU) has licensed Turnitin, which allows instructors to evaluate work submitted by a student via Canvas for plagiarism. In 2024, the campus's license to Turnitin expires. In order to ensure that instructors have access to academic technology that best supports their teaching and students' learning, in partnership with the Academic Technology and Instructional Spaces Subcommittee (ATISS), CTET conducted an evaluation of two academic integrity tools: Turnitin and CopyLeaks. In addition, with the emergence of freely accessible generative artificial intelligence tools like ChatGPT, Bard, and Scribe, academic integrity tools have embedded generative AI content detection services, however, the effectiveness of said detections is unknown. Therefore, the purpose of ATISS and CTET's evaluation is two-fold:

1. Identify an academic integrity tool that will be the best fit for SSU for the coming 1-3 years, taking into account features, ease of use, stability, integration with other SSU software systems, and cost.
2. Evaluate whether AI generated content detection tools should be enabled as part of our future academic integrity service for campus.

Methods

Data collection

The evaluation team used multiple methods to ensure recommendations were well-informed. Data collected included technical testing, campus surveys, tool demonstrations, and a pilot cohort.

Technical Testing

CTET submitted a variety of writing samples to be evaluated by both Turnitin and CopyLeaks for testing. Samples included fully original writing, fully original writing with quotations, original writing written with AI help, partially original writing, partially original writing written with AI help, fully plagiarized writing, and fully AI writing.

Campus Surveys

Surveys were distributed to Sonoma State faculty and students to understand use and perception of current academic integrity tools and generative AI tools.

Tool Demonstrations

CTET hosted demonstrations and comparisons of both Copyleaks and Turnitin. Each session lasted one hour, with a "scripted" demonstration for 30 minutes, and 30 minutes dedicated to open discussion and exploration.

Pilot Cohort

The evaluation team recruited 8 faculty to participate in an active comparison of Turnitin and Copyleaks. All pilot participants agreed to use both tools during the pilot period for different assignments and completed short surveys evaluating each tool individually.

Evaluation & Results

Technical Testing

Turnitin and CopyLeaks's evaluation of submitted writing samples were scored against a rubric to assess each tools' ease of use, effectiveness, and compliance with California State University regulations. Results from the rubric are detailed in the table below:

Criteria	Turnitin	CopyLeaks
Does it detect plagiarized text in texts?	Yes	Yes

What evidence or data does the product have that shows its effectiveness?	For AI: None	For AI: None
How robust is the database(s) against which it compares submitted texts?	More robust	Robust
Does it document evidence to support its plagiarism detection?	Yes, except for AI	Yes, except for AI
Is it intuitive and easy to use?	Yes	Somewhat
Is the integration with our existing tools clean and easy?	Yes	Yes
Is the tool reliable and robust?	Yes	Yes
Is the tool affordable?	Somewhat	Yes
Do the data dashboard, usage metrics, and data analytics provide individual faculty with actionable insights to improve students' learning?	No	No
Do the data dashboard, usage metrics, and data analytics let SSU know what value it is getting from the tool?	No	No
Does the tool work in the most popular SSU browsers?	Yes	Yes
Does the tool provide help desk services that are timely, responsive, and effective for students, faculty, staff, and administrators?	Yes	Yes
Will the tool provide training and professional development for students, faculty, and staff to ensure optimal efficiencies and effectiveness in deploying academic integrity tools?	Yes	Yes
Do the tools have mechanisms in place to improve their system in response to faults and/or changes in technology?	Yes	Yes
Do the tools provide full access and control of campus data?	All data except data used to train AI model	All data except data used to train AI model
Do the tools meet CSU accessibility requirements?	Yes	Yes
Do the tools meet CSU privacy and security requirements?	Yes	Yes
How accurate is the tool's AI detection?	Somewhat	Somewhat
Is it easy to read the tool's AI detection result?	Yes	Somewhat

Additionally, CTET tested each tool for artificial intelligence detection. CTET submitted anonymous student papers from Spring 22 (before the release of ChatGPT), Fall 22 (during the release of ChatGPT), and Spring 23. Copyleaks reported a higher percentage of student work containing artificial intelligence, even in instances when work was submitted prior to the release of the most popular generative artificial intelligence tool.
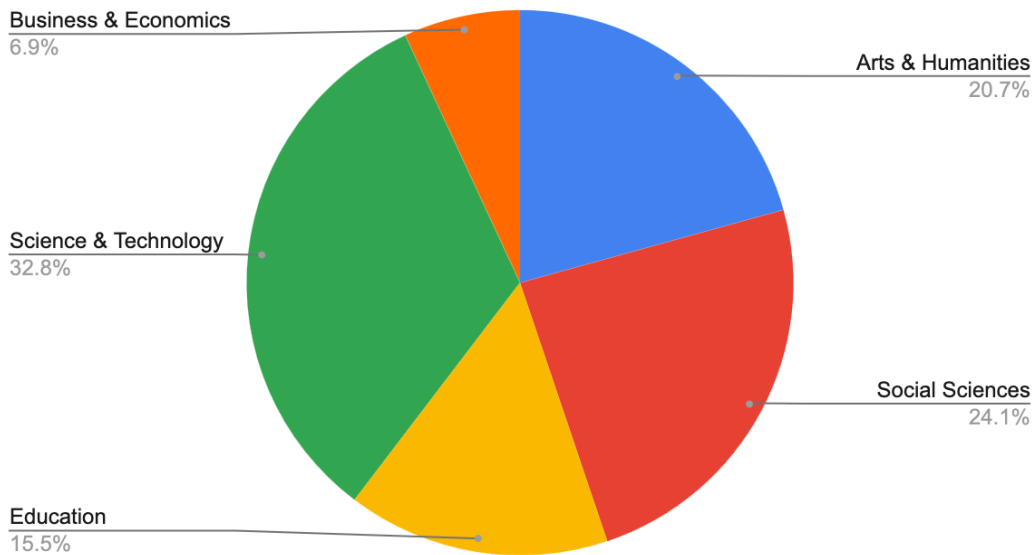
Campus Surveys

The evaluation team distributed two surveys: one to faculty at Sonoma State, and one to students.

Faculty Survey

The faculty survey had 58 complete responses, with representation from each school.

School Affiliation

Business & Economics
6.9%

Arts & Humanities
20.7%

Science & Technology
32.8%

Social Sciences
24.1%

Education
15.5%

Response distribution by school

The majority of respondents (90%) regularly had students submit homework assignments via Canvas, however, only a little more than half of respondents use (52%) or have used (64%) Turnitin to assess student integrity. For faculty that have used Turnitin, seventy-three percent were satisfied with the experience. Respondents cited Turnitin's ease of use, and ability to detect plagiarism as reasons for their satisfaction with the tool. For those not satisfied with Turnitin, they described that the tool diminished their ability to build trust between the instructor and student, and were concerned that Turnitin infringed on students' intellectual property rights. About half of respondents (53%) believe that Turnitin reduces plagiarism. The majority of respondents (67%) consider plagiarism to be a moderate or large problem at Sonoma State.

Regarding generative artificial intelligence, responses were more distributed.

Overall, what is your perspective on AI?

Prefer not to answer
1.9%

Positive
25.9%

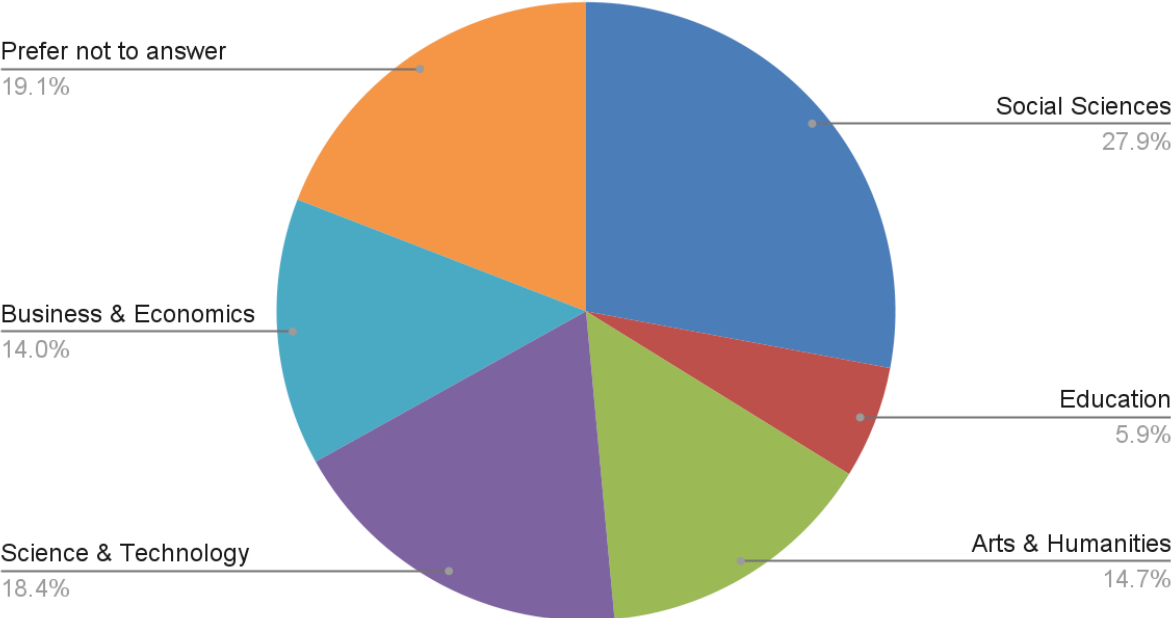Negative
29.6%

Neutral
42.6%
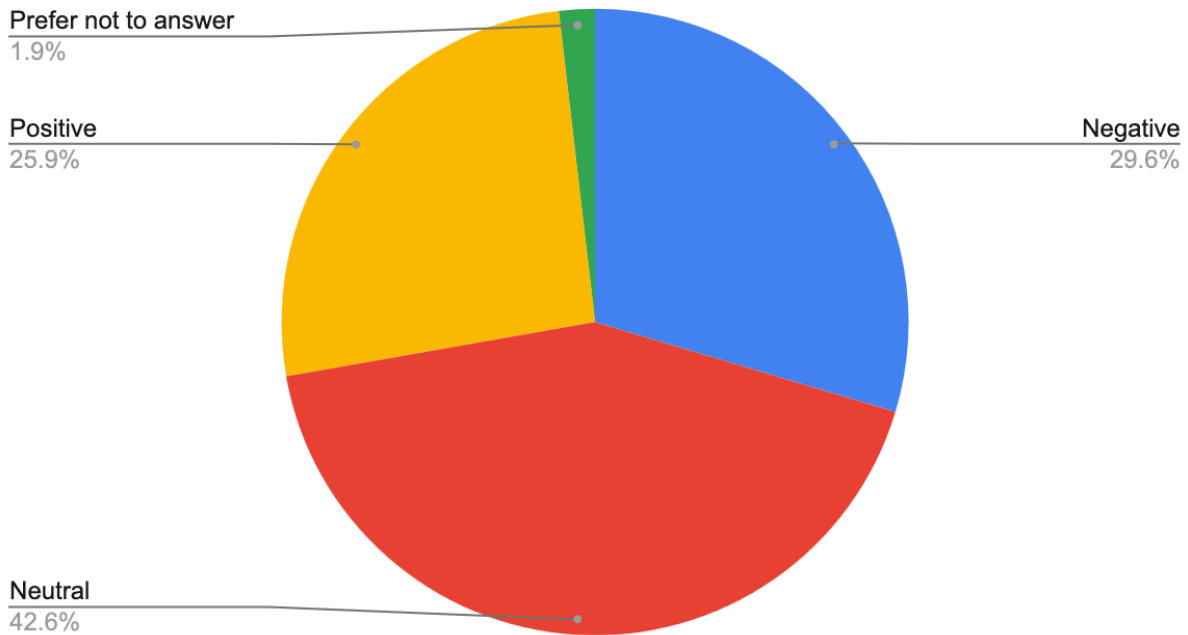
Response distribution by perspective

When asked for a detailed explanation about their perspective regarding artificial intelligence, respondents that saw the technology as positive noted that artificial intelligence would be a useful tool, and that instructors hold a responsibility to instruct students about the new technology, or learning about it for themselves. Respondents who held a negative perspective on artificial intelligence stated that artificial intelligence encourages plagiarism and is detrimental to student learning. A little over half of respondents (59%) believe that they have experienced incidents of students submitting artificial intelligence-generated work as their own. Sixty-five percent of respondents do consider artificial intelligence an issue on Sonoma State's campus.
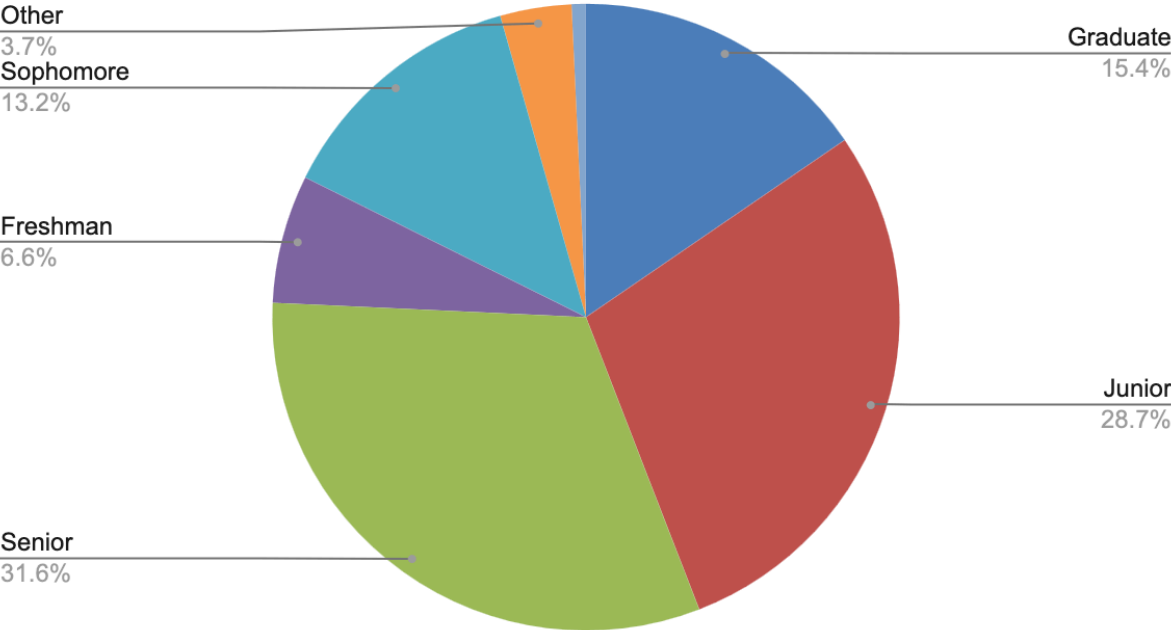
Student Survey

The student survey had 163 responses, with representation from each school and year.

Count of School Affiliation

Prefer not to answer
19.1%

Social Sciences
27.9%

Business & Economics
14.0%

Education
5.9%

Science & Technology
18.4%

Arts & Humanities
14.7%

Response distribution by school affiliation

What is your year in school?

Other
3.7%

Sophomore
13.2%

Graduate
15.4%

Freshman
6.6%

Senior
31.6%

Junior
28.7%

Response distribution by year

When asked about their feelings regarding generative artificial intelligence, almost half of respondents (49%) said that they like the tools, and 47% indicated that they have used artificial intelligence in their courses at Sonoma State. When asked how they used artificial intelligence, the majority of respondents stated they used tools to help organize, structure, or proofread their work. Other respondents reported using the tools for brainstorming or idea generation, as well as a tool to clarify or explain complex course topics.

Regarding plagiarism detection software, about half of the respondents (48%) found instructors' use of the tool to be ethical. Respondents did agree that the tool should be used to detect plagiarism, however, there were many respondents who also provided a caveat that the tool can produce false positives, and instructors should take a critical look at the results produced by Turnitin. It is also important to note that many respondents noted that the use of a plagiarism detection tool to detect use of generative artificial intelligence in student work would be unethical, as artificial intelligence detection software has 'a higher incidence of false positives.'[1]

Tool Demonstrations

There were 0 attendants for the hosted pilot demonstrations, and therefore, no data could be collected.

Pilot Cohort

8 total faculty completed a pilot comparing Turnitin and Copyleaks. Overall, the faculty in the pilot found Turnitin easier to use than Copyleaks. A summary of the responses from pilot faculty is listed in the table below, 1 being the lowest ranking and 3 being the highest.

Question: "How easy was it to…"	Turnitin Average	Copyleaks Average
…determine in advance whether or not the tool was turned on for your Canvas assignment?	2.13	1.75
…understand the tool's plagiarism detection settings?	2.86	2.57
…understand the tool's "score" or other simple assessment of student plagiarism?	2.63	2.13
…understand the tool's report about student plagiarism?	2.75	2.13
…understand the tool's report specifically about AI plagiarism?	2.63	2

[1] https://www.k12dive.com/news/turnitin-false-positives-AI-detector/652221/

Question: "How easy was it to…"	Turnitin Average	Copyleaks Average
Now that you've used the tool to evaluate student work for plagiarism, how do you feel about it?	2.63	1.63

Recommendation

Given all the data collected, at this time, ATISS is recommending that the campus continue a contract with Turnitin, rather than switch to CopyLeaks. Both tools have necessary account features, are stable resources, and integrate with other SSU software systems. This being said, CopyLeaks is a more affordable tool: Copyleaks would cost SSU roughly $15,500 in its first year, or roughly 75% of Turnitin's cost. However, in looking at the data collected by the pilot cohort, Turnitin ranked higher in ease of use in every category. However, considering workload in switching to a new tool such as faculty training and support, as well as integrating tools with SSU systems, the cost savings is negligible.

Regarding whether AI generated content detection tools should be enabled as part of our future academic integrity service for campus, ATISS recommends that AI content detection tools be turned on **after** campus has developed structures, protocols, and training for faculty on how to interpret and handle AI detection. Currently, faculty do not have guidance on navigating an instance when they detect AI in students' work and students have shared experiences of being falsely accused of using AI or consider AI detection tools to be inaccurate. Campus entities such as the dispute resolution board, the Center for Teaching and Educational Technology, as well as schools and departments need to engage in conversations surrounding AI, the use of AI in the classroom and establish protocols for instances when AI is detected in student work. Once an AI detection tool is turned on, campus should continue to engage in conversations discussing how faculty should address or begin conversations with students when AI is detected, and how to interpret results from AI detection tools.