

Collaborative and Connected Data Strategies at University of Sunderland Library

Frameworks for People and Data

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University of Sunderland Library



Business Context

Leverage more of our Library data:

- develop system-based data insights
- combine with student feedback insights

Make best-value use of our data to inform decision-making, shape our services and offer better student experiences.

- **Tools and skill sets:**
Power BI, Python and Alma Data Visualisation (DV).
- **Analysis examples:**
Reading list engagement, collection cost-per-use analysis, SCONUL dashboards, laptop loan engagement, LibKey usage, 'SURE' Open Access repository dashboard, departmental annual reporting, qualitative student survey analysis.

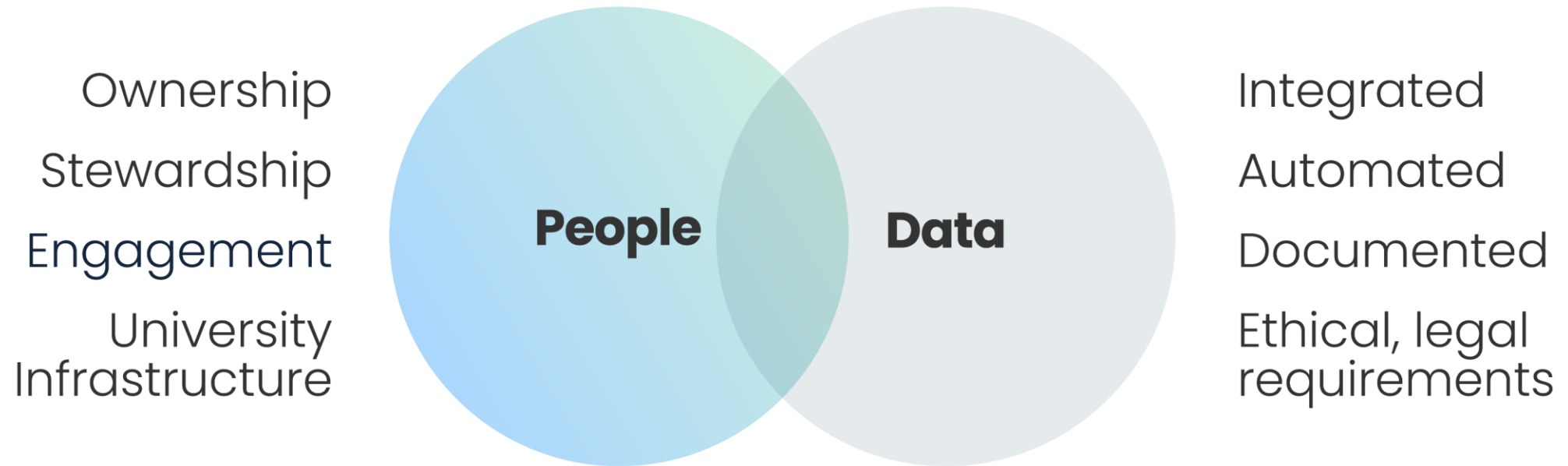
**Agile,
self-service
data insight
access**

**Minimise
resource and
maximise
efficiency**

**Safe,
secure and
trustworthy
data**

People and Data

(a framework for people, engagement and analytic governance)



people collaborations | share knowledge | understand requirements | decision-makers, users, developers
governance frameworks to manage analytic selection, development, maintenance and engagement

People Frameworks: **Ownership**

(a framework for people, engagement and analytic governance)

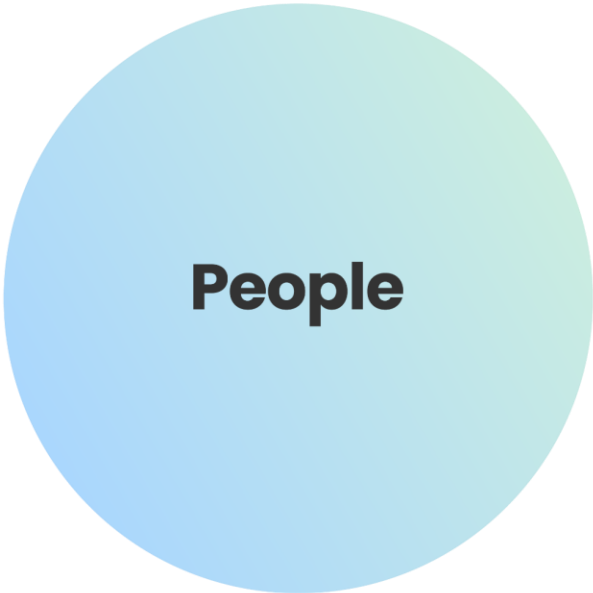


people collaborations | share knowledge | understand requirements | decision-makers, users, developers
governance frameworks to manage analytic selection, development, maintenance and engagement

People Frameworks: **Stewardship**

(a framework for people, engagement and analytic governance)

Ownership
Stewardship
Engagement
University
Infrastructure



People

Frameworks

Standardised solution request form

Criteria to inform analysis type, content, validation and maintenance.

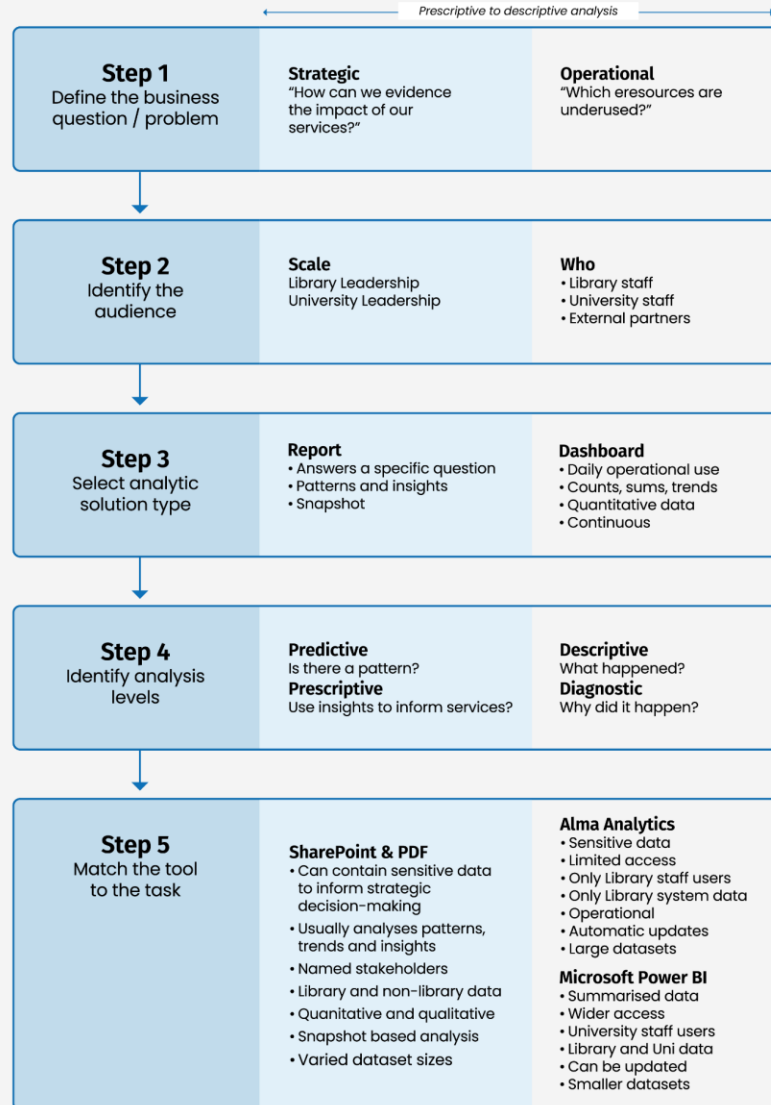
Expectations for solution ownership and requirements identification

Defined, accessible metrics and metadata documentation.

people collaborations | share knowledge | understand requirements | decision-makers, users, developers
governance frameworks to manage analytic selection, development, maintenance and engagement

The 5-Step Library Analytics Decision Flow

University of Sunderland Library Analytics 2025/26



Library Analytics Request Form

To ensure new analytics solutions align with our strategic priorities and comply with ethical and legal data governance, requests for data (dashboard) solutions now need to be requested through and approved by the Library Analytic Steering Group. Please complete the questions on this form which will help the group understand your requirements and offer a best fit solution.

Please allow the group up to 4 weeks to process your request.

If you'd like to know more about how the group can support you, please contact the group members:
Michelle Halpin, Leigh Richardson, Hattie Blenkinsap, Harriet Davidson, Leanne Young, Ian Frost, Klaire Purvis.

Hi, Michelle. When you submit this form, the owner will see your name and email address.

* Required

1. Who is the analytic solution owner / requestor? *

Enter your answer

2. Why do you need the analytic solution (what business problem are you solving with it)? *

Enter your answer

3. Who will need to use the analytic solution? *

Enter your answer

4. How often will the analytic solution need to be updated? *

Select your answer

5. Do you know where the data for the solution is stored? *

☐ Alma

☐ External vendor platform / email request

☐ SharePoint file

☐ I'm not sure where the data is

☐ Other

☐ Send me an email receipt of my responses

Submit

Microsoft 365

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LibKey Engagement

Published 2/12/2026

Solution Title: LibKey Engagement

Location	Library SharePoint Site
Format	Dashboard
Audience	All University Staff
Owner	Library Collections and eResources
Developer	Digital Services & Content Developer
Refresh Type	Manual
Refresh Schedule	Monthly
Refresh Responsibility	Digital Services & Content Developer
Analysis Tool	Power BI
Analysis Type	Insights
Data Owner	External
Data Format	CSV
Data Type	Quantitative

Solution Metrics:

1. Total full-text downloads
2. Search time hours saved
3. % Downloads via Library Search
4. % Full-text downloads by LibKey tool
5. % Full-text downloads by OA and subscription
6. Monthly full-text downloads by LibKey tool
7. Click throughs from Google Scholar and Nomad
8. Nomad banner view to full-text conversion rate
9. Browzine visits to download conversion rate
10. Journal level OA and subscription download comparison
11. Title level usage

[Return to Directory](#)[Open the dashboard](#)

LibKey Engagement

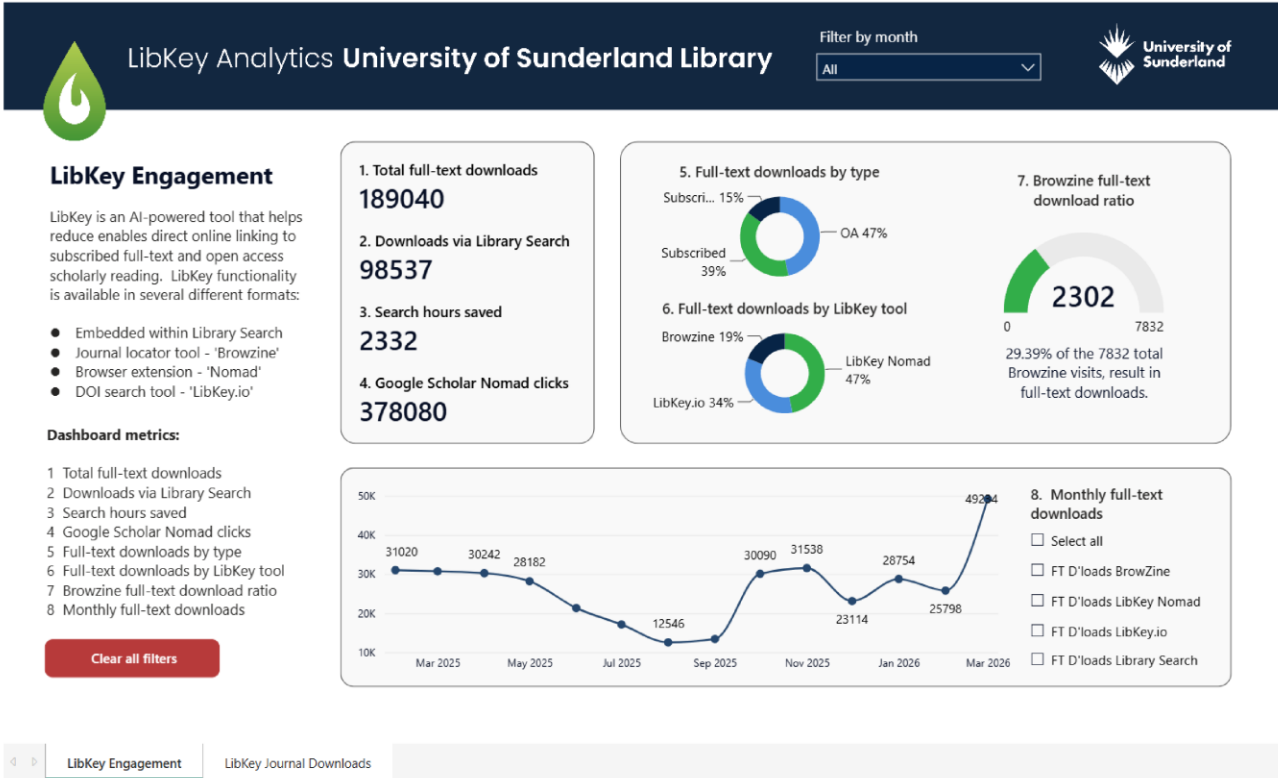
Published 2/9/2026

LibKey Engagement and Impact

To improve content discovery and user experience, the University Library has launched the LibKey resource linking tool. LibKey makes it simpler and easier to locate content regardless of your search discovery start point. It's embedded within Library Search and available to install as a browser extension. It also has a dedicated journal browsing tool called BrowZine and a search by DOI discovery tool called LibKey.io.

Find out more about how LibKey improves your search experience at: libraryguides.sunderland.ac.uk/Libkey

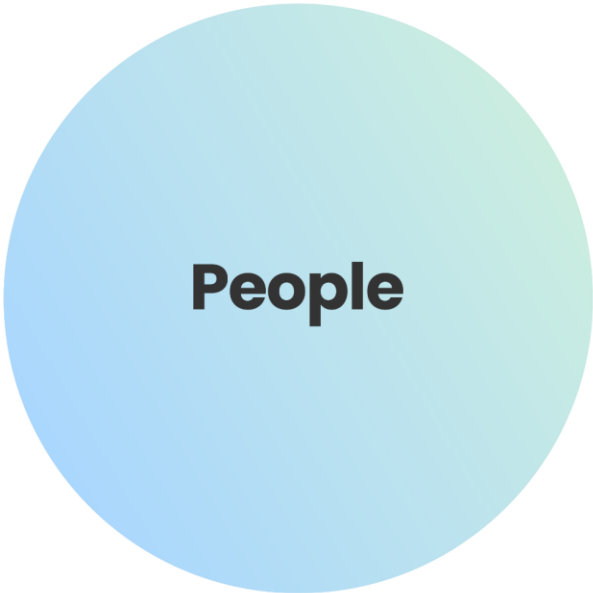
View the LibKey Dashboard to compare engagement with LibKey services. Engagement data is updated on a monthly basis.



People Frameworks: **Engagement**

(a framework for people, engagement and analytic governance)

Ownership
Stewardship
Engagement
University
Infrastructure



People

**Include stakeholders and audience
In-person and online training and
collaborations:**

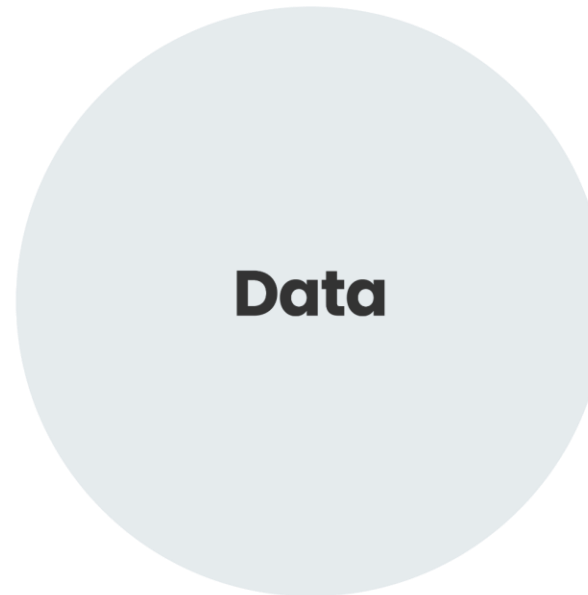
- share knowledge
- identify requirements
- validate solutions
- inclusive, planned reviews
- manual solution refresh ownership

people collaborations | share knowledge | understand requirements | decision-makers, users, developers
governance frameworks to manage analytic selection, development, maintenance and engagement

Data Frameworks: **Integrated**

(minimise resource: make best use of available tools, skills and knowledge)

- **Alma Analytics**
- **Alma Data Visualization** – developed new workflows to create, connect and share insights.
- **Power BI / PowerAutomate** – connect data from different sources and share insights with more colleagues.
- **Python** – for more complex analysis:
 - **AI model development for qualitative student survey analysis.**
 - **Usage analysis where collection portfolio overlap.**



Integrated

Automated

Documented

Ethical, legal
requirements



auto update

PowerAutomate

Research Assistant (RA) Engagement Analytics (Draft)

Metrics

Engagement is explored and measured through Access, Search and Behaviour metrics:

- 1) Number of RA searches
- 2) Number of times RA used
- 3) Average searches per session
- 4) Full-text click through vs summary
- 5) How people access RA
- 6) How are using RA
- 7) Monthly RA searches

How people use Research Assistant

(Filter results by options listed)

Click through to full-text
Clicks help
Copies answer
Exits to Primo
Reruns search
Search
Selects related question
Views AI disclaimer
Views RA summary

1) Number of searches
35755

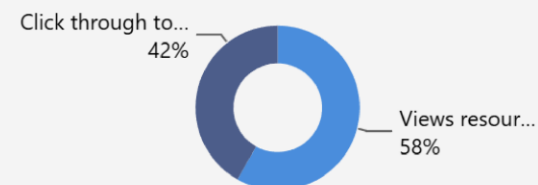
2) Number of times used (sessions)
11326

3) Average searches per session
3.16

Filter by Academic Year

- ☐ 2024 to 2025
☐ 2025 to 2026

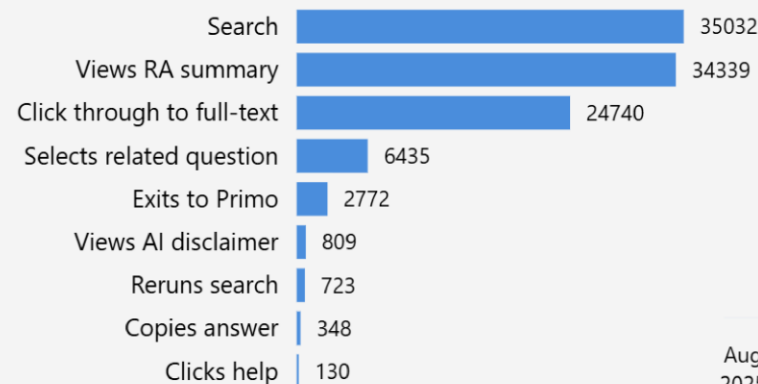
4) Full-text click through vs summary



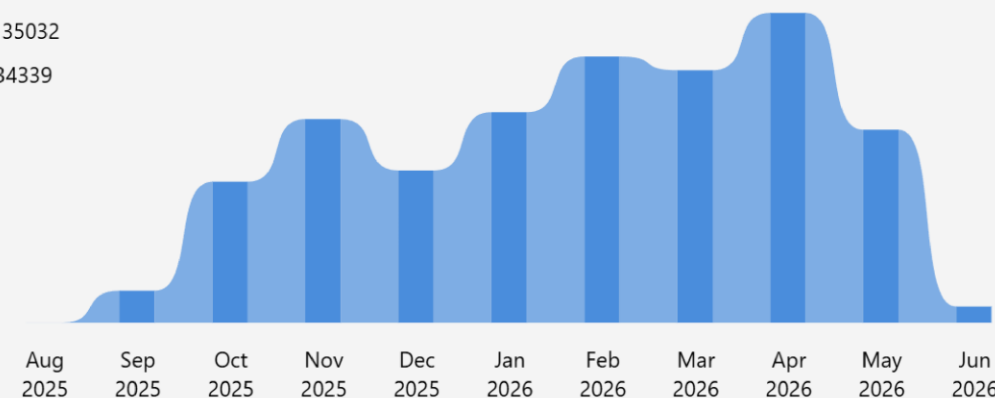
5) How people access RA



6) How people are using RA



7) Monthly RA searches



Data Frameworks: **Automated**

(minimise resource, maximise efficiency: aim for automation)



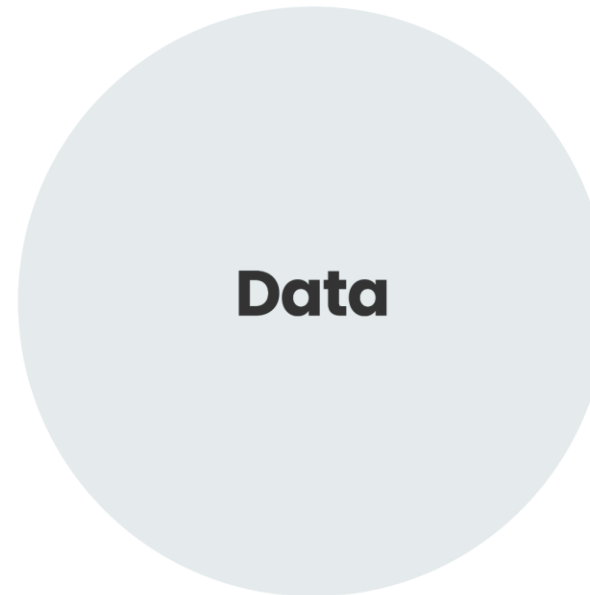
Quantitative

e.g. Alma DV rather than Power BI for cost-per-use dashboards.



Qualitative

e.g. Big Talk student experience survey feedback analysis using hybrid in-house developed AI topic / CNN models that are fine-tuned by external LLMs.



Integrated

Automated

Documented

Ethical, legal
requirements

Human-in-the-loop, 'collaborative' AI | student-led discovery

ethical: algorithm transparency and control | legal: data privacy, storage use and re-use

ProQuest Databases

Cost & Use

ProQuest databases are API and COUNTER compliant:

EBSCOhost Databases:

APA PsycArticles:

POL-5914

Global Newsstream:

POL-7366

Health Research Premium Collection:

POL-6146

Report Metrics

- 1) ProQuest platform monthly usage.
- 2) ProQuest platform cost and usage by fiscal year.
- 3) ProQuest database cost and usage by fiscal year.
- 4) Platform title usage.
- 5) Database title usage.
- 6) Reading list ratio
- 7) Database titles on reading lists.

How is usage measured?

Usage is measured using the COUNTER5 Title Report TR_J1 metric:

- Unique item requests
- Total item requests

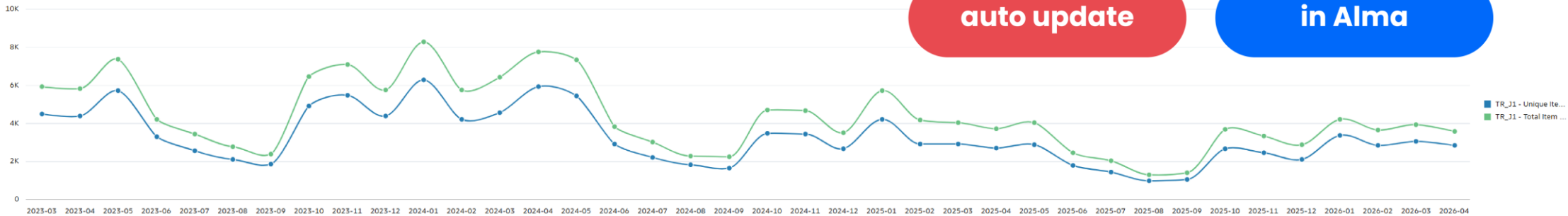
TR_J1 excludes Gold Open Access. TR_J1 counts all formats of usage e.g. HTML and PDF within a single user session.

TR_J1 counts paid for / subscription based usage.

[Find more information about COUNTER measures](#)

What is the COUNTER API?

1. ProQuest Platform Monthly Usage



How to interpret ProQuest Usage

Usage for ProQuest journals is contained within a single ProQuest platform. Journals from this platform can be duplicated within the three ProQuest databases (APA, GLocal Newstream and Health Research Premium). It is not possible to determine which database usage actually occurred within. Therefore to get a general sense of database level engagement, a calculation has been created that distributes usage evenly across each database. For example, if a ProQuest journal occurs within 2 databases, the database title table shows usage that is divided by 2.

This report shares both formats of usage:

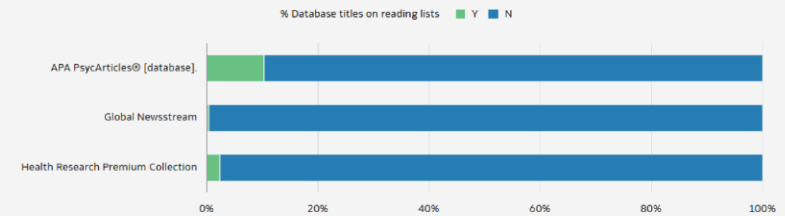
- Title usage at the single ProQuest platform level
- Title usage when distributed at database level (indicated by *)

2. ProQuest Platform Cost and Usage by Fiscal Year

Fiscal Period Description	Platform	Transaction Amount	Unique Requests	Total Requests	Cost-per-use
01/08/2022 - 31/07/2023	ProQuest	£15,275.00	75,407	75,407	£0.20
01/08/2023 - 31/07/2024	ProQuest	£15,275.00	75,407	75,407	£0.20
01/08/2024 - 31/07/2025	ProQuest	£15,275.00	75,407	75,407	£0.20
01/08/2025 - 31/07/2026	ProQuest	£15,275.00	75,407	75,407	£0.20
Grand Total		£60,500.00	301,638	301,638	£0.20

3. ProQuest Database Cost and Usage by Fiscal Year

6. Reading List Ratio



7. Database titles on reading lists

Reading List Code: All Database: All Title: All

MMS id	Title (Normalized)	Reading List Code
991001892874507451	global health action	HSSM72
991001892986107451	intensive and critical care nursing	MNRM03
991001892990007451	journal of biomechanics	SPO3000
991001893041707451	journal of clinical pathology	PSY384
991001893259607451	human nature an interdisciplinary biosocial perspective	PSY327
991001893268907451	educational technology research and development etr d	EPDM95
991001893269007451	educational psychology review	EPDM102
991001893269107451	journal of child and family studies	EDP386
991001893445707451	wilderness environmental medicine	PARA203

auto update

PowerAutomate

Access Medicine Collection Usage

Collection use is counted using the **COUNTER TR_B1** Unique Title Request and Total Item Requests (TIR) metric.

Filter data by academic year

All



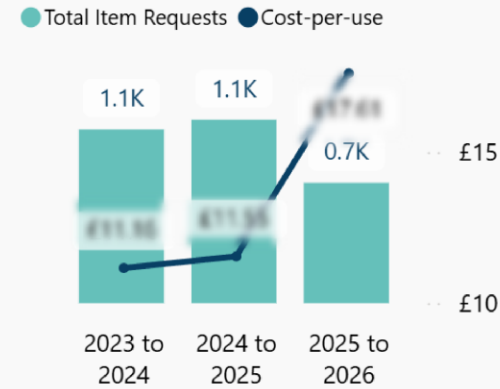
Cumulative Access Medicine cost and use (filter by academic year)

1. Transaction amount
£38,349.58

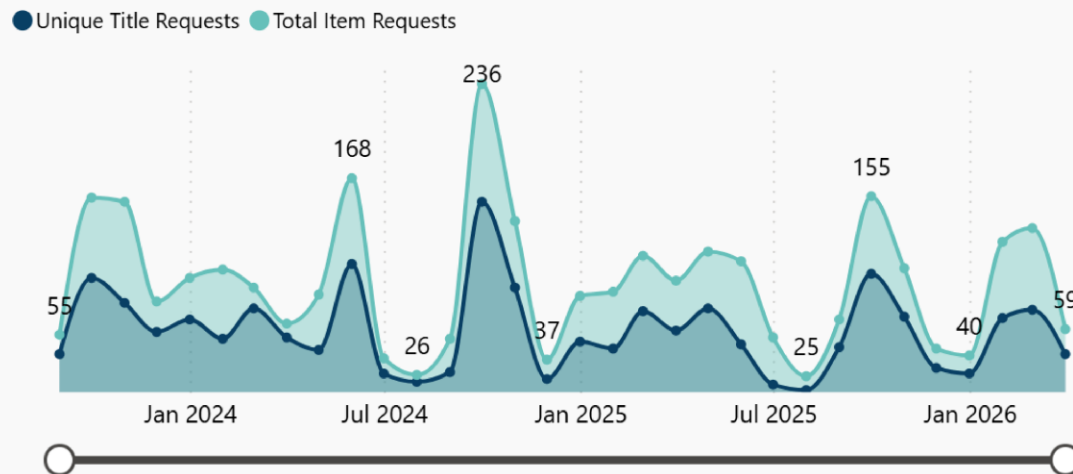
2. Total Item Requests
2965

3. Average cost per use
£13.44

4. Academic year use and cost-per-use



5. Access Medicine Use: TR_B1 Unique Title and Total Item Requests



6. Book title requests (TIR) with reading list (RL) indicator (Yes = on a RL)

Book title	TIR	RL Status
adams and victor s principles of neurology	40	No
atlas of emergency medicine	18	No
basic clinical biostatistics	8	No
basic clinical pharmacology	97	No
basic clinical pharmacology by betram g katzung	2	No
basic concepts in pharmacology what you need to know for each drug class	79	No
basic musculoskeletal imaging	3	No
behavioral medicine a guide for clinical practice	20	No
big picture histology 2nd edition	1	No
big picture medical biochemistry	21	No
big picture physiology medical course and step 1 review	18	No
cardiology an integrated approach	22	No
cardiovascular physiology	5	No
cleveland clinic way lessons in excellence from one of the world s	1	No

Data Frameworks: **AI Automated**

(student-led, inductive, qualitative insights that shape library services)

Human only

- 💖 Reflexive thematic analysis.

In-house AI neural networks

- 💖 High accuracy.
Works on smaller datasets.
- 💔 Resource to train model by coding sample data.
Limited staff scalability.

In-house AI ML topic model

- 💖 No resource required to train models.
Potential to scale staff capacity.
- 💔 Difficult to interpret.
Need large datasets.

Hybrid AI Topic Models + LLM

- No resource required to train models.
- 💖 Higher accuracy, easier to interpret.
Potential to scale staff capacity.
Works on smaller datasets.

External LLMs (via Copilot)

- 💖 No resource required to train models.
Potential to scale staff capacity.
- 💔 Standardised prompt framework deployment.
Ethical issues:
 - decision making based solely on AI
 - inability to control algorithm
 - data anonymisation
 - downstream / third party use and AI re-use



Big Talk to the Library 2026

Theme: Library Development

Survey Question (free text)

What is the Library doing well and what could it do better?

Filter by School

All



Filter by Faculty

All



Filter by Course

All



Filter by Full / Part Time Mode

All



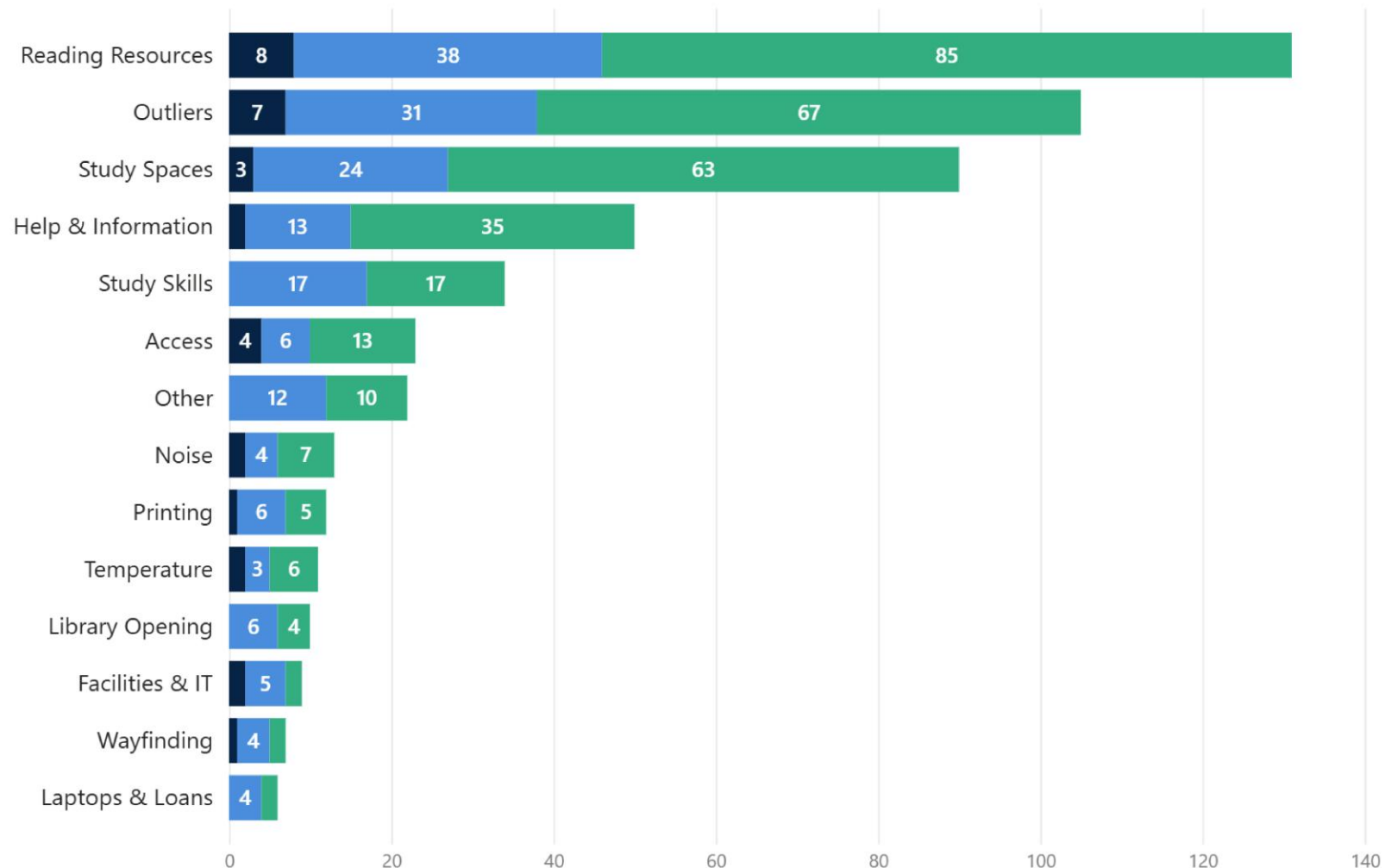
Filter by Campus Group

All



What is the Library Doing Well and what could it do better?

Sentiment ● Negative ● Neutral ● Positive



Thematic analysis of student survey feedback

This report shares thematic analysis summary findings of NSS and Big Talk to the Library student feedback data:

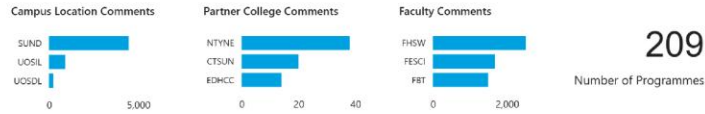
- Big Talk: 2022 to 2024 surveys
- NSS: 2022 to 2025 surveys

Survey	Comments
Big Talk	2426
NSS	3243
Total	5669

Analysis of comments identified 7 thematic topics:

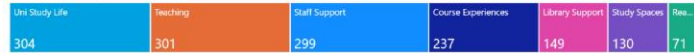
- Course Experiences
- Library Support
- Reading Resources
- Staff Support
- Study Spaces
- Teaching
- University Study Life

Topics are mapped to original comments to show how student comments can differ when viewed by Faculty, Study Location and Programme.



Feedback topics by Faculty

FBT Feedback Topics



FESCI Feedback Topics



FHSW Feedback Topics



Analysis Model (December 2025)

Automated Machine Learning Natural Language Processing (NLP) Model | Transformer-based word embedding combined with LDA clustering | AI BERTopic Pretrained Model

Feedback topics: focus by study location

Study locations: Sunderland Campus, London Campus and Distance Learners.

Faculty

- ☒ Select all
- ☒ FBT
- ☒ FESCI
- ☒ FHSW

Programme

All

Study Location

All

Survey Year

All

Survey Type

All

Sunderland Campus Feedback Topics



Distance Learner Feedback Topics



UoS in London Feedback Topics



Programme Level



Analysis Model (December 2025)

Automated Machine Learning Natural Language Processing (NLP) Model | Transformer-based word embedding combined with LDA clustering | AI BERTopic Pretrained Model

Feedback topics: focus by partner college students

Data is available: Sunderland Campus, London Campus and Distance Learners.

Faculty

- ☐ Select all
- ☐ FBT
- ☐ FHSW

Programme

All

Study Location

All

Survey Year

All

Survey Type

All

Partner College data is only available from the NSS Survey

City of Sunderland College Feedback Topics



East Durham College Feedback Topics



North Tyne College Feedback Topics



Programme Level



Analysis Model (December 2025)

Automated Machine Learning Natural Language Processing (NLP) Model | Transformer-based word embedding combined with LDA clustering | AI BERTopic Pretrained Model

Search entire dataset to view comments and topics

Faculty

- ☐ Select all
- ☐ FBT
- ☐ FESCI
- ☐ FHSW

Programme

All

Study Location

All

Survey Year

All

Survey Type

All

Comment ID	Topic	Original Comment	Faculty	Location	Programme	Survey Type	Survey Year
BT2022_100	Library Support	always helpful with finding the right sources	FESCI	SUND	BA (Hons) Photography Video and Digital Imaging	Big Talk	2021 to 2022
BT2022_1000	Staff Support	The staff always know how to answer any questions you have.	FESCI	SUND	BSc (Hons) STEM Education	Big Talk	2021 to 2022
BT2022_1001	Study Spaces	The staff and the atmosphere is overall good. Wifi is poor	FHSW	SUND	Bachelor of Medicine / Bachelor of Surgery (MB ChB)	Big Talk	2021 to 2022
BT2022_1002	Study Spaces	The staff are always helpful and lovely. Maybe a wider variety of food and drinks at the cafe would make me want to go more often.	FHSW	SUND	BSc (Hons) Sport and Exercise Sciences	Big Talk	2021 to 2022
BT2022_1003	Staff Support	The staff are always really friendly but perhaps weekend staff	FHSW	SUND	Bachelor of Medicine / Bachelor of Surgery (MB ChB)	Big Talk	2021 to 2022
BT2022_1004	Staff Support	The staff are fab, they always help out.	FESCI	SUND	BSc (Hons) Health and Social Care	Big Talk	2021 to 2022
BT2022_1006	Staff Support	The staff are helpful and are good at pointing me in the right direction for what I need	FESCI	SUND	BA (Hons) Primary Education	Big Talk	2021 to 2022
BT2022_1008	Teaching	The staff are helpful but I think we as students need more staff members in the different floors	FHSW	SUND	MSc Pharmaceutical and Biopharmaceutical Formulations	Big Talk	2021 to 2022
BT2022_101	Staff Support	Always someone available to answer questions, good atmosphere	FHSW	SUND	BSc (Hons) Paramedic Science and Out of Hospital Care	Big Talk	2021 to 2022
BT2022_1010	Staff Support	The staff are so lovely and nice.	FESCI	SUND	BSc (Hons) Sociology	Big Talk	2021 to 2022
BT2022_1011	Uni Study Life	the staff are very friendly and easy to approach, more areas for group study would be good, rooms where you do not have to book	FHSW	SUND	BSc (Hons) Psychology	Big Talk	2021 to 2022
BT2022_1012	Staff Support	The staff are very helpful	FHSW	SUND	BSc (Hons) Cosmetic Science	Big Talk	2021 to 2022
BT2022_1013	Staff Support	The staff are very helpful and friendly	FHSW	SUND	BSc (Hons) Adult Nursing	Big Talk	2021 to 2022

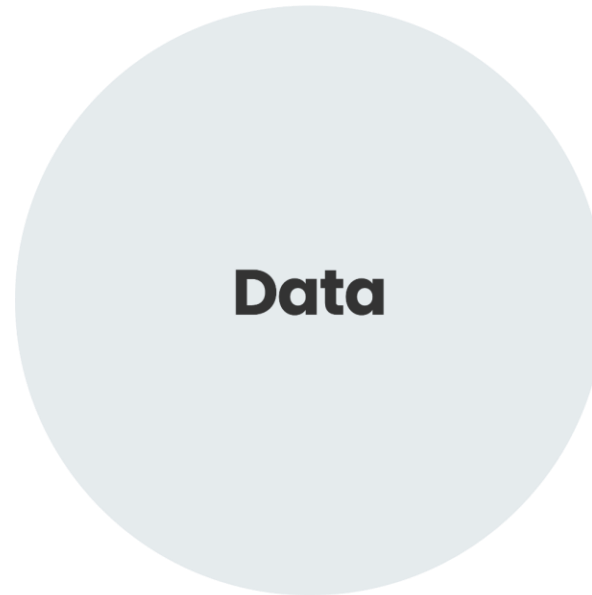
Analysis Model (December 2025)

Automated Machine Learning Natural Language Processing (NLP) Model | Transformer-based word embedding combined with LDA clustering | AI BERTopic Pretrained Model

Data Frameworks: Documented

(SharePoint centralised documentation and single access route)

- Analytics directory
- Solution metrics
- Data dictionaries
- Validation
- Refresh schedule and ownership
- Monitoring and maintenance
- Review schedules



Integrated

Automated

Documented

Ethical and legal
requirements

Reflecting to move forward

People engagement is essential

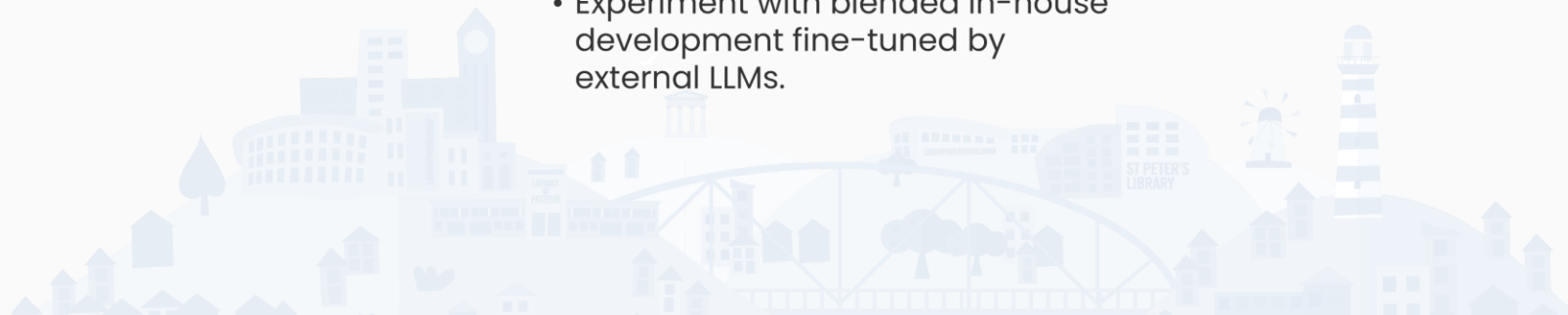
- Develop trust-based partnerships.
- Discover non-functional as well as functional requirements.
- Include Library team in validation and testing.
- Agree collaborative reviews and update phases.
- Adopt varied engagement formats.
- Have a dedicated communication, documentation and access route.

Minimise resource and scale staff capacity

- Dashboards: always aim for auto-refresh.
- Training and support for solution owners when auto-refresh not possible.
- AI offers significant time saving efficiencies.
- Human-in-the-loop for thematic interpretation, algorithm control and transparency.
- Experiment with blended in-house development fine-tuned by external LLMs.

Framework to inform analytic format

- Match solution type to analysis and audience.
- Power BI to engage a wider audience and connect different data sources.
- Alma for secure role permission access.
- Python for complex, bespoke analysis tasks.
- AI models for qualitative analysis.





Thank you for your time

University of Sunderland Library | Student Journey

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