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STUDENT JOURNEY

Enhancing Library Services: Collaborative AI for Resource Discovery and Impact Analysis

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How AI is helping us support our students and shape our services

> 58% of the 2025 Big Talk to the Library student respondents reported using AI to support their learning. Students expressed a preference for AI-enabled Library services that make searching for full-text reading, easier and faster.

Leverage both human-in-the-loop expertise and AI automation efficiencies

How the Library is using AI to:

help students discover their reading resources

↓

help us understand their experience of using them

↓

use these insights to shape our services

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Context and challenges

Shift from print-based scholarly publishing to digital subscriptions

- Greater resource availability
- Access is more complicated
- Different platforms, protocols
- Fragmented discovery experience

Make it easier for students to find and read full-text Library subscribed content

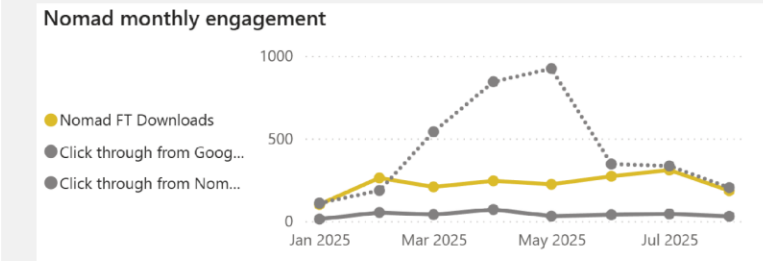
Leverage rich, context relevant qualitative feedback insights to inform service offers

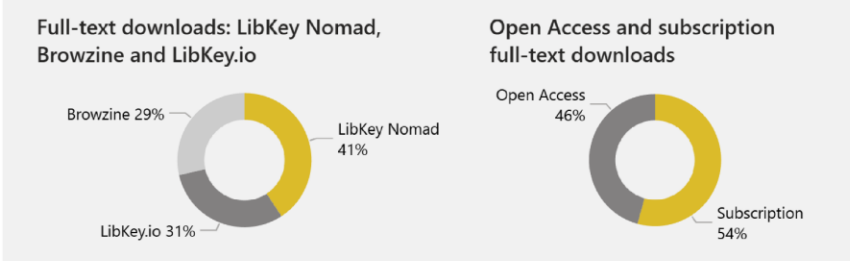
- Staff resource availability
- Domain expertise
- Time resource
- Scale of qualitative analysis

Adopt more efficient, thematic analysis solutions - maintain accuracy and scale access

AI resource discovery: LibKey

1070 search hours saved





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LibKey

AI-enabled discovery tool that makes it quicker and easier for students to access full-text reading: subscribed and open access

- Single click linking to full-text
- Integrated within Library Search
- **LibKey Nomad** browser extension to automatically detect subscribed content, regardless of search location
- **LibKey Browzine**: easy-to-use journal search interface with citation tracking and reference management tool integration
- **LibKey.io**: instant full-text access via DOI

AI resource discovery: Research Assistant

- **Natural language searching**
- **Search of abstracts**
- **Top 5 matching sources**

- **Summarises abstracts**
- **Single click links to reading**
- **Filter to full-text**

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AI Research Assistant

AI Retrieval Augmented Generation (RAG) natural language searching tool - supplements Library Search

- Searches a Central Discovery Index - over 5 billion records from thousands of publishers, aggregators and repositories
- Available within the Library Search webpage
- Promotes engagement with our subscribed reading content - filter functionality to search for full-text Library subscribed resources

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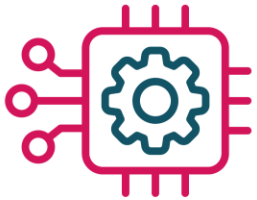
AI thematic analysis: ‘collaborative’

domain expertise + AI thematic analysis

Research that is developing two AI models

Model 1:
NLP Convolutional Neural Network (CNN)

- deep learning
- works well with smaller datasets
- supervised - domain expertise to code sample data
- high accuracy, interpretable, actionable outcomes
- 0.70 to 0.75 F1-Score
- 74% prediction accuracy



Model 2:
NLP Topic Model (Latent Dirichlet Allocation)

- machine learning
- works better with larger datasets
- unsupervised - no need to code sample data
- grouped themes, less interpretable and actionable
- 0.67 Coherence score

Human-in-the-loop ‘collaborative’ AI · student-led discovery · ethical: algorithm transparency and control · legal: data privacy, storage use and re-use

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Thank you for your time

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