Futurelib

UNIVERSITY OF CAMBRIDGE

Imagining the future of library services at University of Cambridge.

Library drop-box

Intraloan

Examining current experiences related to accessing printed library resources at the University of Cambridge

Futurelib Programme –August 2017

THE FUTURELIB PROGRAMME

Futurelib is an innovation programme exploring the future role of academic libraries within the University of Cambridge. It employs ethnographic research methods and human-centred design techniques to examine the current user experience of libraries and draws on the skills of librarians from around the institution to test new service concepts. It is funded by Cambridge University Library.

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1. INTRODUCTION

The University of Cambridge is home to over one hundred libraries. This unique and diverse network consists of college, department, faculty and specialist research libraries. The main University Library (UL) building can be accessed by all members of the University and holds over eight million items, over three million of which are books and journal volumes which can be borrowed by users of the Library. Many students and staff at the University need to access the printed collections of multiple libraries within the Cambridge network and policies and procedures in place at each library can be very different for the same user. In addition to this, the libraries people need to access are often geographically distant from each other. Members of the University have very different schedules and commitments and this also has a large impact on their ability to to access physical library buildings and resources.

During the Intraloan project the Futurelib Programme set out to learn more about current issues related to the use of printed library resources in Cambridge. This involved an initial period of scoping research; working with students and academics to find out about their experiences of services related to accessing printed resources. The qualitative, attitudinal data gathered during this phase was supplemented by additional behavioural research methods. These included a digital diary study conducted with students, focusing on their use of print material, along with piloting new services in order to measure their use and gauge their potential value. The services trialled were a book drop-off point, serving multiple libraries on one of the main University sites, and a pilot delivery service from the main University Library to three other libraries in Cambridge. During these trials more qualitative data was gathered, through interviews with users of the services and through other feedback channels, along with statistical usage data.

As with all Futurelib research, the Intraloan project was intentionally open and exploratory, focusing on working with library users to find out what the important issues were for them, rather than assuming, for example, that the most important factor influencing people's ability to access printed resources at the University was location. This report outlines the research conducted over the course of the project, the analysis of the data gathered and the resulting suggestions for service evaluation, implementation and design.

2. INITIAL SCOPING RESEARCH

2.1 Gathering feedback from academics

Cambridge academics who are actively involved in teaching and research at the University can often prove a difficult user group to reach when conducting library research projects. It was, however, of paramount importance to us that their collective experiences and opinions fed in to this study.

We were aware that it would be very difficult to arrange to work with academic staff in person, at workshops or through interviews with individuals. With that in mind, help was sought from librarians at Cambridge department, faculty and college libraries, who circulated the following questions to their academics via targeted emails:

- "To what extent do you think Cambridge's printed library collections are located in the right place for their users?"
- "If you think any changes are needed, how would you improve access to the material you require?"
- "Can you provide an example of a time when you needed to access printed materials housed in Cambridge and it was inconvenient or impossible? Why was this? And what did you do as a result?"

Over 50 responses were received which were varied in nature: some focusing on specifics and some commenting on the Cambridge library system more generally; some strongly advocating for change and others reflecting a high level of satisfaction with the current situation. Responses from academics who did see a need for change included the following:

- "An intra-library loan system is the best way forward. I have used similar systems in the USA and they have been very efficiently and brilliantly run." (Academic)
- "Basically my problem is this. I spend increasing amounts of time biking around Cambridge to get books ([list of named libraries], etc. etc. And less often [two other named libraries]. This is partly because I am working on an inter-disciplinary project (but then isn't everyone?) but it is partly because of a no/decreased duplicates policy. I often need to put books *together* (including those in [named reference-only reading room]. This gets more and more time consuming. Of course my time on this is never costed (only the savings of not buying an extra copy), but given the hours spent being a book fetcher (one of the best paid on the planet), what it prevents me doing, REF issues etc., I suspect this is a seriously false economy." (Academic)

- "A delivery service or even a central collection point would be amazing if it were possible – it would save a lot of time if I could order books from more than one library but pick them up together on the same day." (Academic)
- "I'm pleased to hear that the UL is addressing the matter of inter-library loans. The woeful inadequacy of the current arrangements for such loans is the chief feature of the UL's operations that distinguishes those operations negatively from the workings of any major university library (and most minor university libraries) in the USA." (Academic)

Comments received from academics who did not see a need for change in terms of the services currently available to them included:

- "I think that the collections are in the right places. The Faculty Library offers the necessary materials for undergraduate teachings. Graduate students and Faculty use the CUL collections. It works well." (Academic)
- "I tend to think printed collections are very well located, as I am happy to travel between my College, the UL and my Faculty Library." (Academic)
- "I'm fortunate to have a very good Faculty Library, with other useful subject libraries [...] nearby and the UL not far away. (Academic)
- "As someone fortunate to be at a centrally located college and a fairly centrally located faculty, I've never felt it hard to locate any of the printed books I've needed." (Academic)

This initial research highlighted a number of associated issues, including, but not limited to, a frustration with current Cambridge library opening hours and a level of confusion around policies and procedures at different libraries. More responses can be seen in the findings section of this report. Analysis of the qualitative data gathered at this stage added to the justification for the pilot services conducted as part of the Intraloan project, as it was clear that there was an appetite for change in terms of the services currently offered by Cambridge libraries.

2.2 Workshops and interviews with students

In December 2016 and January 2017, activity-based workshops were conducted with students of 4 Cambridge colleges: Girton, Homerton, Murray Edwards and Lucy Cavendish. The aim was to explore students' current activity and opinions regarding Cambridge library services relating to printed resources. A conscious effort was made to work with students from colleges both near to and far from the city centre. Intentionally not mentioning the potential for new services to workshop participants, we conducted the activities listed overleaf:

- Cognitive mapping exercises, with students 'mapping' the physical libraries and collections they used, showing their routines, habits and preferences.
- Brainstorming exercises asking students to think of ways in which their access to printed resources at Cambridge could be improved.
- Short interviews, based around similar questions to those put to Cambridge academics.
- Individual and group 'journey mapping' exercises, in which students outlined each step in the process of borrowing and returning books, identifying opportunities for improvement which could potentially be achieved through new library services or changes to existing services.
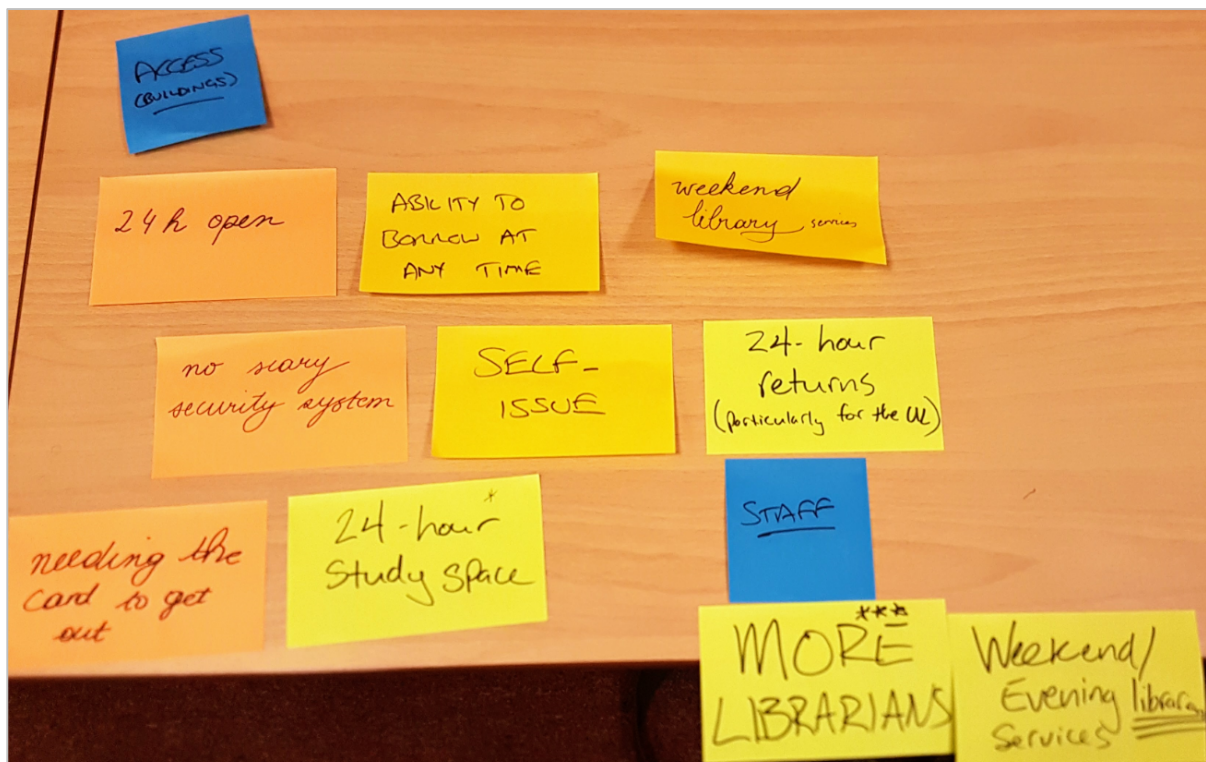
[Above: Categorising suggestions and comments from a brainstorming session with students]

The workshops gave us real insights into the issues students had in accessing printed material. This fed into the research design for the next stages of the project, as well as the analysis process which resulted in the project findings and suggestions for service design. As with all research of this nature it taught us a lot about the current student experience of Cambridge library services, both related to the areas we were directly investigating and in terms of other issues. Key themes included: access to library buildings; interaction with library staff; availability of print and electronic resources; services for part-time, distance learning and 'non-traditional' students; loan periods and renewals; and study space provision.

2.3 'BookTrack' digital diary study

Conducting the workshops with students had started to give us an impression of how using printed library resources fitted in with their wider study lives at Cambridge. We had also gathered valuable attitudinal data, learning about their impressions, interpretations and experiences of library services at the University. In order to explore this further it was necessary to gather more behavioural data. This was realised through a digital diary study conducted with students using the dScout mobile app, dubbed 'BookTrack', as student participants were asked to make diary entries whenever they interacted with printed library books and journals.

[Above: An excerpt from a BookTrack diary study entry]

During the BookTrack study participants recorded information when they searched for, borrowed, renewed, returned or shared a printed Cambridge library book or journal. We were keen to find out how this activity fitted around their existing schedules and other tasks; participants were asked what they were doing directly before and after the activity they had entered into their diary. We asked participants whether the experience was positive or negative and if they could think of any way in which the experience could have been improved. The app recorded geo-spatial data for each diary entry, telling us where users were when completing the activity they were recording. This behavioural data was invaluable in augmenting what we had already learned about the way in which Cambridge students make use of printed library resources.

2.4 SWOT analysis with Cambridge library staff

In November 2016 Futurelib met with members of library staff from across Cambridge libraries to collaborate on the first stages of the Intraloan project. This included conducting a group SWOT analysis session of potential services related to the movement of printed material around the University. This analysis was invaluable in informing the project and a summary is represented here:

Strengths

- Better access to collections
- Cost savings
- Meet existing demand
- Convenience for users
- Goes to those who can use it
- Widening our service
- Provides choice
- Time saving
- Potential to increase demand for print material, especially among time-poverished students
- Use of more of stock in more libraries
- Book return is a massive plus!
- Closer collaboration with libraries and better communication
- It's what users seem to want, especially at outlying libraries
- Support for users with disability issues
- Support research and teaching
- A good example of how libraries can be responsive to reader demand
- Finds out what the users need

Weaknesses

- Resource intensive
- Implementation = logistically complicated
- Set-up costs
- Costs: infrastructure, expenditure, wear and tear on books, multiple copies
- Depersonalises library service (book drop box)
- Danger of pandering to poor time management
- Lack of standardisation
- Different users have very different needs
- Security of stock – what happens when book gets damaged?
- We would have to forgive a lot more fines, some libraries can't afford that
- Taking a break from work to visit libraries
- Problems with overdue books and books requested
- Book drop box doesn't register returns and there will be a delay
- Are we trying to solve a 'real' problem? What does the reader actually want?
- Some libraries would benefit more than others

Opportunities

- Learn more about usage of collections
- Increase perception of coherent Cambridge library service
- Develop more of a community of libraries in Cambridge
- Decreases renewals
- Better understanding of user needs
- Opportunity to move library services to modern expectations and practices
- Scan and delivery, especially for Moodle use
- More cohesive and strategic College Development
- Great for researchers, PhDs, postdocs – could strengthen the relationship with this user group
- Fluidity of collections
- Use of books by subject that are not stocked by Faculty/Department Library
- Use of one central book dropbox could be better than individual ones
- Opportunity to implement new service with new library system (Alma)
- Disabled students get better service

Threats

- Raised expectations
- Will users still use library spaces?
- Changes to staff workload in smaller units
- Collection management, damage to the books, especially if rare
- Playing the system
- Lose the impetus to develop college library collections – lower budgets?
- Forced standardisation
- Local security agreements
- Books being outside library
- Possible removal of books from external book drop box
- Collaboration may mean losing control and ownership
- Trying to implement complex system at same time as new library system
- More pressure on particular titles
- Pilot projects might not accurately reflect the full benefits of a properly implemented new service

3. PILOT SERVICES

3.1 Book returns drop box

Prior to the Intraloan project, discussions had taken place about the possibility of a book drop point on the Sidgwick site, which would allow library users to return books borrowed from all, or a number of, libraries on the site. Sidgwick is home to many libraries in the AHSS (Arts, Humanities and Social Sciences) schools, members of which rely heavily on circulating printed library books for their work. It seemed natural for a pilot service of this nature to fall under the umbrella of the Futurelib project, meaning that the data gathered would feed into a wider investigation of the current use of printed material in Cambridge.

[Above: One of many iterations of prototype signage trialled during the book drop pilot, photo taken 14th February 2017]

The box was officially opened on 17th January 2017 by Acting University Librarian Chris Young, pictured on the cover page of this report. The collection and redistribution of books received through the box was primarily handled by staff at the English, Modern and Medieval Languages and Divinity libraries. Futurelib, together with libraries participating in the pilot service, collected quantitative usage statistics, as well as qualitative data gained through interviews and conversations with people using, or passing, the book drop. The traffic over the pilot phase was good, with over 1,000 volumes returned through the service before the end of Lent Term, i.e. by 17th March 2017. It was decided that the book drop would continue to serve Arts and Humanities libraries on the Sidgwick site, with the School of Humanities and Social Sciences deciding to opt out of the service. Analysis of the quantitative and qualitative data gathered during this pilot can be found in the 'Analysis of pilot services' section of this report.

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Promoting the service

The Sidgwick book drop service was promoted by the libraries that were involved in a number of ways. These included in-person conversations with library users, targeted emails and the use of social media platforms. An unforseen outcome was the growing popularity of the 'Sidgbox' Twitter account, administered by members of staff at the English Faculty Library. Tweets from the account are light-hearted in nature, include literary and pop culture references and have been very successful in engaging with library users, particularly the local student population. Sidgbox tweets have commented on events in the student calendar such as exams and even encouraged students to register to vote. The account profile itself provides practical information on which libraries the book drop box serves. At the time of writing this report Sidgbox has recently grabbed the attention of the student media in Camridge, with the Varsity newspaper publishing a story entitled 'The Sidgwick library dropbox has a Twitter account and it's surprisingly sassy".

Sidgbox

@sidgbox

Book dropbox on the Sidgwick Site.
Likes: Sidgwick site library books.
Dislikes: short-loan books, college library books, and squirrels.

📍 Cambridge, England

3.2 Book delivery services

During February and March 2017 a four-week delivery service was trialled, allowing users of three Cambridge libraries to order books and journal volumes from the main University Library (UL) to their 'home' library. Users of the libraries involved in the pilot were also able to return items ordered through the service to their home library, rather than to the main UL building. Different service models were considered, but due to the scope of the project and the nature of the libraries' collections the decision was made to concentrate solely on delivering items from the main UL to users of other libraries during the pilot. The main UL has over three million borrowable books and journals, primarily in the arts and social sciences. This means that demand for main UL stock by users of other Cambridge libraries is higher than demand from main UL users for stock from other libraries in the Cambridge network. This is not to say that this demand does not exist, and consideration should be given to this during any further research and service design.

Participating libraries

Main University Library

- The main Cambridge University Library building.
- The Library's printed collections primarily support teaching, learning and research in the arts, humanities and social sciences.
- 45,000 registered borrowers.
- 13,250 circulating items issued per month.
- Large, multi-storey building with over 2 million circulating books and journal volumes on open shelves and more held in closed-access areas.

Education Faculty Library

- Social sciences library with frequent printed collection use.
- Around 2 ½ miles and over a 40-minute walk from the main University Library.
- Many different user groups with different schedules, commitments and needs, including professional, distance learning, and part-time students.
- Supporting numerous postgraduate students and academics involved in inter- and multi-disciplinary research.

Faculty of Asian and Middle Eastern Studies Library

- Humanities library with frequent printed collection use.
- 0.4 miles and less than a 10-minute walk from the main University Library.
- Supporting students and staff who rely heavily on access to non-English language printed material, much of which is held at the main University Library.
- Previously offering a more informal book collection service, wherein users of the FAMES Library could ask Library staff to collect books from the main UL and could then use them in the FAMES Library for reference.

Pembroke College Library

- Library of one of the oldest and most established colleges of Cambridge University. Supporting students and academics from a wide range of disciplines, both in AHSS (Arts, Humanities and Social Sciences) and STEM (Science, Technology, Engineering and Medicine) disciplines.
- Around 1 mile and roughly a 10-minute walk from the main University Library.
- At the discretion of the College Librarian the pilot service was offered to fellows (academics) of the College only.

Pilot service mechanics

Embodying the ethos of the Futurelib Programme, the pilot delivery service was intentionally conducted as a quick prototype which was relatively simple to launch. More fully-implemented services would require a significantly higher level of infrastructure, including interaction with library management systems, structured staffing models and more established delivery and collection procedures and mechanics. The pilot service operated as follows:

- Users were able to request any item in the main UL collection that would usually be borrowable to be delivered to their 'home' library

- Requests were checked by library staff at participating libraries and sent to Futurelib to be fetched from the main UL shelves and prepared for delivery

- Any requests placed before midday could be collected from 14:00 the next working day (i.e. excluding Saturdays and Sundays)

- Requests were made in person and via email, but primarily through the use of bespoke online ordering forms

- Users collected items they had requested from the main UL at their home library, where they were informed of main UL borrowing policies and procedures and signed to confirm that they had collected the requested items

- During the course of the pilot, users could return requested items either to their home library or to the main UL

- All operational actions, including processing orders, fetching, delivering and issuing items, communicating with users and updating main UL and home library user registration were carried out by Futurelib and staff at participating libraries

[Above: Photo taken at a session where participating library staff evaluated the mechanics of the pilot service]
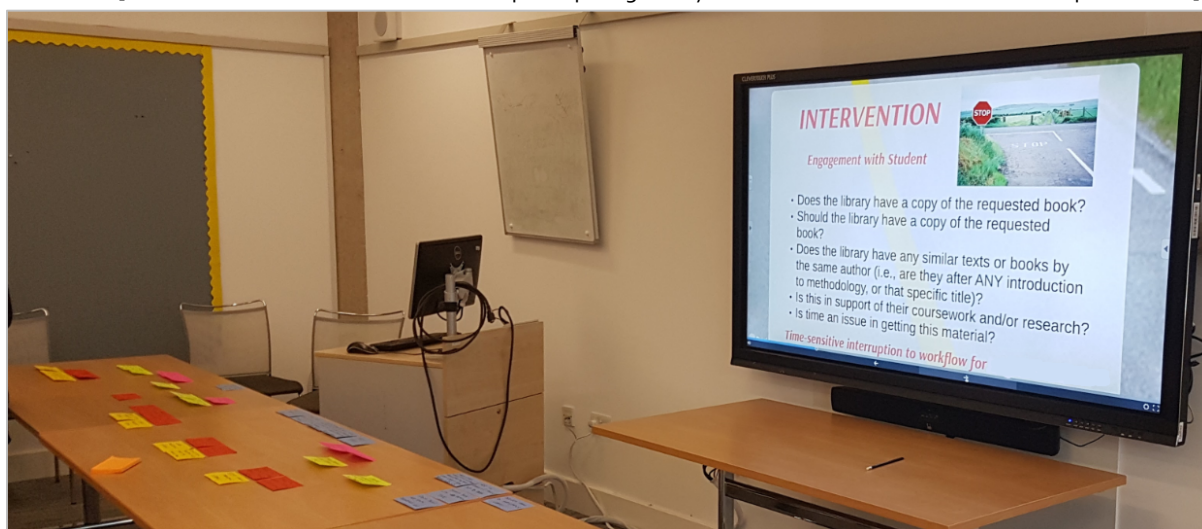
Promoting the service

The service was promoted to users of the participating libraries in a number of ways. This included targeted emails, printed and digital posters and the use of blogs and social media. In order to manage expectations it was important that the pilot service was promoted to users as a test which would be temporary in nature. Wherever possible promotional materials clearly stated the dates of the trial and indicated that it would be a temporary test service.
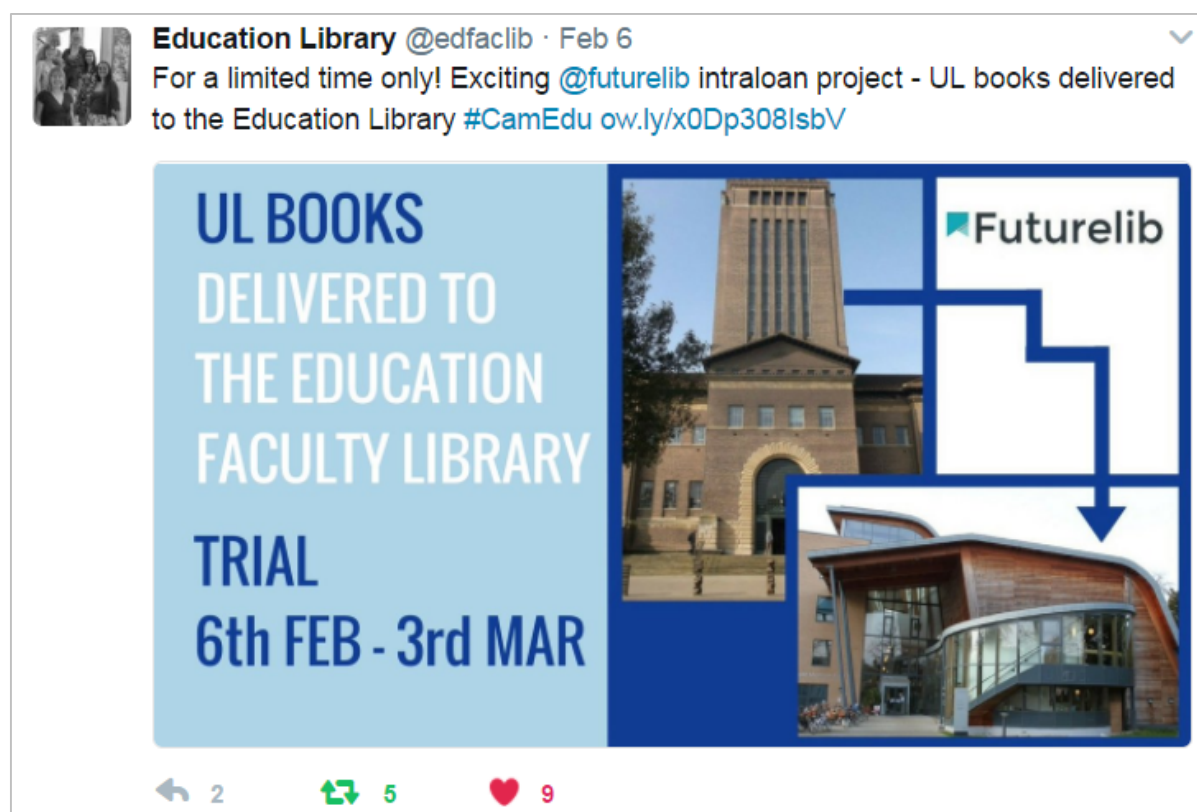
[Above: One of many tweets from the Education Faculty Library during the pilot service]

Increased promotion of an existing service

Prior to this project, staff at the Engineering Department Library and the Betty and Gordon Moore Library (primarily supporting the Faculty of Mathematics and other STEM disciplines) were offering a service which allowed users of either library to ask for books and journal volumes to be delivered from one to the other and could return them to either library. The libraries agreed that as part of the Futurelib Intraloan project they would increase the promotion of the service to measure any changes in use, and would record feedback from people using the service. At the end of January 2017 targeted emails were sent to users of the libraries and the service was promoted through printed posters, library websites and social media platforms.

The graph below shows the total number of books ordered and delivered through the service from 5th November 2015 to 10th April 2017. The service has experienced reasonably low levels of traffic over the time it has been operating, with an average of one book per month being transferred between the libraries involved. Following the increased promotion during the Intraloan project usage increased to an average of four volumes per month, with an initial spike occuring immediately after the promotion.
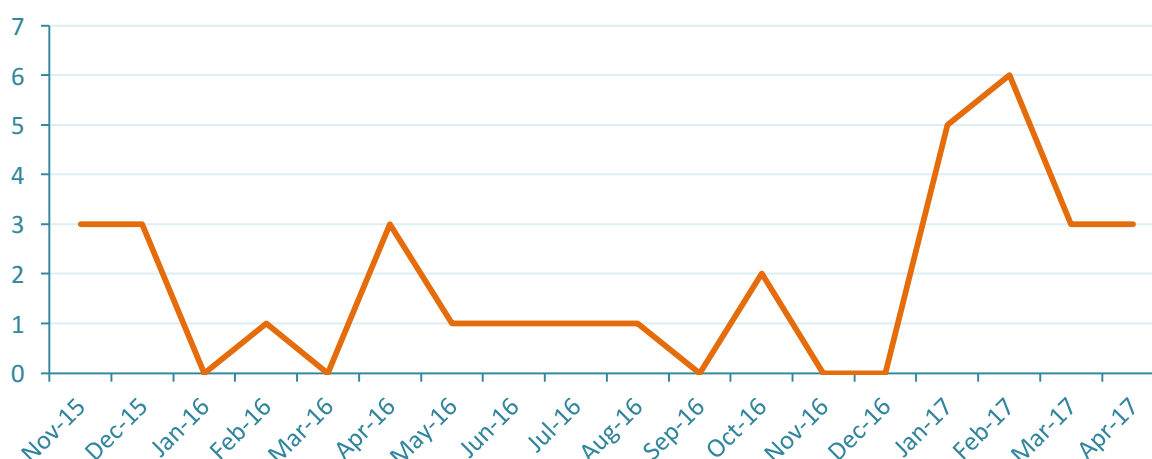
4. EVALUATION OF PILOT SERVICES

4.1 Sidgwick book drop: Statistical usage data
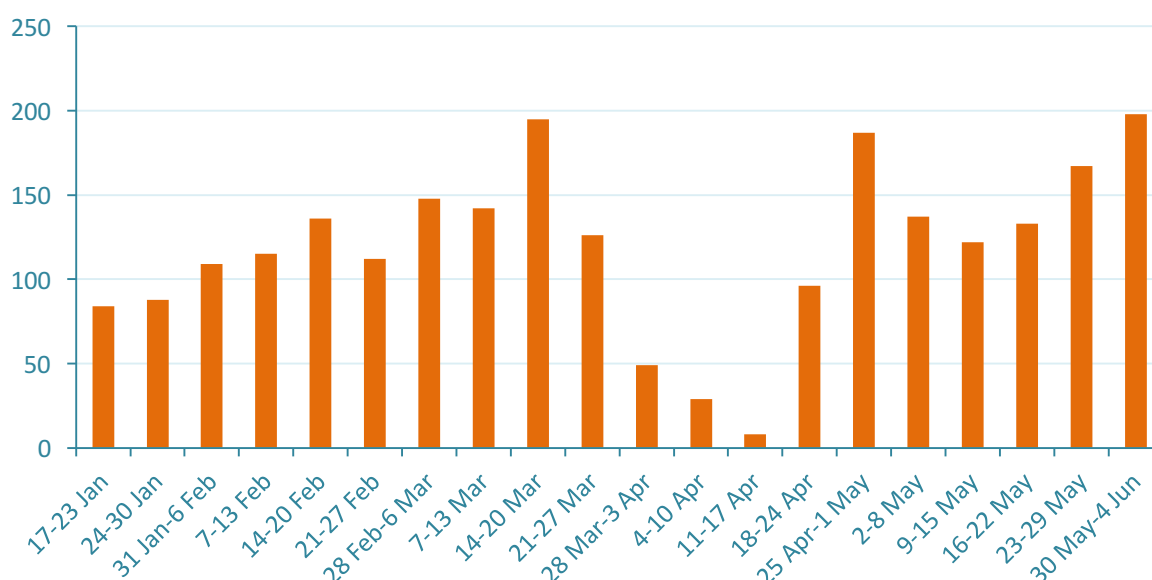
[Above: Chart showing number of books returned through the pilot book drop box each week, between January and June 2017]

Usage of the book drop box during the first few months after its installation was steady, increasing slowly at first, then starting to plateau. As this report is being written usage continues to be good and is in fact rising slightly again. This is reflected by the chart on the previous page, which shows the number of volumes returned through the box each week. The dip in usage during late March and early April reflects the Cambridge term dates, with many students being away from the University at this time.
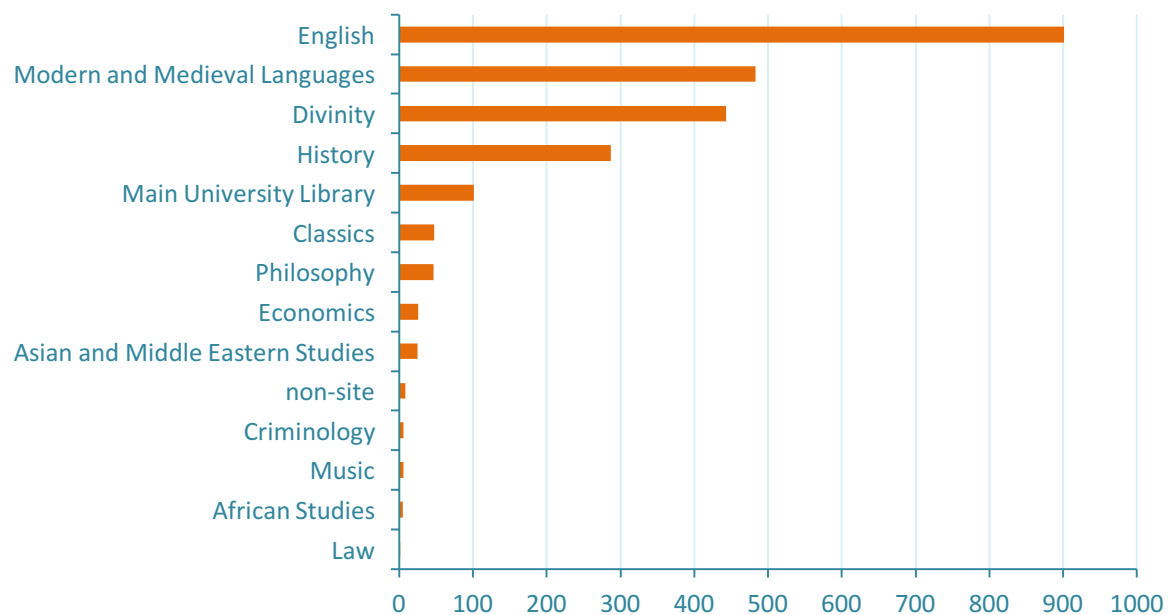
The chart above shows the number of books returned through the book drop box since its installation. The three libraries which received the most returns (English, Modern and Medieval Languages and Divinity) were the libraries who dealt with the re-distribution of material and were therefore more likely to be talking to their users about the service, actively promoting it to them.

4.2 Sidgwick book drop: Qualitative data

Feedback and attitudinal data was gathered from people who had used the book drop service and from those who had not. This was achieved through informal conversations between users and library staff and more structured ad-hoc interviews with members of the University on the Sidgwick site, near to the book drop itself. Interview questions included:

- Which libraries do you use and/or borrow from? Why these?
- Were you aware the book drop existed? If so how did you find out?
- Have you used the box? Would you in the future?
- What do you think the pros and cons of the box could be for you?

- Can you think of any other services related to the use of physical library books that would help you with your studies/work and managing your time?

Positive responses included:

- "This would make things easier for me. It's still a detour [from my walk to lectures], but not as long." (3rd year undergraduate student)
- "I would use it if books will be returned to [my Faculty Library]. My loans from [the Faculty Library] are always one week – there are no short loans." (3rd year undergraduate student)
- "I just want to say this is the most fantastic idea, thank you so much. I've used it twice already - it's changed my life." (Undergraduate student)

Some people expressed concerns about the service and comments such as the following were received:

- "I guess it could delay loans slightly before they were returned." (MPhil student)
- "There's a bit of an unknown factor, as you don't see the books leaving your account." (Undergraduate student)
- "There's a bit of uncertainty as you don't know who will collect the books and when." (Undergraduate student)

Due to its proximity there were a large number of comments and questions about the main University Library. These included:

- "I was looking at it today and wondering whether it took UL books." (MPhil student)
- "If it took UL books I'd love it – that 500m walk is really too much for me!" (Undergraduate student)
- "No one goes to the UL to return just one book! It takes time so you have to have a real reason to go there. (Undergraduate student)

A staff member reported speaking with two postgraduate students who were leaving Cambridge for vacation, which they would be spending at their homes outside of the United Kingdom. They spoke to this member of staff at the main University Library as they were intending to return books there, as well as at the English Faculty Library. The conversation took place on a Saturday after full Cambridge term had finished, a day when the English Faculty Library was closed. The member of staff at the main University Library advised that they return the books using the Sidgwick book drop, which meant that the books were received by the English Faculty Library on the following Monday. Without this option, the students may have incurred overdue fees and the books may not have been available to other library users for a considerable period of time.

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Other outcomes of pilot service

As mentioned previously, the redistribution of books returned through the pilot book drop service was handled primarily by staff at the English, Modern and Medieval Languages and Divinity libraries, which meant that the teams worked closely together. Communication increased between libraries across the site, with members of staff talking to each other when the books were redistributed. A positive outcome of this reported by library staff was that they had learned a lot about how the other library services on the site operated.

Prior to the installation of the book drop box, the Divinity Faculty Library had policies in place which meant that users of the library were responsible for re-shelving the items they had finished using. Due to the fact that a large number of books were returned to the Library through the book drop service without the user being present, this policy was revised and the Library will, from October 2017, offer a service in which they re-shelve books returned in-person to the library desk, as well as those through returned through the book drop.

It is often the case that through the increased collaboration and evaluation of services necessary during research projects of this nature, unintentional but positive changes occur, both for the benefit of library staff and library users.

4.3 Delivery service: Statistical usage data

Each request through the pilot book delivery service was tracked and, along with detailed item information for each book or journal volume requested, the following information was recorded:

- Date of request
- Requesting library
- User's name
- User's status, e.g. undergraduate student, master's student, PhD student, academic staff
- User's college (where applicable)
- User's faculty or department within the University
- User's email address
- Date item issued to user's account
- Date item returned to main UL, if within the scope of the pilot or if item was identified as having been part of the pilot

Anomolous cases, in terms of how the service operated, were recorded in detail. Examples included requests for items which were held at the main UL but that were not borrowable, requests for items

from libraries not participating in the pilot and items that could not be found on the shelves at the main UL when they were ordered, along with with more specific cases.

This provided valuable data in terms of when the service was used, who was using the service and how frequently, what type of material was requested through the service and where communication was necessary. Due to the fact that the service was offered to the three participating libraries only, it was decided that a detailed analysis of the subject matter of the material which had been requested would not prove useful, as results would be heavily skewed by the two faculty libraries involved.

Key statistics from the quantitative data gathered from the pilot service include:

- 189 volumes were delivered but closer to 300 were requested. Many requests were made for items which were in fact held at the requesting library; this was often due to usability issues with iDiscover, the Cambridge interface for Ex Libris' Primo Discovery and Delivery system
- 20% of the total requests were made by five users
- Only three journal volumes were ordered over the course of the pilot service. In one of these cases the person who had requested the volume specified that only one article was needed - instead of the entire volume being delivered the article was scanned and emailed to the user

Use of pilot delivery service by user group
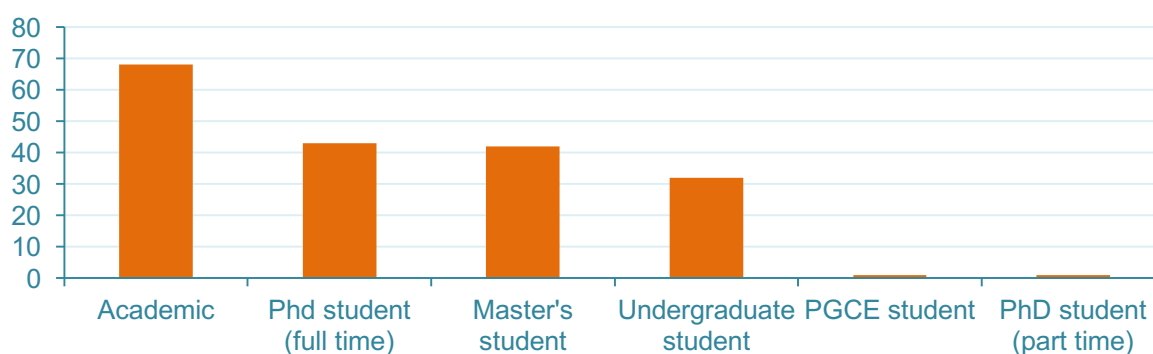
[Above: Number of volumes issued to different user groups through the pilot service]

Perhaps unsurprisingly, there were a large number of requests from academic staff and postgraduate students. Few undergraduate students used the service, but those who did often made a relatively high number of requests over the four week period. Three undergraduate students placed over 50% of the total 32 undergraduate requests. These students were members of the Faculty of Asian and Middle Eastern Studies and a large number of the requests were for non-English language material. It was expected that PhD students would make use of the service as many are involved in inter- and

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multi-disciplinary research. The high number of requests placed by master's students may be due to a number of factors, including the fact that their courses are relatively intensive and based around classes which often take place inside department and faculty buildings; they therefore tend to be very engaged with their subject libraries and library services. More surprising was the low number of requests from distance learners and part-time students. Part-time students reported to library staff during the course of the pilot that they would have been more likely to use the service if it was for a longer period of time, knowing that if they borrowed a book during the trial period they would still need to return to the main UL weeks or months later to return it. In terms of the Education Faculty, many part-time students are practising Education professionals who focus more on education as a subject in the British context, so their needs are met by the Faculty Library collection to a large extent.

Use of pilot service by members of Cambridge colleges
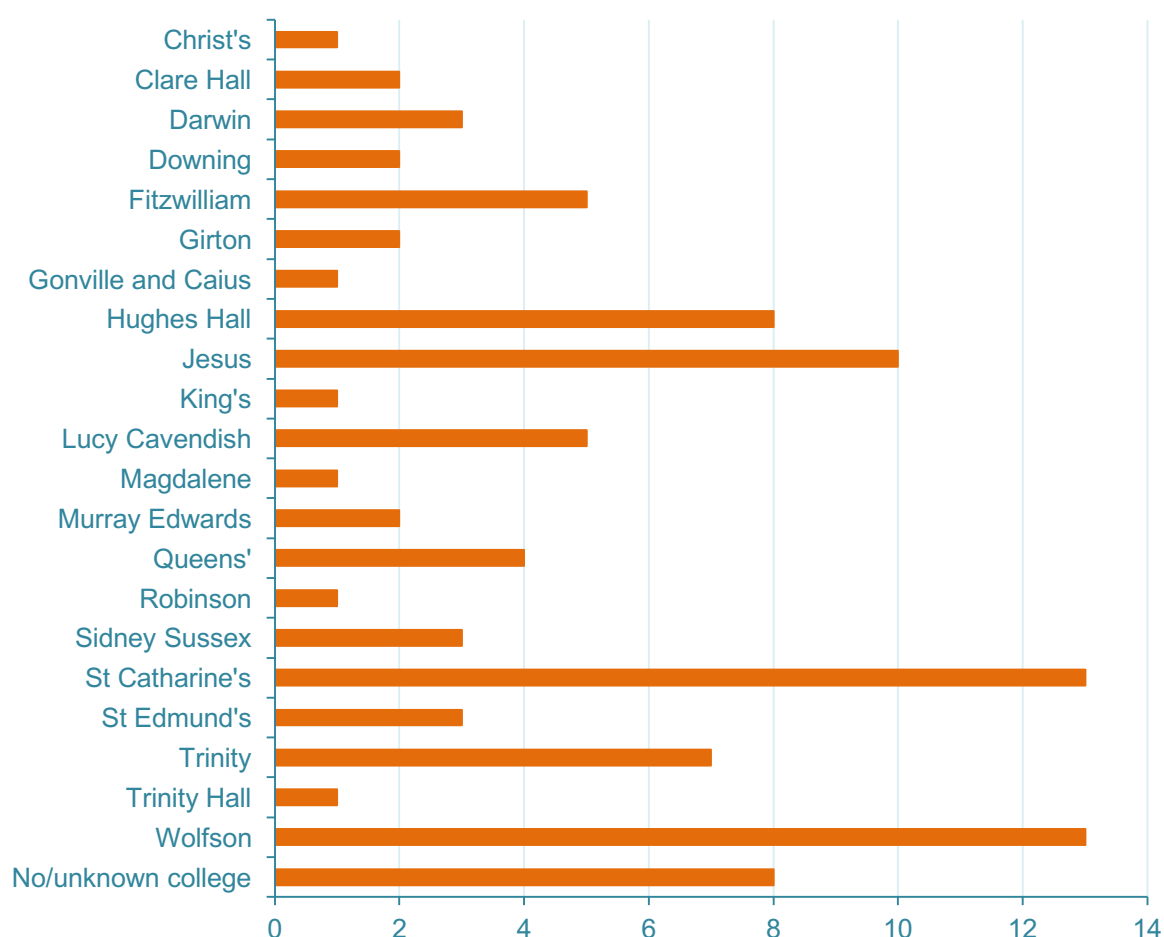
[Above: Chart showing number of volumes issued to members of different Cambridge colleges]

Pembroke College has been removed from this analysis in order to avoid skewing the data due to the role played by the College in the pilot service. Homerton College has been removed for similar

reasons; a large number of Homerton College members are also part of the Education Faculty, whose library also took part in the pilot delivery service.

22 of the remaining 29 Cambridge colleges are represented in this chart. It is difficult without supporting evidence to draw any conclusions as to why members of some colleges have placed more requests than others. Using Wolfson College as an example, it may be speculated that the relatively low number of members, high proportion of postgraduate students and 'mature students', i.e. 20 years of age or older had an impact on the number of volumes requested by members of the College. Further research would be needed to confirm this and other similar hypotheses.

Levels of use over the four-week period
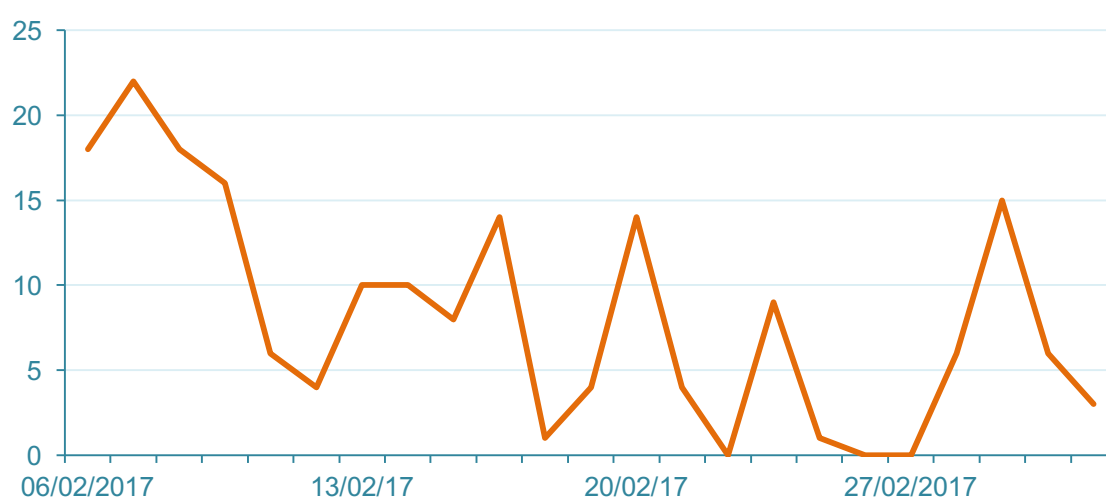
There was an expectation that there would be a spike in usage at the start of the pilot service, due to it being heavily publicised to members of the participating libraries before launch. Another spike could be expected at the end of the four week pilot period, with people using the service at the last available opportunity. There is a spike in usage towards the end of the pilot, but this is not significantly higher to those at other points across the four weeks. Further testing would be required to see whether this level of usage continued, but the evidence here suggests that this testing would be worthwhile. In short, pilot service traffic was reasonably consistent across the four weeks and suggests that the service was seen and used as more than just a novelty.

Daily usage of pilot delivery service
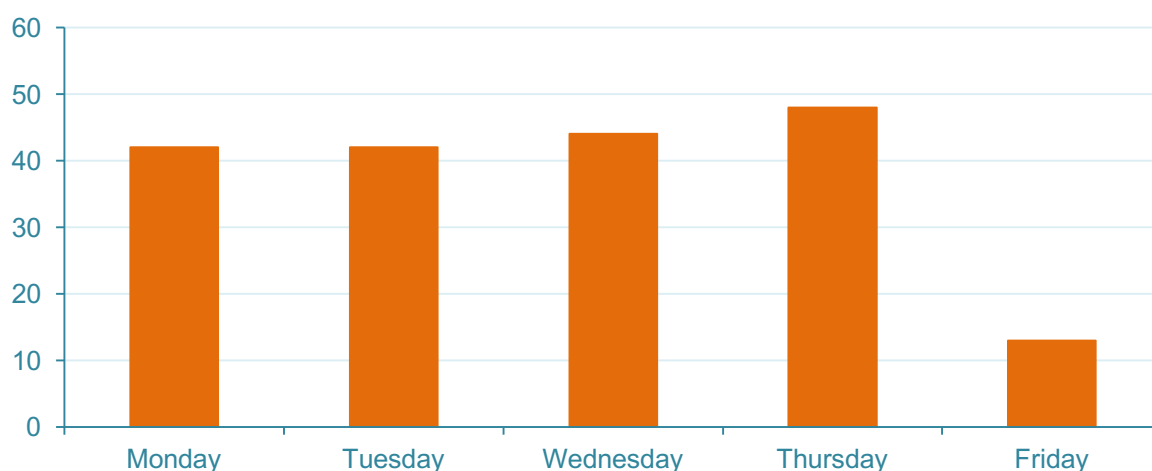
This pattern has also developed over four weeks of initial testing, so may not remain consistent during further implementation of a similar service. The fact that deliveries were not made on a Saturday or Sunday is very likely to have affected the pattern. It is still interesting, however, that most books were delivered and issued during the middle of the week, with fewer people requesting material on a Friday in order for it to be ready on the following Monday. The rapid delivery process (books delivered the day after they had been requested) could be responsible for this activity to an extent. Irrespective of the reasons for this pattern, the data is useful in terms of informing future testing and service design and important in terms of operational issues such as staffing.

Time saved by users of the service

Part of the justification for the pilot delivery service was that the initial feedback gathering phase highlighted that members of the University were struggling to visit the libraries they needed to, due to a lack of time around other scheduled commitments. The time needed for each individual to do this will vary greatly, based on the location of their college, department and the libraries they need to visit. One potential scenario could be someone predominantly working from Murray Edwards College, who needs to visit the Social and Political Sciences (SPS) Library, then the Seeley Historical Library, then the main University Library to collect books, before returning to Murray Edwards College to continue their work. They need to collect 3 volumes from each of the first two libraries mentioned and 7 from different areas of the main UL. Using a combination of information from online sources and our own research, we found that the time taken for this activity could be broken down in the following way (table overleaf):

Activity	Time spent
Walking between libraries	57 minutes
Locating resources	90 minutes
Other procedures (entering/exiting libraries, borrowing books, etc.)	15 minutes

Total time spent: **2 hours 22 minutes**

The time spent on this activity is not insignificant; depending on the stage of the work they are involved in members of the University will need to make trips similar to this at least once a week. This borrowing pattern is not dissimilar to that of a humanities undergraduate student preparing reading materials in advance of writing an essay. We also conducted a direct comparison of someone working at the Education Faculty Library, who needs to borrow 7 volumes from the main UL, returning to the Education Faculty Library to continue their work. The following table shows how long this would take someone who is able to cycle between libraries, using the current services available in Cambridge:

Activity	Time spent
Cycling between libraries	28 minutes
Locating resources	50 minutes
Other procedures (entering/exiting libraries, borrowing books, etc.)	10 minutes

Total time spent: **1 hour 28 minutes**

Users of the pilot service were able to reduce this time from almost one and a half hours to less than five minutes. If a more fully-implemented service allowed library users to order volumes from other Cambridge libraries to points which were more convenient to them, it is not difficult to see how much time could potentially be saved. This is time in which individuals who wished to make use of the service could be concentrating on other aspects of their work.

Our research during this project showed that some members of the University value this time spent travelling around Cambridge to find and borrow the resources they need, but many mentioned that they would prefer to spend this time on other areas of their work. Providing this option to library users would mean that people could choose whether or not to spend their time in this way, providing choice and a more tailored library experience. The amount of time that could be saved by staff and students across the University has the potential to have a significant effect on teaching, learning and research.

4.4 Delivery service: Qualitative data

Qualitative data was gathered from users of the pilot service in a number of ways: email correspondence; in-person conversations with library staff at various stages during the pilot and through asking users about their experiences and opinions of the service. Comments included:

- "I think this is a marvellous service – I'd love it to continue." (Academic)
- "I very much think this service will be helpful, and I'll be making a request this week." (Academic)
- "This has been a godsend and I hope so much that it can continue. My thanks to all involved!" (Academic)

The following statement was received by a part-time PhD student, supporting the idea that if a more fully implemented service were to be put in place, different user groups may begin to take advantage of it:

- "Since they rerouted the [local bus service] it's been way less convenient to nip round to the UL and I would love the trial to be extended – it seems too short to me for people to even realise it's happening." (Part-time PhD student)

This was supported by academic staff who were involved in teaching at the time of the trial:

- "I think mid-term is a difficult time to do this, as we've either gotten the books or don't have time to read. I'd imagine there will be more demand at the start of term?" (Academic)
- "I'm away at a conference at the moment, and haven't had a chance to use the service as I've been too busy with teaching." (Academic)

Feedback gathered from users of the service highlighted the difficulties people experienced using the main UL building and its collections and frustrations they had locating the resources they needed:

- "Although the University Library is a little closer to me than the Faculty is, I try to avoid getting books from the University Library wherever possible. For such a world-class library system, the organization sometimes leaves a lot to be desired. There are certain ranges of book call numbers that I have learned to dread when they come up in search results. [...] The shelving situation is a nightmare with a very non-user friendly manner of books piled in rows and side tables, assuming the books are even there when I need them to be." (PhD student)
- "I preferred to order the book through this system because I find the UL system very frustrating and time-consuming. [...] Sometimes I find [the book I need] in a pile under the window or another area of the Library where the excess books are being placed, but it happened quite often

that I can't find a book at all. I rarely find staff close to the shelves, which means that if I need any help I need to get back to the reception, which can be quite far depending on where I am, so it has happened that I just left without a book I was looking for because I had run out of time. [...] Although I live close to the UL, I found the Intra-Library Loans easier and quicker for me. [...] If the system in the UL was more functional, I might get the books directly from there instead." (PhD student)

5. THE ANALYSIS PROCESS

The Intraloan project employed a number of different research methods over four months, in order to gather both attitudinal and behavioural data. This data ranged from comments from students received at workshops, to statistics gathered from the pilot services. It was important that all of this data be gathered together and looked at as one complete picture, in order for it to feed in to the findings for the project and the resulting suggestions for service evaluation and design. Analysis and idea generation sessions were held, both with staff who had participated in the pilot services and with staff who had not been as involved, in order to introduce fresh perspectives, individual knowledge and experience and new ideas.

Data collected and analysed included:

- Feedback gathered throught the use of questionnaires
- Qualitative data from interviews
- Existing statistical data from previous services
- Outputs of cognitive mapping, idea generation and journey mapping sessions at the student workshops
- Digitial diary entries from the 'BookTrack' study
- Statistical usage data from the pilot services
- Qualitative data gathered during the pilot services, through comments, enquiries and conversations with library staff

In addition to this analysis, a concentrated evaluation of the pilot delivery service was conducted. This was achieved through a workshop with staff from the participating libraries, which involved mapping different aspects of the service, from the point a book was requested through to when it was returned. This exercise was used to identify how a more fully-implemented service could be better designed.

6. KEY FINDINGS

6.1 Access to printed resources is extremely important

One of the first things to be highlighted by this project was how important access to printed resources continues to be for members of the University at all levels. During the initial feedback gathering phase we received over 50 responses from Cambridge academics, many taking the opportunity to highlight precisely this. In a lot of cases people expressed their awareness for the breadth of resources available to them and their gratitude for this:

- "I am, of course, very lucky and grateful to have so many resources nearby, and the Faculty Library's generosity with loans and purchases has made access wonderful." (Academic)
- "For my needs [the location of Cambridge's printed library collections] are almost perfect. The Sidgwick site and the UL together are what I need and this is also where I work. I am also lucky in having access to an excellent College Library." (Academic)
- "I am happy with where I find the books I need. [...] I have long since recognised that this means visiting libraries other than [home department library] and the UL, for example [other named departmental libraries]. That used to be part of the fun of finding books!" (Academic)

Although some people expressed a desire for access to more electronic content, some also took the opportunity to mention how they categorically preferred printed resources:

- "I know many library administrators tend to favour digital copies over paper ones, especially for periodicals. One should not replace the other, and preference should always go the paper copy. Favouring the digital over the paper copy invariably leads to disaster." (Academic)
- "The only real problems I have with the Cambridge system are with digital-only material." (Academic)

Our research has shown that to a great number of our users, particularly in the Arts and Humanities, but also in the Social Sciences and for some working in the Science, Technology and Medicine disciplines, access to printed resources is still a very high priority and a real concern. Cambridge library services should continue to reflect this and should aim to provide this access in the most seamless way possible, in order to ensure that they continue to be successful in supporting our users. This emphasis will in turn ensure that this core aspect of our services continues to support and enable teaching and research at the University, helping to increase the positive perception of Cambridge libraries amongst the student and academic communities.

6.2 People's schedules affect their access to printed resources

During this project we worked with part-time and full-time, undergraduate and postgraduate students, as well as academic staff involved in teaching and research. Existing time commitments and schedules were very different for different library users and this had a direct impact on when these individuals were able to access physical library buildings and their printed collections.
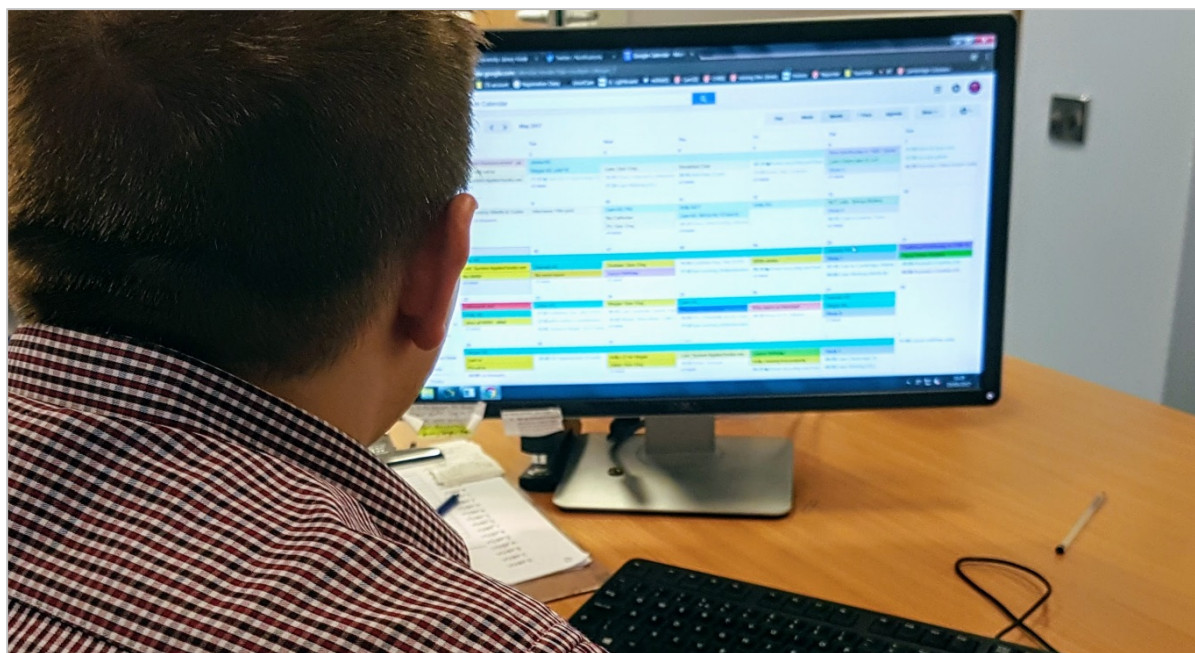
Visiting libraries to borrow and return books is often seen as an administrative task which must fit around other scheduled activities, events and commitments. For undergraduate students these include lectures, supervisions and lab classes, as well as extra-curricular University activities and social events. For postgraduate students they can include supervisions, often both as supervisor and supervisee, classes, other meetings and teaching commitments. Academic staff at the University often have a lot of time dedicated to teaching in lectures, classes and supervisions and are also required to be present at board and committee meetings.

Undergraduate students

During the project we spoke to and worked with over 100 undergraduate students, from both STEM (Science, Technology, Engineering and Medicine) and AHSS (Arts, Humanities and Social Sciences) disciplines. As mentioned previously we also intentionally worked with students at 'outlying' colleges such as Homerton and Girton, as we hypothesised that they may experience more difficulties in accessing printed material at the various libraries in Cambridge.

Almost all of the undergraduate students seemed to have had very positive experiences related to accessing printed resources at Cambridge and library services relating to this. When the possibility of an intra-library loans service was not mentioned, very few students arrived at this as a suggestion of how their experience at the University could be improved. This was in comparison to academic staff, who often mentioned that such a service would be valuable to them and change the way in which they worked. The undergraduate students we spoke to, regardless of the location of their college, had scheduled events such as lectures and supervisions in or near to the main University sites. These happened each week and provided opportunities for students to borrow and return books when they needed to. This will not be the case for all undergraduate students; some will need to use libraries that are not located close to their college or their other scheduled activities.

Postgraduate students

There are a large number of postgraduate courses at the University of Cambridge, each of which places different requirements and pressures on enrolled students. Even in terms of students studying for their course full-time, the amount of self-directed time can vary greatly between individuals, as can the need to use the printed collections of multiple libraries. STEM PhD students for example have little self-directed time to use libraries and their collections, as most of their work is conducted in labs and research group offices. AHSS PhD students usually have far more self-directed time, but rely heavily on the use of printed books and journals for their work. Full-time MPhil students go through a rapidly changing programme of study over the course of one year; their need for different printed resources from different libraries can therefore change dramatically over this time. Distance learning and other non-residential students may have less cause to visit some of the main University sites; this includes students enrolled with the Institute of Continuing Education and students who are already practising professionals in their fields.

Academic staff

Individuals in this group were the most likely to identify a desire for change in the services currently available to them. This was largely based on the fact that their existing schedules meant that they struggled to find the time to visit libraries to borrow and return books. As well as the actual time and effort involved, it often seemed that there was a mental block which prevented these individuals embarking on the task of locating the printed materials needed for their research, particularly at times when they were committed to teaching and other associated activities. Academic staff are also more likely to have spent time in other academic institutions and to have had experience of using a wider range of library services.

6.3 Library opening hours do not always meet user needs

It became clear early on in the project that there were a number of issues currently affecting the extent to which members of the University were currently able to access printed resources in Cambridge. One key factor was the opening hours of library buildings, which made it difficult for those with other commitments throughout the day to obtain access to the printed collections of those libraries. During our intial feedback gathering stage many comments were received along the following lines:

- "The main obstacle to access is not location but opening hours. Many college (and American university) libraries are open 24/7. That may be a stretch too far (and obviously very expensive, but an extension of opening hours would be welcome." (Academic)
- "I came to Cambridge from the US, where major university libraries are regularly open until 10pm or even midnight on weeknights. And they are packed." (Academic)
- "The biggest single improvement would be extended library hours. It is very difficult to get to the UL before it closes at seven and there is seldom time to do any browsing. I usually manage to zip in at six, grab the things I know I need and race out before closing time." (Academic)

Clearly, many members of the University were dissatisfied with the current opening hours of Cambridge libraries and many had enjoyed different experiences at other institutions. This was particularly the case for academics with busy teaching schedules and other existing commitments such as board and committee meetings. The majority of Cambridge library buildings and printed collections are accessible to these individuals when it is least useful, i.e. when they are conducting and commited to other work on behalf of the University. Similar situations exist for other members of the University; STEM PhD students for example are often working in labs for most of the time when Cambridge libraries are open. It is academics in the AHSS disciplines, however, who struggle the most to access the materials they need for teaching and research, due to current library opening hours.
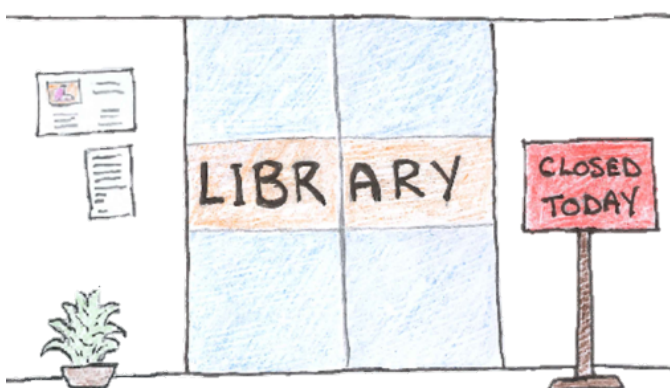
6.4 People are confused by differing policies and procedures

A key emergent theme of our research was that individuals were often confused by differences in procedures and policies at the individual Cambridge libraries they used, or wished to use. This had a strong influence on which libraries and collections they accessed, in some cases preventing people from using resources which could have been of benefit to their work.

- "I think the major issue I face when using different libraries is the inconsistency regarding number of books available, number of days you can borrow books, and the overdue fees. It all differs so much from each library and it makes it hard sometimes to navigate in. Additionally, some libraries send out a notice email saying an item is due soon, whereas some libraries only send out emails once the books are overdue, which can be quite frustrating." (Undergraduate student)
- "As a researcher and lecture who is not college affiliated, I find the complexity of the Cambridge library system sometimes hindering both in terms of time management and access to materials. [...] Much material which I cannot locate at the [Faculty Library] is available at the UL, but the completely different rules for borrowing sometimes demands lots of planning ahead and some logistics." (Academic)
- "Some degree of consistency in terms of rules for loans (reserving, checking items out, the length of borrowing) would help tremendously." (Academic)

It is worth noting that with the implementation of the Ex Libris Alma library management system in 2018 there will be significantly less difference across Cambridge libraries, in terms of policies and procedures relating to borrowing, renewing and returning books and journal volumes. The functionality of the system means that aspects such as loan periods, recall notice periods and library fines will be standardised to a much greater extent. This should alleviate some of the difficulties and confusion highlighted above. It is, however, important to note that at the time of this project this issue contributed to the problems library users encountered when trying to access the printed resources they needed for their work.

The confusion over policies and procedures was not limited to loan periods and related issues. People also mentioned being confused over differences in the rules in place in different library buildings and reading rooms and the procedures for ordering and using books and journals. Communication was a key issue, with information from the different libraries individuals used coming through different channels and in different forms. Attention should be paid to these issues when thinking about and designing library services at the University.

6.5 More e-resources may help to solve the problem for some

Some students and members of staff during our research mentioned that if they could access more electronic resources they would use these, either exclusively or for certain purposes, rather than visiting the Cambridge libraries that held the printed copies. This was particularly the case when people were involved in inter-disciplinary research, needed to skim articles and book chapters quickly, or needed to revisit sources for bibliographic information. This access was also highly valued by researchers and others who spent a lot of time away from University sites.

- "I would strongly recommend increasing electronic book collections. I think a good platform for online access should be created, which should ideally make possible to have access to any book in the library collection." (Academic)
- "I benefit primarily from the ongoing increase in electronic access, as I often spend research time physically out of Cambridge." (Academic)

Alhough this access would suit some library users and provide options, the majority of students and academics we worked with during this project preferred to use printed material whenever possible, particularly when choosing between printed and electronic books. These individuals sometimes mentioned that having access to an electronic copy as well as a printed copy of a text would be useful, but that the printed copy should take preference.

- "[...] in fact it's not always a good thing that all reading material is instantly available (as electronic resources are): a little bit of thinking and processing time (e.g. as one goes over to a library to find something), is very valuable, and increasingly rare. [...] Instant access to material can make students anxious about time-pressures, as they start to feel that the production of their own writing should be equally instantaneous." (Academic)
- "I don't really like using electronic books extensively online – it's OK for reading a chapter or so, but not much more." (Academic)
- "My problems are with the electronic periodical collections. I have lost track of the number of times I could not access volumes that the system told me we were subscribed to." (Academic)

Our research in this area has supported the idea that people are becoming more used to electronic books and journals, but for a number of reasons often still prefer printed versions. This should be taken into consideration when making collection development decisions. It is an aspect of library services which will need consistently revisiting, as the functionality of electronic resources and the platforms through which they are accessed continue to develop.

6.6 Contact and communication with library staff are important

An important theme during our research was the level of opportunity for contact with library staff members of the University experienced when using Cambridge library services. A lack of in-person contact was highlighted by some people as a pitfall of certain services and made them feel less confident. When asked about using the pilot book drop box for example, people mentioned that they felt less confident than when they returned books in person to a member of staff:

- "There's a bit of an unknown factor, as you don't see the books leaving your account." (Undergraduate student)
- "There's a bit of uncertainty as you don't know who will collect the books and when." (Undergraduate student)

In terms of the pilot delivery service, input from professional library staff meant that the requests could be monitored carefully, which had a number of benefits to users of the service. One key issue was that books held at the requesting library were often ordered from the main UL. After conversations between library staff and people who had requested such items it became clear that they were often unaware that their 'home' library did in fact hold the book or journal they needed. Without this level of staff input the requests would have been placed automatically, potentially having a damaging effect on the use of college and departmental collections and resultantly on the relationships those libraries had with their users. Depersonalising library services in this way could lessen the opportunities staff have for engagement, teaching and training with library users.

Library staff were able to use the level of engagement they had with the pilot service to inform collection development decisions, as well as to increase their knowledge of their user base. This led to the opportunity for a highly tailored service; members of staff were able to talk to users about the books they had requested, offering alternatives or additional reading material and identifying opportunities to provide further assistance and support. It also meant that the libraries involved could evaluate their own printed and electronic collections, based on what users had requested from elsewhere.

If services such as those piloted during this project were to be more fully implemented they would need to be streamlined and automated to an extent, so as to be less demanding on staff time and resources. It is clear, however, that a key consideration would be how to ensure that this communication between libraries and their users continues; this engagement is key to improving the user experience of our libraries and the knowledge gained through working closely with our users is essential in terms of informing library services.

6.7 People are intimidated by the main University Library

During our research, members of the University at all levels mentioned difficulties they had using the main University Library building and its collections. This ranged from confusion over policies and procedures, to comments about the time it took to use the building and find resources, to real anxiety about visiting and starting to use the Library. The lack of confidence people had in using the main UL was partly due to its bespoke classification system, the complicated layouts of its open collections and the procedures in place which differ from those at many other Cambridge libraries. It was also, however, partly due to the fact that many members of the University had received little or no formal introduction to the Library. When people had received any form of introduction it had usually been from peers, rather than Cambridge library staff. Increased user education would help to ensure that the unique and extensive printed collections at the main UL continue to play a vital role in supporting teaching and research at the University.

6.8 People register with multiple libraries to access additional resources

Interviews conducted with students during the project revealed that some were only using their own college and department/faculty libraries, whereas some had registered with and were using and borrowing from other libraries in related disciplines, along with the main University Library. These students valued the choice that this gave them and were often still able to borrow the books they needed when all the copies had been borrowed from their college and department/faculty library.

- "It took me a while to realise that I could register with other libraries and that I could borrow books from them. In my first and second year I only used [named college library] and [named faculty library], but now I use [list of 3 Cambridge libraries] as well. I found out by talking to friends who had done the same thing." (3rd year undergraduate student)

This is an interesting factor when considering acquisition and collection development across Cambridge libraries. Understandably, department and faculty libraries give priority to their own students and staff; when members of other departments and faculties are allowed to borrow they can often borrow fewer items, sometimes for a shorter period of time. A deeper level of understanding of this activity amongst library users, alongside increased communication between libraries, however, would be valuable in terms of collaborative collection development across the University system.

7. DESIGN CONSIDERATIONS

7.1 Responding to user needs, schedules and activities

It is clear that different members of the University have very different experiences and existing commitments. Any library services which attempt to ease access to printed library collections should be designed with this in mind. For example, academics in the AHSS disciplines rely heavily on the use of printed material and have existing schedules which make it very difficult for them to visit the libraries they need to in Cambridge. PhD students in the same disciplines rely equally as heavily on the same types of resource, but often have more self-directed time in which to visit libraries to find and collect what they need. PhD students in the STEM disciplines often rely less heavily on printed library material, but also on average have far less self-directed time, as many spend most of their working days in labs. If there are limitations to service design and implementation, careful thought should be given to how the intended services could best support teaching, learning and research at the University.

7.2 Supporting library users with accessibility issues

When considering any services which have to do with accessing physical library buildings and collections, it is important that consideration is given first to library users who for medical reasons struggle to do so using the services that are currently available to them. This could include people with mobility issues, those with learning difficulties which add to the challenge of navigating libraries and collections, as well as those who due to anxiety and other mental wellbeing issues struggle to access the physical library spaces which house the materials they need to support their work. For example, if certain services were to be offered to certain 'user groups' at the University, this should not exclude certain members of other groups, for which these services would be highly valuable, due to reasons such as those outlined here.

7.3 Providing a range of services

This project has highlighted that individuals have different prefences which directly inform how they make use of libraries and library services. A clear distinction emerged between those individuals who appreciated the time it took to visit libraries and collect resources, seeing it as an important part of their work, or a well-deserved break, and those who did not relish the time spent collecting resources, valuing services which prevented them having to do this. Our services should provide choice for our users, in order for each person to have as much of a tailored, bespoke experience as possible. Services should not be seen as failing if they are only used by some people, as long as the overall user experience of our services improves significantly.

7.4 Input from library staff

It has already been mentioned that the expertise of professional staff are a core aspect of what makes library services successful. When designing services related to accessing print material, careful consideration should be given to this. Automating and streamlining core services such as providing access to print resources could be advantageous in allowing staff to spend time on providing high value services that support teaching and research. A lack of staff input into these core services, however, could be to the detriment of people making use of them. This should be a key consideration when designing new library services and evaluating existing services.

7.5 Collaboration between libraries and library staff

At present in Cambridge, many librarians, as well as library users, visit other libraries across the University to collect resources. This is often to provide content for virtual learning environments (VLEs) which support teaching in the various University departments and faculties. If services are introduced which allow people to request material to be moved from one library to another, there is a key opportunity to support this activity at the same time as delivering resources directly to library users.

7.6 Off-site storage facility

This project was conducted alongside the construction of a large off-site storage facility which will eventually hold much of the University's low-use printed library collections. The Futurelib team met with staff responsible for implementing this facility at various stages throughout the project. In terms of the pilot projects and other research activity there was little overlap, as the off-site store is concerned with the storage of material which is rarely used or not used at all, whereas the Intraloan project examined how people access the books and journal volumes they needed the most. Continued communication and collaboration will be needed, however, to ensure that any new services relating to printed library material make the most efficient use of systems, infrastructure and staffing.

7.7 Further piloting and testing in context

We would strongly recommend that any further service implementation is carried out incrementally, with an emphasis on recording data and measuring use throughout. This will allow services to be developed at relatively low cost, with the ability to iterate and refine them in order to make them as successful as possible. Attention should be paid to local context; even within the Cambridge system, differences between libraries and areas of the University means that different services will be valuable to different people and in different places.

8. DESIGN SUGGESTIONS

Throughout the course of this project it has been clear that there are many issues which currently affect people's access to printed library resources in Cambridge. This directly informs the following suggestions for service design, which are centred around the fact that there are a number of different ways in which this experience could be improved for library users which it would be valuable to examine further.

8.1 Book drop points

The book drop box piloted during our research was successful in providing options to those using libraries on the Sidgwick site. The level of traffic was good, it took very little staff time to process the re-distribution of items returned through the box and very few complications and issues arose. It is difficult to infer from this, however, how successful similar book drop points would be if installed at other locations within the University. It is worth reiterating that the Sidgwick site is home to libraries whose users are heavily reliant on the use of printed library books.

If further book drop points are considered we would strongly recommend a period of scoping research in terms of the local context, i.e. at University site-level. Similar methods to those employed during the early stages of this project, detailed in the 'Initial Scoping Research' section of this report, could be used at a local level to inform decisions. This research could be 'light-touch', but should involve gathering both behavioural and attitudinal data. Ad-hoc interviews with users of libraries in the vicinity could be conducted, along with an examination of their current activities, schedules and behaviours. This should provide sufficient insight to inform decisions in terms of whether piloting a service would be valuable, which local user groups would be likely to use the service, where a book drop point might be best located, and so on.

If this examination of local context suggests that a book drop point could be a valuable and feasible service, we would suggest that the next action would be to conduct a pilot, measuring usage and gathering feedback. One way of doing this would be to consider where the book drop might be relocated if the pilot were not seen as successful. An example could be a book drop point that, if not successful in serving a number of libraries, could be repurposed and used to serve one specific library building and service.

8.2 Book delivery services

The initial feedback gathered from academics and the success of the pilot book delivery service suggests that a more fully-implemented service would be highly valued at the University. The mechanics would need to be streamlined and a more suitable infrastructure would need to be arrived at to support this further level of implementation. This would include considering the role of the online library management system, staffing, delivery mechanics and the automation of many of the processes. A significant amount of staff time during the pilot project was spent on keeping records of requests. Much of this work could be automated using the library management system and associated digital systems.
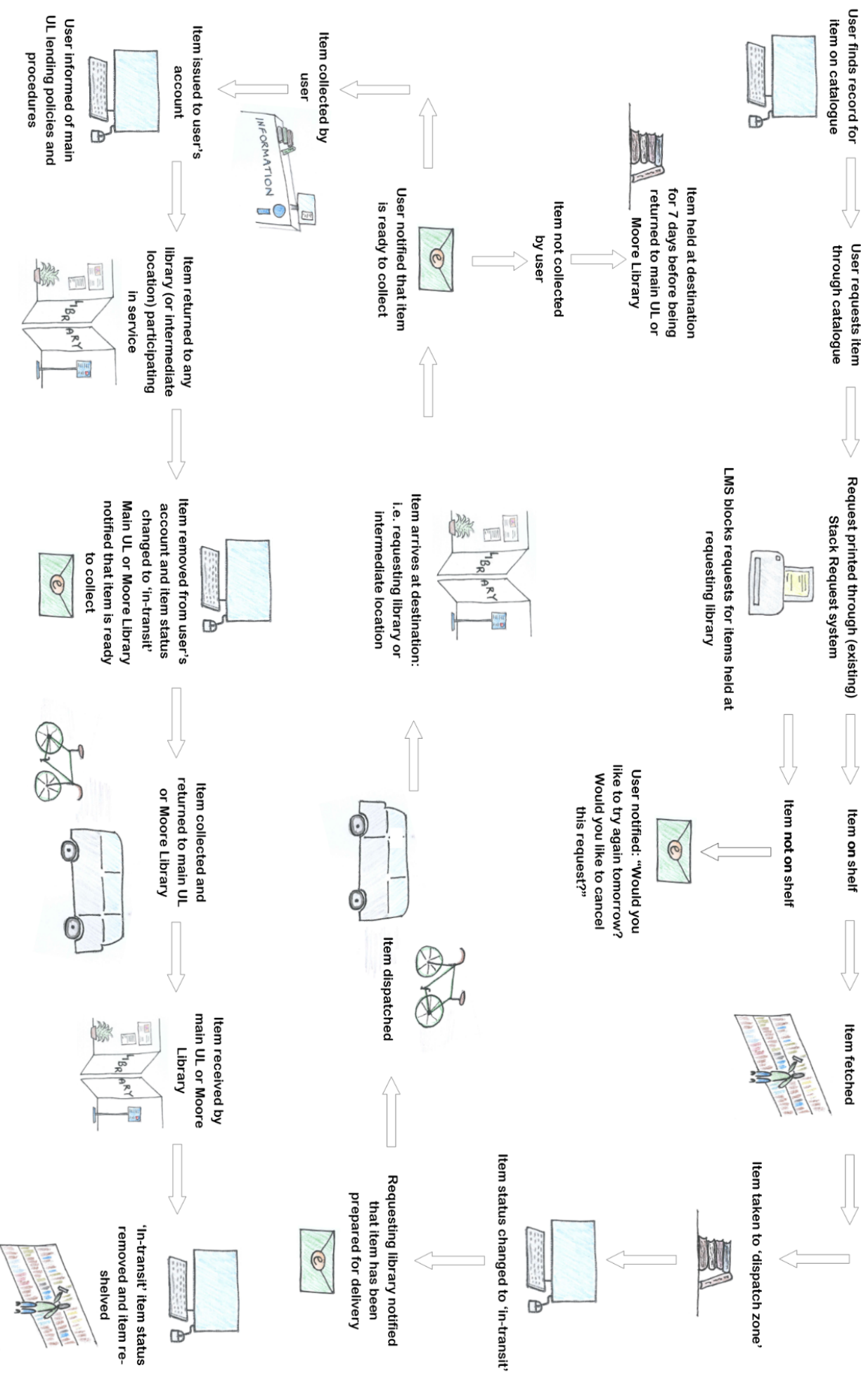
We would recommend that the pilot service be gradually expanded, in order to measure and evaluate continued usage and success. One way to do this would be to offer the service to a wider range of libraries, but, if offered for a longer period of time, members of Cambridge libraries who could not make use of the service would be more likely to notice that the service was available to other people and not to them. Another way to implement the service on a wider scale would be to offer a similar service to that of the pilot to any departmental or faculty library in the University system, but to initially restrict the service to certain library users. This project has shown that the user group that would benefit most from such a service is Cambridge academic staff. A more fully-implemented service could potentially be offered to academic staff first and other user groups later, depending on its continued success and feasibility.

As mentioned previously, this research project took place in the context of an evolving local off-site storage facility, which will eventually hold much of the University's low-use printed library collections. There are plans in place for books and journal volumes to be delivered from this store to a central collection point, or points, across the University sites. A possible way to incrementally develop on the pilot service would be to offer the service to all University members, but restrict the points where books could be collected and returned to these points.

Consideration should also be given to a service model which would allow books to be ordered from the Betty and Gordon Moore Library, as well as from the main UL, as this Library holds a large number of the University's printed resources supporting members of STEM disciplines. The service between the Moore Library and the Engineering Library examined during this project, however, suggests that levels of usage may be relatively low.

Analysis and evaluation of the mechanics of the pilot service resulted in an outline for one potential service model. This can be found overleaf.

Intra-library loan: Service outline for deliveries from main UL and Moore Library to participating libraries

▶Futurelib

User finds record for item on catalogue

→ User requests item through catalogue

→ Request printed through (existing) Stack Request system

LMS blocks requests for items held at requesting library

→ Item **on shelf**

→ Item fetched

→ Item taken to 'dispatch zone'

→ Item status changed to 'in-transit'

Item **not on shelf**

→ User notified: "Would you like to try again tomorrow? Would you like to cancel this request?"

Requesting library notified that item has been prepared for delivery

→ Item dispatched

→ Item received by main UL or Moore Library

→ Item collected and returned to main UL or Moore Library

'In-transit' item status removed and item re-shelved

Item arrives at destination: i.e. requesting library or intermediate location

User notified that item is ready to collect

Item held at destination for 7 days before being returned to main UL or Moore Library

Item not collected by user

Item collected by user

Item issued to user's account

→ Item removed from user's account and item status changed to 'in-transit' Main UL or Moore Library notified that item is ready to collect

→ Item returned to any library (or intermediate location) participating in service

User informed of main UL lending policies and procedures

8.3 Main University Library: Book fetching service

During the course of the pilot book delivery service a situation arose wherein books could be fetched from the open-shelf collections at the main UL and delivered to service points at other libraries in Cambridge, but could not be ordered for collection at a service point, or points, in the main UL building. Much of the feedback gathered during the project as a whole pointed to difficulties library users were having navigating the main UL building and printed collections. At present the main UL employs full- and part-time staff whose primary responsibility is fetching material from closed areas of the library, making it ready at various service points for users of the Library to collect. This includes many books and journal volumes which can then be borrowed from the Library. This service is not available for material, often very similar in nature, which is held in open areas of the building which can be accessed by users.

Our research has shown that it would be valuable for many members of the University if books could be ordered from the open areas of the main UL and made available for collection in the Library. One of the key things which currently prevents people fully utilising the printed collections at the main UL is the difficulties they encounter when trying to find the resources they need. In addition to the problems people experience when navigating the collections themselves, the necessary security measures at the main UL mean that entering and leaving the Library can be time-consuming and sometimes frustrating for people. Current opening hours also mean that many busy students and academics struggle to find the time around other scheduled events to visit the Library; if they do they often leave without at least some of the resources they are aiming to find and borrow.

We would suggest that a service should be developed which allows people to order books from the open shelves in the main UL to a collection point, or points. The service could make use of existing systems and infrastructure, so would be relatively easy to implement. This could potentially have a significant positive effect on teaching and research at the University.

As with the other suggestions for service design outlined in this report, we would suggest that a service be trialled for a clearly defined period of time, in order to measure its use, record data and assess its value and feasability. Clearly, user expectations would need to be carefully considered and managed, as with the pilot delivery service conducted during this project.

8.4 Main University Library: Roving assistance

The findings of this project supported those of previous Futurelib research in relation to the issue of providing assistance at the point of need, at the main University Library in Cambridge. One of the reasons people reported being reluctant to use the main UL and its open-shelf, printed collection was the fact that they knew that they would not find staff to ask for assistance once they had reached the area of the Library in which they hoped to find the resources they needed.

During the recent Futurelib Tracker project, different assistance models were trialled at the main UL in order to test the hypothesis that people would be more likely to ask for, or benefit from being offered, assistance at the point that they needed it, rather than returning to a service point which could be a long way from their location. The results of this experiment supported the hypothesis:

- 41 of 67 **(61%)** of Library users were helped when approached by dedicated staff, actively looking for and engaging people to offer assistance, wearing 'Here to Help' t-shirts.
- 24 of 240 **(10%)** of Library users approached staff for assistance that were wearing the same 'Here to Help' t-shirts while completing other duties in the open-shelf areas of the Library.
- 14 of 227 **(6%)** of Library users were helped by staff at the circulation and help desk in the entrance area of the Library, asking people leaving the Library "Did you find every book you were looking for?" and offering to help users if they responded in the negative.

Almost all enquiries received had to do with locating resources and navigating the Library building. People were not keen to approach staff to ask for help, but often welcomed offers of help when actively approached. This suggests that a more permanent service would ideally be staffed by friendly, approachable customer service staff, who would need a good knowledge of the Library building and its printed collections, but would be unlikely to be faced with more complicated enquiries. A detailed account of this research can be found at p32-35 of the Tracker project report (http://bit.ly/trackerprojectreport), along with other related service design suggestions.

As with the fetching service described previously in this report, a roving assistance model could be trialled at the main UL to assess its value and feasability. The key consideration here would be staffing, as the open Library is very large, with different areas and floors. This type of service could be particularly valuable at certain times of year, such as at the beginning of academic years, with new students learning how to use the Library. Staff could potentially be repurposed from areas of the Library that are quieter at this time of year. Assistance at the point of need could also be provided in other ways, such as through digital touchpoints or live chat services.

8.5 Assessment of current library opening hours

Our research during this project reaffirmed the findings of previous Futurelib projects, which showed that the current opening hours of Cambridge libraries may not meet the needs of many of our users. Cambridge academics highlighted the fact that they were often unable to visit libraries that closed at around 7pm, as they were involved in teaching and had other commitments throughout most of the 'working day', i.e. between 9am and 6pm. Diary studies and interviews conducted with students during previous projects have shown that for many students, the 'working week' is centred around their supervision and essay cycle, rather than being Monday to Friday.

The insights gained during our research are not sufficient to determine how library opening hours should change, if in fact they should change at all. Further research and testing would be required to arrive at more conclusive information. The most appropriate way to examine this issue further would be for individual libraries to conduct research into their own opening hours, as user needs and behaviours differ significantly from one library service to another. This could begin as a data capture exercise, based on interviews with users and could also include behavioural methods such as shadowing and diary studies, resource permitting. This should be followed by a period of piloting different opening hours, based on findings of the initial research, in order to measure their value.

8.6 Scan and deliver service

During the pilot delivery service only three requests were made for journal volumes. Due to the level of involvement of library staff in the service one of the University members who made a request was able to communicate that they only required a specific article from the volume they had requested. In this case, the article was scanned by Futurelib staff at the main University Library and emailed to staff at the user's faculty library, who then emailed the scan to the user.

If a delivery service is implemented on a larger scale, consideration should be given to whether this would be possible. The issue of exactly how this would operate with a more automated request system would need to be carefully thought through, but we would recommend that if possible the option to request a scanned article or book chapter would be part of the service. This would mean that the option would be simpler and more convenient for both the libraries involved and the end user, whilst also being more cost-efficient. This could also prove an invaluable service for libraries who are curating content for online learning environments. As with all the other service design recommendations present in this report, we would suggest that such a service by piloted first, in order to measure its value and feasability. This approach would allow for an iterative design process, meaning the service could be refined after launch.

9. CONCLUSION

Our research during this project led to valuable insights about how people are currently interacting with and using printed library resources at the University of Cambridge. It reaffirmed for us how important accessing these resources still is to people and about the extent to which, for various reasons, students and staff at the University often struggle to obtain the resources they need. Although the role of the library is evolving rapidly, providing this access is a key way in which our services continue to support teaching, learning and research.

It is of vital importance that, alongside the many other ways we now work with and support our users, both in-person and remotely, the more traditional aspects of our services be given sufficient attention. The suggestions for service design and implementation in this report approach this issue in different ways, having the common aim of making the ways in which library users access printed resources less problematic, in order to provide a more intuitive, seamless user experience.

The success of this project rests on having been able to trial services in order to measure their value and use. The pilot services described in this project were invaluable in terms of augmenting the attitudinal and behavioural data we had captured. These services would not have been possible without hours of effort and dedication from staff at the libraries involved. I cannot thank enough the staff at the Education Faculty Library, the Faculty of Asian and Middle Eastern Studies Library and Pembroke College Library for their commitment and enthusiasm during the pilot delivery service. A special thank you also goes to staff at the English Faculty Library, the Modern and Medieval Languages Library and the Faculty of Philosophy Library for their work implementing, managing and measuring use of the Sidgwick 'Sidgbox' book drop. Thanks also to the teams at the Betty and Gordon Moore and Engineering libraries, for their willingness to help with upscaling their delivery service during this project.

It is important to note the limitations of the project. Within the timeframe for the project and with the resources available we were able to conduct an in-depth study of the current use of printed library resources at the University, however the pilot projects focused on specific Cambridge libraries at a specific time of year. We were able to pilot one book delivery service model; given more time it would have been a valuable exercise to pilot different models in order to measure the success and feasability of each. It was also outside the scope of the project to pilot other services which could be valuable to users, such as a more fully-fledged scan and deliver service, or a concentrated evaluation and testing of library opening hours.

Our research for this project provided a real evidence base in terms of the issues people experience when trying to make use of the extensive printed library collections available to them in Cambridge. It raised important questions about how we might improve this experience for our users, which led to some practical suggestions for service design. These provide a valuable opportunity to further explore what it is that our users need and which services they would benefit from the most. We would recommend that these services be developed incrementally in order to measure their value and to continuously improve them for our users.

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