Laura Sanders and Barbara Whiston
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CPI

AI FOR LIBRARY COLLECTION ANALYSIS

A Pilot Project



WHO?





Laura Sanders

Barbara Whiston

Friends, colleagues, school librarians

WHERE?

Lower Canada College

Fully independent private K-12 school in the NDG borough of Montreal



Fig. 1. Lower Canada College, n.d.

WHERE?

Two Libraries

Junior Library

270 students / 11,000 circs per year



Golden Library

625 students / 8,600 circs per year



WHY?

Challenges of School Librarianship



The nature of the role

- Isolation
- Employment status
- Limited time, resources & support
- Juggling all aspects of the library role

WHY?

AI Literacy



Fig. 2. *Two librarians learning to use AI.*

COLLECTION OVERVIEW

Junior Library

6,194 print volumes

- Picture books
- Albums
- ER
- PL & LF
- Chapter Books
- Romans
- Graphic Novels
- BD
- E Non-Fiction & Documentaires
- Non-Fiction & Documentaires

Golden Library

5,200 print volumes

- Adult Fiction
- Young Adult Fiction
- Romans
- Graphic Novels
- Bandes-dessinées
- Non-Fiction
- Spanish (fiction and non-fiction)
- Mandarin (new this year, fiction and non-fiction)

COLLECTION OVERVIEW, CONT.

Digital Collection
(Shared by both libraries, mostly English)



Holdings

- 2,653 ebooks
- 159 audiobooks
- 268 magazines

Access Levels

- Juvenile
- Young Adult
- Adult

METHODOLOGY

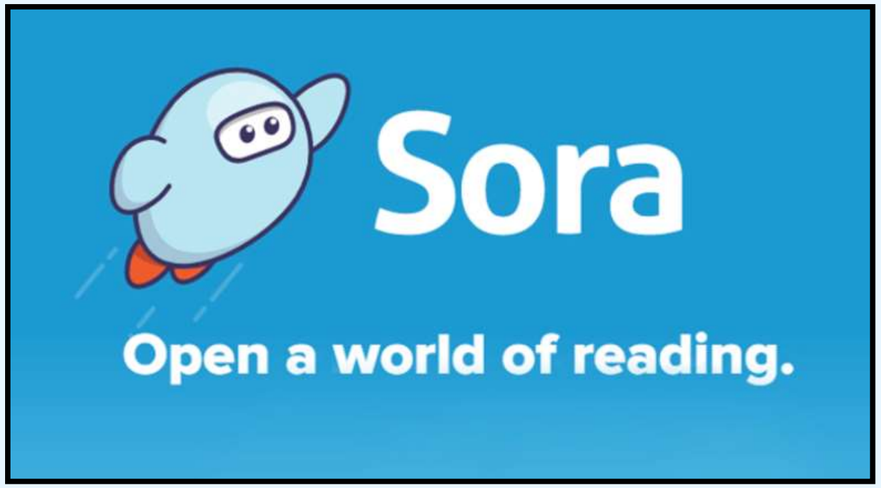
Barbara, Junior Library

Laura, Golden Library



METHODOLOGY CONT.

DESTINY DISCOVER



METHODOLOGY CON'T...

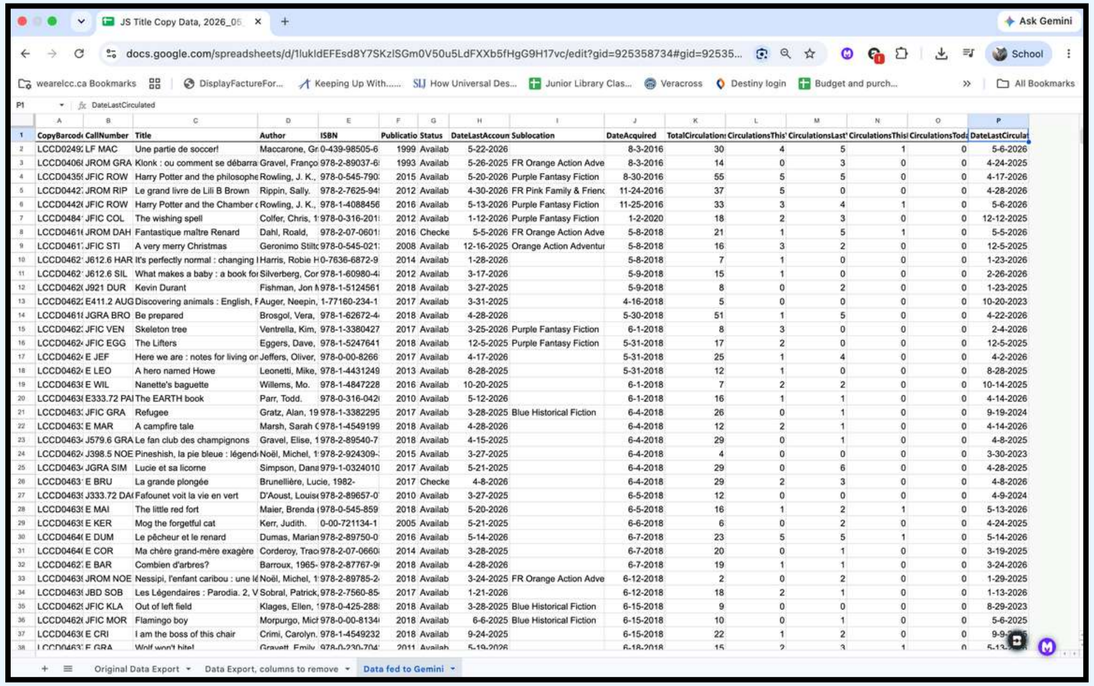
Barbara, Junior Library

Print, Title/Copy Data

Print

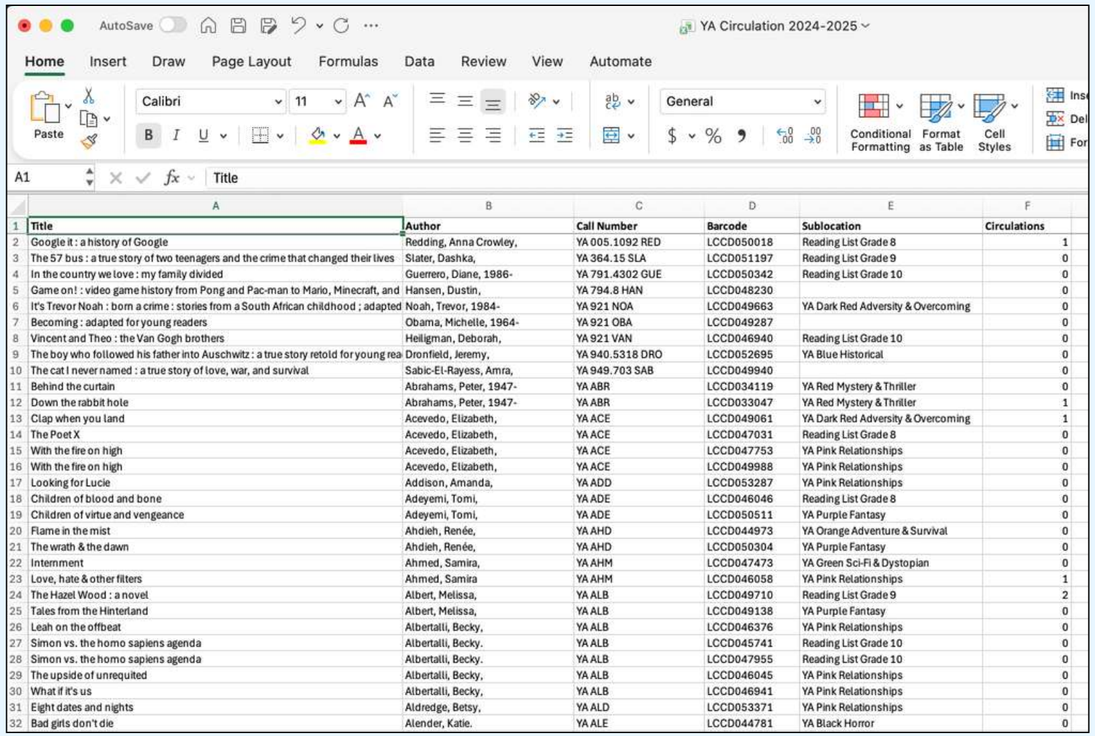
Exported

- one spreadsheet including circulation from the past three school years from Follett Destiny.
- one spreadsheet detailing the collection holdings.



METHODOLOGY CON'T...

Laura, Golden Library



	A	B	C	D	E	F
1	Title	Author	Call Number	Barcode	Sublocation	Circulations
2	Google it : a history of Google	Redding, Anna Crowley,	YA 005.1092 RED	LCCD050018	Reading List Grade 8	1
3	The 57 bus : a true story of two teenagers and the crime that changed their lives	Slater, Dashka,	YA 364.15 SLA	LCCD051197	Reading List Grade 9	0
4	In the country we love : my family divided	Guerrero, Diane, 1986-	YA 791.4302 GUE	LCCD050342	Reading List Grade 10	0
5	Game on! : video game history from Pong and Pac-man to Mario, Minecraft, and	Hansen, Dustin,	YA 794.8 HAN	LCCD048230		0
6	It's Trevor Noah : born a crime : stories from a South African childhood ; adapted	Noah, Trevor, 1984-	YA 921 NOA	LCCD049663	YA Dark Red Adversity & Overcoming	0
7	Becoming : adapted for young readers	Obama, Michelle, 1964-	YA 921 OBA	LCCD049287		0
8	Vincent and Theo : the Van Gogh brothers	Heiligman, Deborah,	YA 921 VAN	LCCD046940	Reading List Grade 10	0
9	The boy who followed his father into Auschwitz : a true story retold for young rea	Dronfield, Jeremy,	YA 940.5318 DRO	LCCD052695	YA Blue Historical	0
10	The cat I never named : a true story of love, war, and survival	Sabic-El-Rayess, Amra,	YA 949.703 SAB	LCCD049940		0
11	Behind the curtain	Abrahams, Peter, 1947-	YA ABR	LCCD034119	YA Red Mystery & Thriller	0
12	Down the rabbit hole	Abrahams, Peter, 1947-	YA ABR	LCCD033047	YA Red Mystery & Thriller	1
13	Clap when you land	Acevedo, Elizabeth,	YA ACE	LCCD049061	YA Dark Red Adversity & Overcoming	1
14	The Poet X	Acevedo, Elizabeth,	YA ACE	LCCD047031	Reading List Grade 8	0
15	With the fire on high	Acevedo, Elizabeth,	YA ACE	LCCD047753	YA Pink Relationships	0
16	With the fire on high	Acevedo, Elizabeth,	YA ACE	LCCD049988	YA Pink Relationships	0
17	Looking for Lucie	Addison, Amanda,	YA ADD	LCCD053287	YA Pink Relationships	0
18	Children of blood and bone	Adeyemi, Tomi,	YA ADE	LCCD046046	Reading List Grade 8	0
19	Children of virtue and vengeance	Adeyemi, Tomi,	YA ADE	LCCD050511	YA Purple Fantasy	0
20	Flame in the mist	Ahdieh, Renée,	YA AHD	LCCD044973	YA Orange Adventure & Survival	0
21	The wrath & the dawn	Ahdieh, Renée,	YA AHD	LCCD050304	YA Purple Fantasy	0
22	Internment	Ahmed, Samira,	YA AHM	LCCD047473	YA Green Sci-Fi & Dystopian	0
23	Love, hate & other filters	Ahmed, Samira	YA AHM	LCCD046058	YA Pink Relationships	1
24	The Hazel Wood : a novel	Albert, Melissa,	YA ALB	LCCD049710	Reading List Grade 9	2
25	Tales from the Hinterland	Albert, Melissa,	YA ALB	LCCD049138	YA Purple Fantasy	0
26	Leah on the offbeat	Albertalli, Becky,	YA ALB	LCCD046376	YA Pink Relationships	0
27	Simon vs. the homo sapiens agenda	Albertalli, Becky.	YA ALB	LCCD045741	Reading List Grade 10	0
28	Simon vs. the homo sapiens agenda	Albertalli, Becky.	YA ALB	LCCD047955	Reading List Grade 10	0
29	The upside of unrequited	Albertalli, Becky,	YA ALB	LCCD046045	YA Pink Relationships	0
30	What if it's us	Albertalli, Becky,	YA ALB	LCCD046941	YA Pink Relationships	0
31	Eight dates and nights	Aldredge, Betsy,	YA ALD	LCCD053371	YA Pink Relationships	0
32	Bad girls don't die	Alender, Katie.	YA ALE	LCCD044781	YA Black Horror	0

Collection Statistics – Historical

Print

Exported Excel files for each of the previous five school years from Follett Destiny. All categories except Mandarin.

Digital

Exported Excel files for the previous five school years:

Categories:

Adult Fiction
Adult Non-Fiction
YA Fiction
YA Non-Fiction

User Types:

Young Adult
Adult

PROMPTING METHODOLOGY

Barbara, Junior Library

“I am an elementary school librarian in an elite private elementary school in Montreal Quebec Canada. Analyze the circulation data in this file and identify borrowing trends and suggest areas that need to be developed or weeded. “

Iterative refinement:
“If I tell you that almost all French circulation is related to class reading requirements, where graphic and even illustrated novel reading is discouraged, how would that impact the suggested Next Steps?”

Laura, Golden Library

Started general: “Please identify trends in the data.”

Gradually iterated to add context as necessary:

- Renovation affecting print circulation.
- French collection a requirement despite low circulation.
- Genrefication of Adult Fiction only partially complete.

USEFUL INSIGHTS

Junior Library

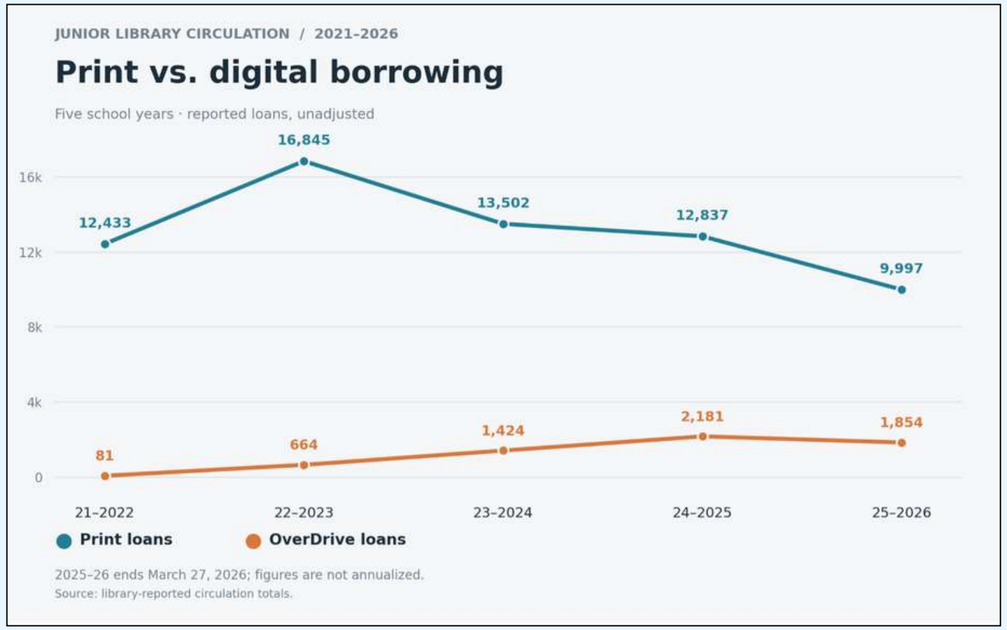


Fig. 3. *Junior Library Borrowing: 2021-2026.*

Golden Library

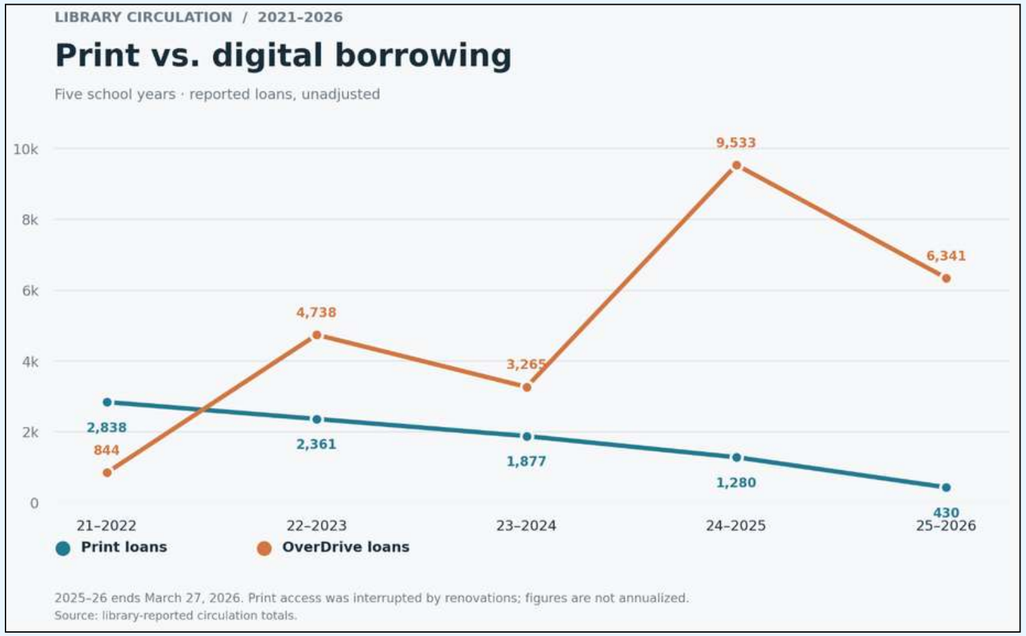


Fig. 4. *Golden Library Borrowing: 2021-2026.*

USEFUL INSIGHTS

Junior Library

Confirmed subjective instinct, but little added value

- Series, graphics, and quick snippet books like Guinness World Record Books get the most traction
- A lot of dead wood in the Romans section
- Rejuvenate series

Useful insights:

- Genrefication of fiction increased circulation, except in one category
- Suggested how to tweak that category to improve circulation
- Suggested dividing one genre into 3 subgenres
- Cataloguing inconsistencies mitigated the value of AI analysis: Substantial clean up of MARC records is required across the print collection.

Golden Library

Circulation has shifted steadily toward digital borrowing over the last five years.

- Students read graphic novels, manga, and BD formats.
- Our students read entire series as quickly as possible.
- Our students read a lot of romance.
- Fantasy romance is the most popular genre in both print and digital, but most students want to read it digitally.
- The collection has a lot of dead weight. 56% of the Adult Fiction section hadn't circulated in five years, along with 62% of Non-Fiction. The Spanish collection has not circulated at all since 2023.

ISSUES



Fig. 5. *Two Frustrated Librarians*

ISSUES

Barbara, Junior Library

Gemini

- arbitrarily truncated the dataset
- argued with me when I challenged it
- could not identify or handle French text
- could not identify non-fiction by either ISBN or call number so did not help identify gaps
- could not accurately analyze collection or usage by document language
- had an adult-viewpoint bias that limited the usefulness of its elementary school collection organization decisions
- Gemini was analyzing metadata that was not visible in the dataset.

Laura, Golden Library

- The free Gemini Educator account could not produce a report (data overload?).
- Gemini hallucinated reasons behind trends, e.g., a “concerted French department curriculum initiative” in 2023-2024.
- Made recommendations without understanding the full context (ie. “French digital checkouts are almost entirely dominated by *Astérix*.”)
- Attributed some collection changes to our recent renovation, even if those changes happened before it.

NEXT STEPS

Barbara, Junior Library

- Completed genrefication of Romans in the hopes of boosting circulation of remaining ‘dead wood’
- Revitalized and completed popular series
- Prioritize the consistency, completeness, and accuracy of MARC records related to language and series info
- Conduct Gemini analyses of the digital collection

Laura, Golden Library

- Continue to weed outdated non-fiction as well as YA fiction.
- Speak to Spanish teachers about collection; if it’s not needed, weed it.
- Purchase more manga, graphic novels, BDs and Middle Grade
- Purchase more YA romance
- Observe how the new library space impacts the collection and borrowing
- Observe how the transition of students in Grades 7 and 8 from iPads to laptops affects OverDrive circulation.

PROMPTING FOR RELIABLE OUTPUTS

A Avoid any unnecessary data

To limit hallucinations, limit the data you share with the AI, and tell it explicitly to consider only that data

L Let it know as precisely as possible the required output

- “Cite your sources.”
- “If unsure, state uncertainty.”
- ‘If you can’t confirm, say so.’

I Iterate

Make your prompts progressively more precise

V Verify, validate

Validate results using your own or another analysis; challenge the AI if the result seems off

E Ethics

Protect student information; prompt for inclusive results and neutral language

LESSONS LEARNED

Barbara, Junior Library

- Explore creating custom Follett reports to provide more targeted data for analysis
- Will analyze smaller, more targeted datasets, and specify in the first prompt that Gemini must analyze the complete dataset
- Will specify that Gemini should base its recommendations on the point of view of an elementary school student
- Will challenge even those findings that align with my expectations or ‘common sense’

Laura, Golden Library

- Include circulation of Juvenile titles in my report.
- Provide more specific context of collection in initial prompt.
- Create a Gemini Skill going forward to standardize the analysis and report generation.
- Begin each analysis by providing as much context about changes or extenuating circumstances as possible.

CONCLUSION



AI helped confirm patterns we'd already noticed in our collections and, to a lesser extent, identify trends we hadn't.

Analyzing its 'mistakes' uncovered inconsistencies in our MARC records. Interestingly, this involved MARC fields that were not visible in the dataset.

Refine queries iteratively, providing as much context as possible.

Verify and challenge AI responses rigorously.

We look forward to exploring the AI that is native to our LIS once it becomes available in Canada and comparing its results to external AI platforms.



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THANK YOU!



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