

Appendix F: Technology-enabled opening pilot: Final Report

1. Context

This appendix sets out the results of a pilot project to test the use of technology-enabled opening (Open+™) at Edgware Library. Open+™ uses technology to automate the mechanical processes involved in opening and closing a public library building. This includes switching lights and PCs on and off, locking and unlocking doors and arming and disarming alarm systems. The system works in conjunction with the library's existing IT services (library management system, PC booking system and self-service kiosk technology) to manage customer access and to facilitate basic library functions such as issues, renewals, returns and internet use. CCTV cameras linked to the Open+™ system record all activity undertaken during unstaffed opening hours. To access the library during extended hours customers scan their library card and enter their unique personal identification number (PIN) into a keypad located at the library entrance. A series of automated announcements indicate to customers when the library is due to close and instruct users to leave the building. Whilst use of the system is relatively new in the UK, Open+™ has been widely adopted throughout Scandinavia to extend library opening hours beyond those that can be staffed. Take up in the UK is increasing and a number of library authorities are investigating 'unstaffed access' as part of their future service models. The following paper gives a detailed report into the pilot of Open+™ technology at Edgware Library.

2. Establishing the Pilot

2.1 Background

In October 2014, Council approved the establishment of a pilot scheme to take place at Edgware Library for a period of three months. This pilot began on 29 June 2015 and is currently on-going. During the pilot period the library opening hours have been amended as follows:

Monday

7am – 9.30 am (unstaffed) 9.30am – 5pm (staffed) 5.15pm – 10pm (unstaffed)

Tuesday

7am – 9.30am (unstaffed) 9.30am – 8pm (staffed) 8.15pm – 10pm (unstaffed)

Wednesday

7am – 9.30am (unstaffed) 9.30am – 5pm (staffed) 5.15pm – 10pm (unstaffed)

Thursday

7am – 10am (unstaffed) 10am – 8pm (staffed) 8.15pm – 10pm (unstaffed)

Friday

7am – 9.30am (unstaffed) 9.30am – 5pm (staffed) 5.15pm – 10pm (unstaffed)

Saturday

7am – 9.30am (unstaffed) 9.30am – 5pm (staffed)

Sunday

10am – 2pm (unstaffed) 2pm – 5pm (staffed)

2.2 Parameters of the pilot scheme

The following principles have underpinned the pilot scheme:

- Open+™ hours have been offered outside of existing staffed opening hours
- Access to services during extended Open + ™ hours available to adults and older teens with parental permission. Children under 16 must be accompanied by an adult

2.3 Services Available

The following services are available during extended hours:

- Access to the library space, including downstairs study tables
- PC access
- Wi-Fi internet
- Issue, renewal and return of library items
- Payment of fines
- Photocopying and printing (including payment)
- Collection and placement of reservations
- Newspapers and magazines
- Access to e-books and e-audio books for download.

A customer user guide has been created to assist library users and to help them find and access resources whilst there are no staff on site. A feedback form and post box have been provided to facilitate communication between customers and staff and to enable library users to bring staff attention to any technical problems or any difficulties experienced in finding or accessing resources.

2.4 Access to technology-enabled opening

Any customers wishing to use the library during extended hours have been required to register first. A field is then flagged in their library account which interacts with the door technology when they scan their barcode and enter their PIN. Unregistered customers are refused entry (the doors remain closed). Young people aged 16 and 17 years old are required to obtain parental permission prior to being able to register for the service.

At the end of every staffed session all customers are required to leave the building and those who have registered for extended hours can then swipe themselves back in. This ensures that only registered customers are in the building during extended Open+™ hours.

During the pilot a number of approaches to safety and security were tried and tested to inform the proposal to roll out TEO to other library sites. Users were made aware that staff/personnel would enter the building from time to time. For the pilot period, the council engaged a security staff member that was not uniformed. At the outset for the first three months, the security staff member presence was significant but over time, the staff presence within the operational library area was reduced with a regular patrol of the building and its surroundings.

For the pilot of TEO, the council installed event recorded CCTV. This system records all activity in the library during TEO hours. Should an incident be reported, CCTV footage can be checked (in accordance with data protection regulations which prescribe the circumstances that CCTV can be used as evidence).

The TEO system records the barcode and PIN details for each entry to the building, thereby creating a record of users. Together with the event recorded CCTV the council was able to check CCTV in relation to two reported incidents (see section 5 below).

All customers are provided with a user guide highlighting issues of personal safety and providing information about what to do in the event of an emergency. An emergency telephone is provided.

For health and safety reasons, the public toilets and the upstairs reference room is restricted during extended opening hours.

3. Open+ Pilot Outcomes

The outcomes of the Open+ pilot scheme at Edgware are described in the pages below. Outcomes have been drawn from a number of sources of data:

- Library Management System
- Netloan PC booking system
- Library wifi system
- Survey of Open+ registered users

3.1 Registrations

The cumulative number of customers who have registered to access Edgware Library during extended hours (as at 31 January 2016) is 1115.

Our survey was sent to 512 of these registered users (see section 4.1 for the selection methodology), 92% of whom informed us that they were already registered as library users before subsequently, choosing to sign-up for access during the extended technology-enabled hours. When asked why they signed up, most responded that it would enable them to: use the library outside of their

usual working times; and study at times that suit their lifestyle/working arrangement. Figure 1 shows their responses (multiple answers were allowed).

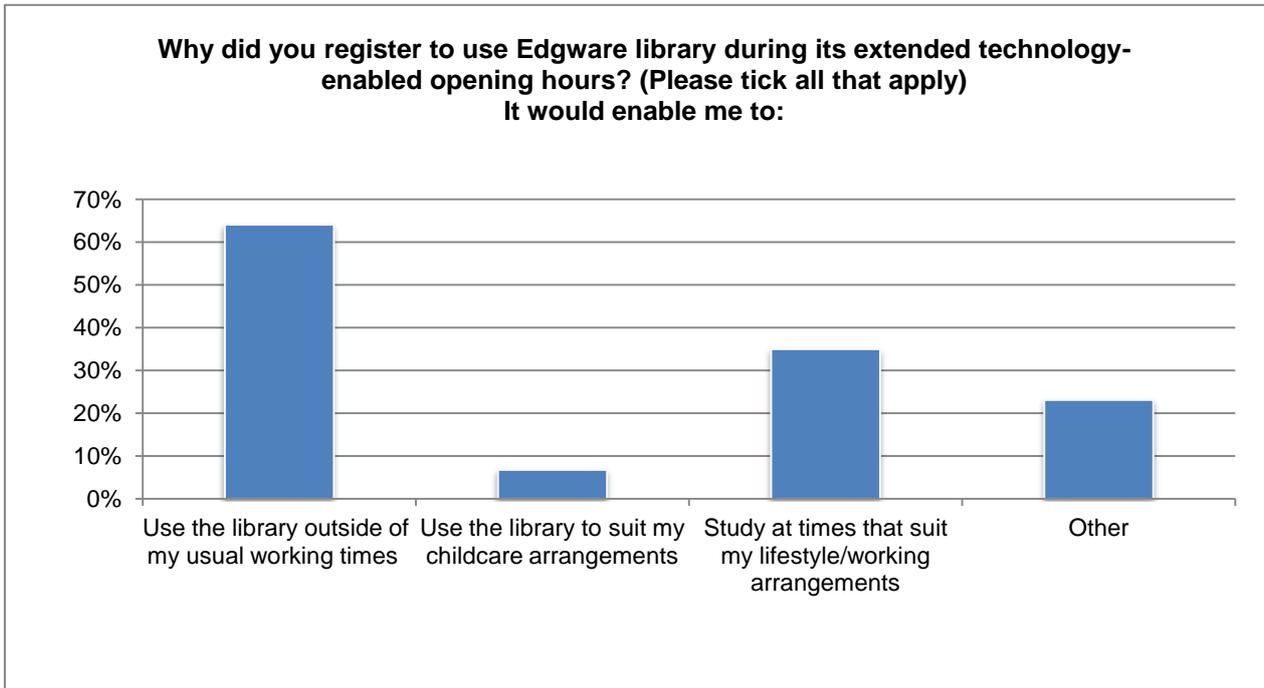


Figure 1: Graph displaying the results of question 1 in the survey of Open+ technology in Edgware library

Other comments left related in general to increased flexibility and personal convenience. Examples are given below:

'Flexibility if I choose to use the library outside of normal opening hours'

'Return or choose books when it can be less busy (parking essential as I have a Blue Badge'

'New way to interact with the library'

'To take advantage of getting in early. I often arrived too early and had to come back later'

'Seemed like a very good idea to be able to use the library at my convenience'

'I find it extremely convenient and useful to use the library at times suitable to me rather than confined just to library opening times'

3.2 Use

Of the 1115 registrations, 518 individuals have made at least 1 entry to Edgware library during the Open+ extended hours. Of these users, the split between males and females is relatively even: 43% are female, 49% are male and the remaining 8% have an unrecorded gender.

3.2.1 There have been a total of 3,800 entries to Edgware library during the pilot period, figure 2 shows the number of entries per person extracted from the data captured by the software at the Open+ entry doors. This demonstrates that there are a number of individuals using Edgware library specifically during the extended hours on a weekly and even daily basis. In our survey we also asked respondents how frequently they used the extended hours, 48% said they were using it at least once per week. The majority of those who have used the extended hours according the Open+ door entry data have done so up to twice per month.

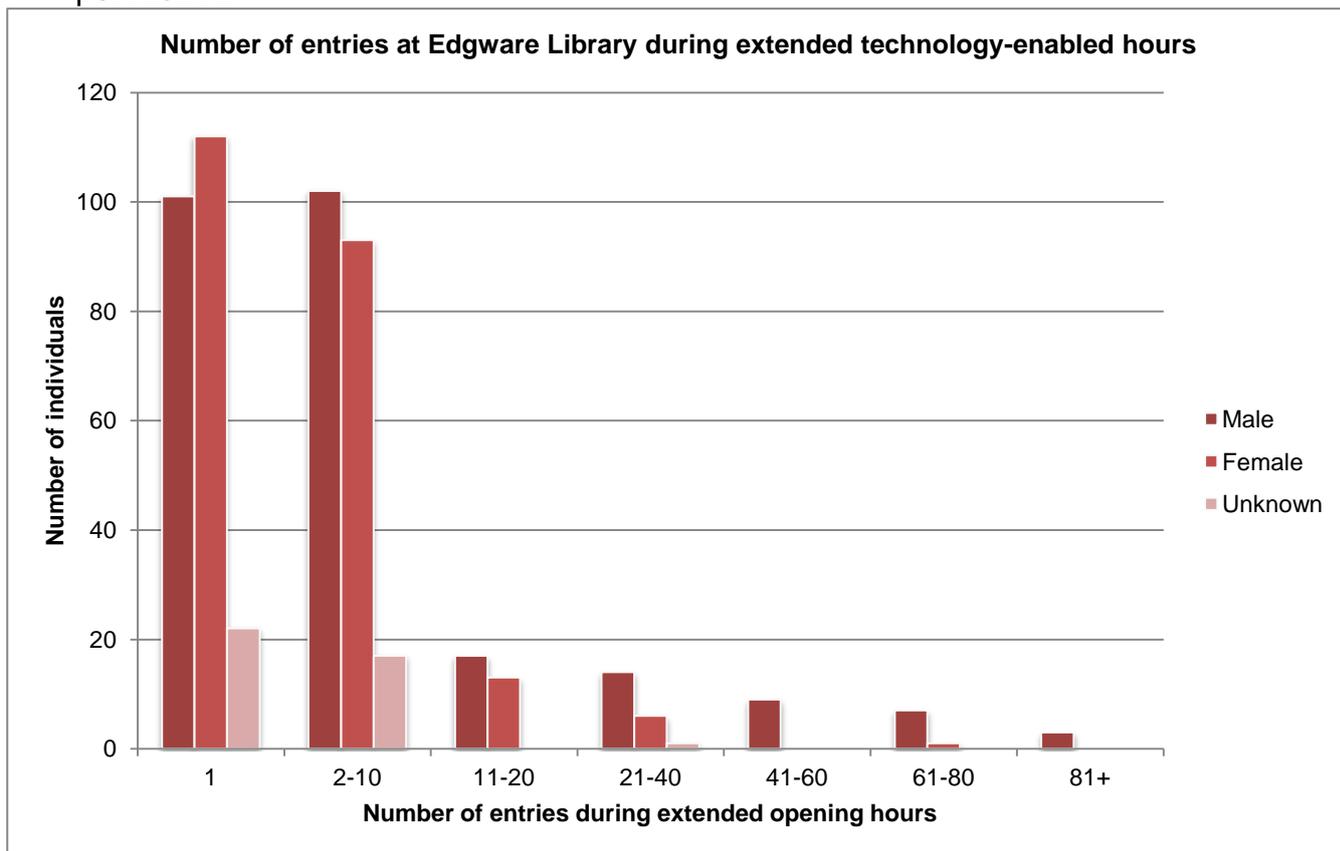


Figure 2: Graph displaying the number of individuals who have entered Edgware Library since June 29 2015 during the extended technology-enabled opening hours categorised by the number of entries they have made.

3.2.2 Respondents to the pilot survey were asked a number of equalities monitoring questions; this allowed an age profile of registered users to be estimated. 60% of respondents were aged between 25 and 64 years old, 29% were aged 65 or older and 7% under 24 years old. Figure 3 shows the age profile of those who responded to the survey and have both registered for and used the extended technology-enabled hours service at Edgware Library. Furthermore, of the 12% of pilot survey respondents registered as having a disability, 79% had made use of the service with 73% of those users making use of the service once a week or more frequently.

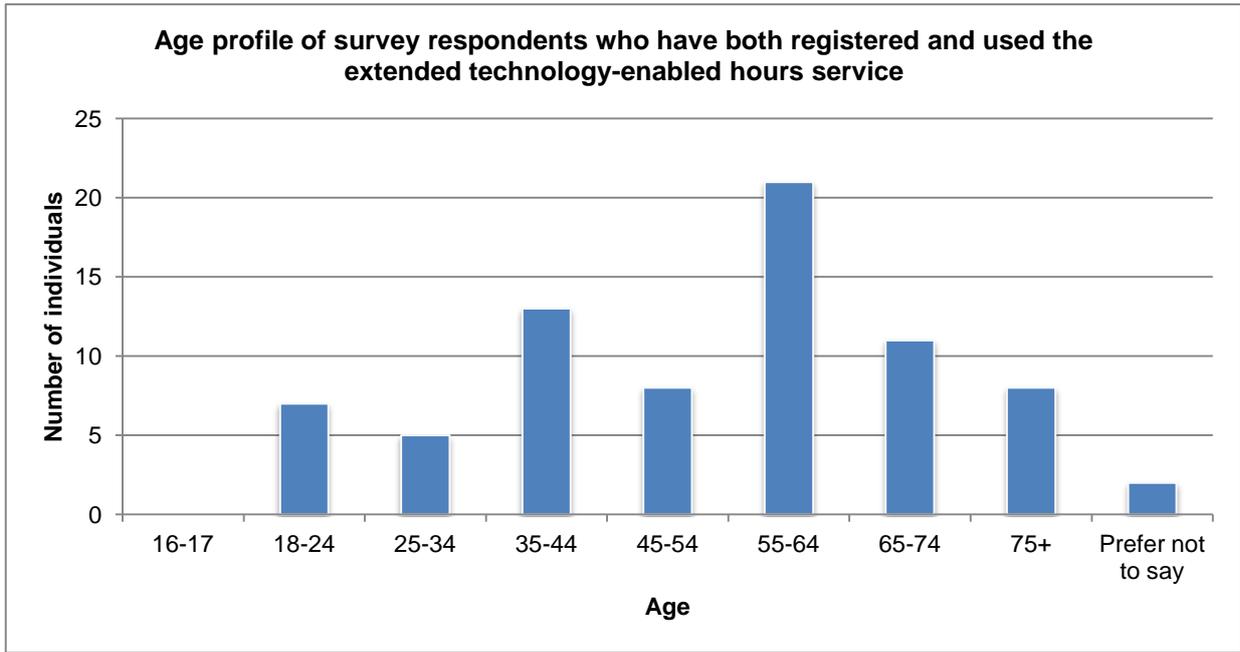


Figure 3: Graph displaying the results of question 29 in the survey of Open+ technology in Edgware library for those who have used the extended hours service.

3.2.3 Data related to library entry recorded through the Open+ door system was mapped against time to give the graph shown in figure 4. Users were also asked in the Open+ survey when they used the extended hours both during Monday-Friday and at the weekends. The most popular times for use was between 6pm and 9pm (Monday-Friday); between 7am and 9am (Monday to Friday); and on Sundays 10am-2pm.

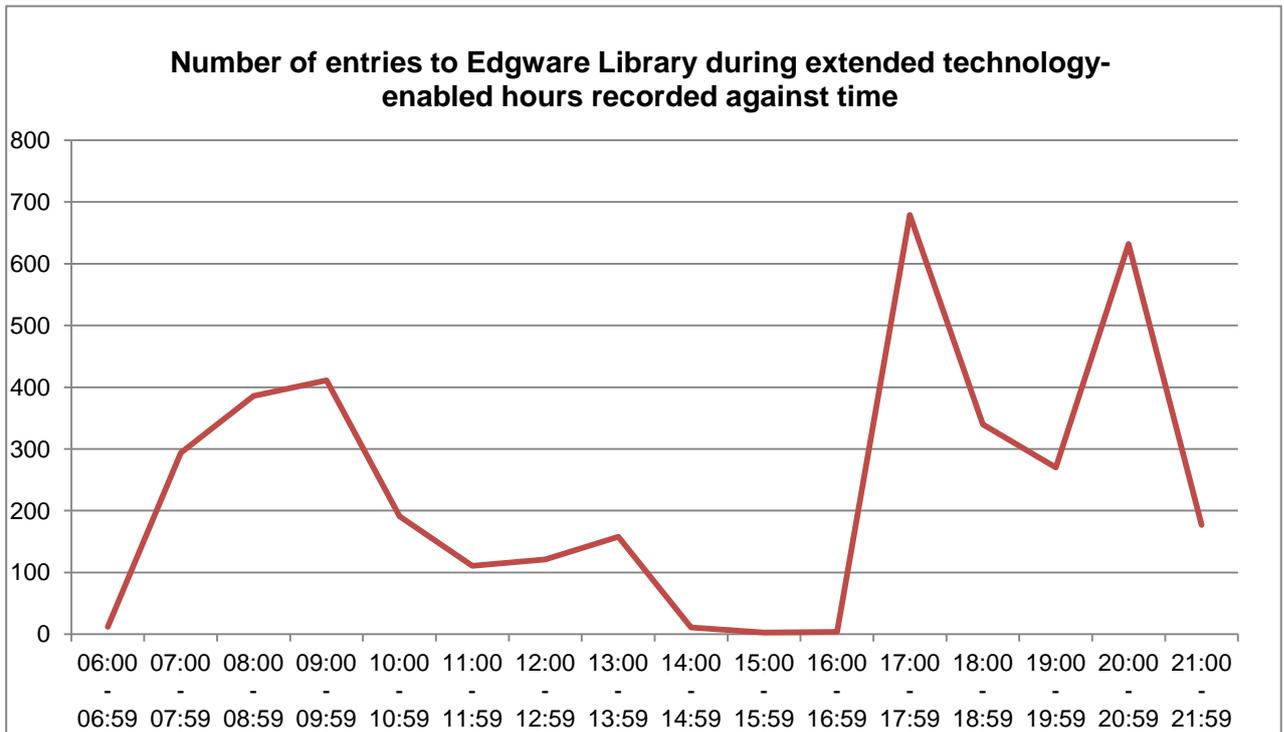


Figure 4: Graph showing the trend of use of the extended technology-enabled hours at Edgware Library through data captured by the entry door software.

3.2.4 We asked those individuals who had used Edgware library’s extended hours who they generally visited with during these times. Figure 5 below shows the results. Of the 13% who accompanied their children, 50% of the children accompanied were aged 0-5years old; 25% aged 6-10; and 25% aged 11-15.

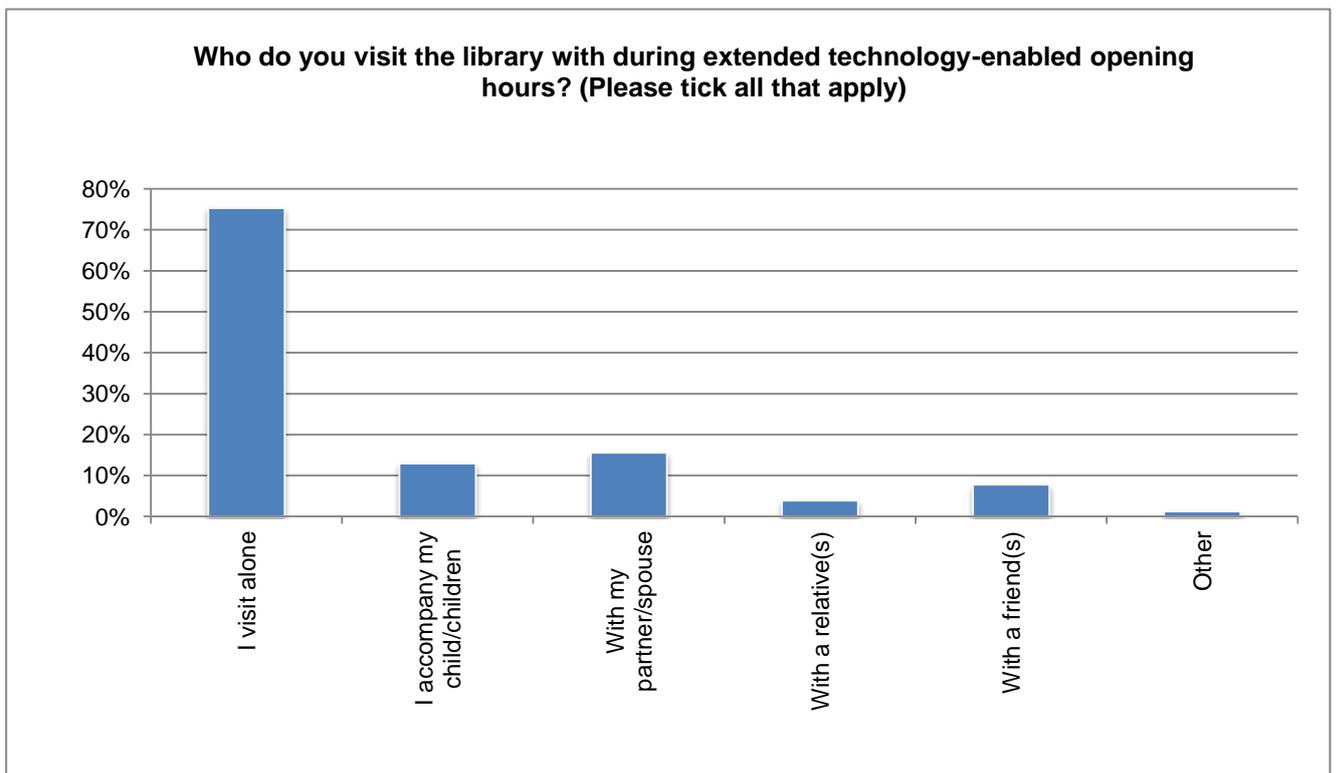


Figure 5: Graph displaying the results of question 9 in the survey of Open+ technology in Edgware library

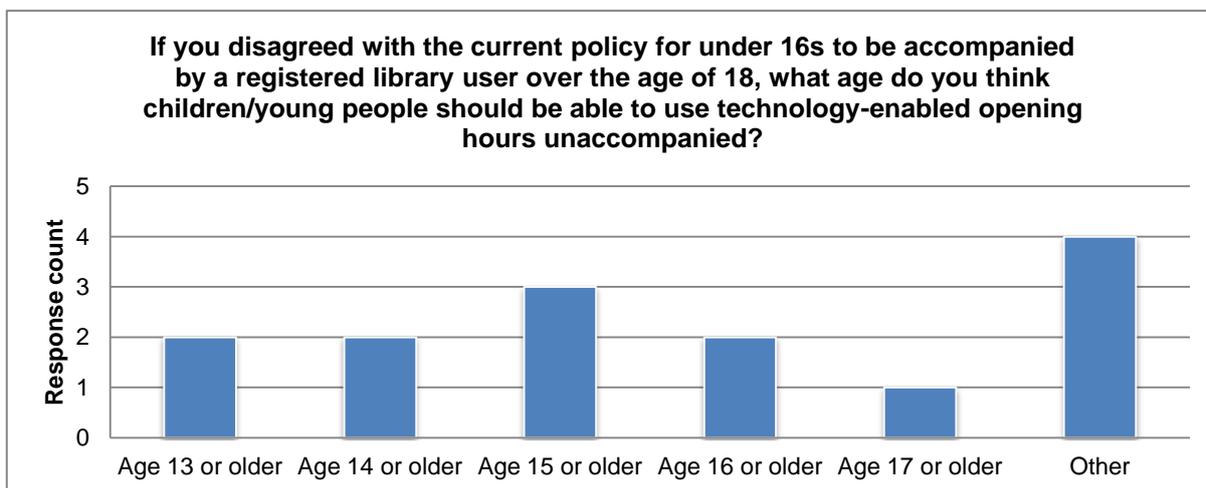


Figure 7: A graph displaying the results of question 12 in the Open+ survey, answered only by those users who disagreed with the current policy for under 16s to be accompanied by a registered library user over the age of 18 when using the extended technology-enabled opening hours.

The comments left by those who selected 'other' were:

'I think children/young people should not use technology-enabled opening hours unaccompanied because they are so noisy'

'My son needs to study for exams and it would be great if I didn't need to accompany him - he's a mature 15 year old!'

'18 and over'

3.4 Registered non-users

Of the 117 individuals who registered to use the extended technology-enabled hours and completed our survey, 40 had not used the technology-enabled extended hours service. These individuals were asked why they had not used the Open+ service (multiple responses could be given). The reason given by 80% of respondents was that they have not yet needed to use the library during the extended hours. 5% stated that the services or facilities they want are not available during the extended hours; and 12.5% suggested that they did not feel confident using an unstaffed library. Of the 5 comments that were left in the open text box for this question, 4 related to issues of personal safety.

3.5 Activities undertaken during extended opening hours

Data collected from the Library Management System (LMS), PC booking and wi-fi systems show the number of transactions for book issues/ renewals and returns; computer sessions and wi-fi use.

Of a total 5640 transactions, 50% were book issues/returns; 33% were PC sessions and 17% was wi-fi use. This data, however, does not quantify other use of the library space not involving interaction with technology. Therefore, in our survey, we asked users what services they use during the extended

technology-enabled hours. Many gave multiple answers. Figure 8 shows the responses.

Correlating with the LMS data, the most popular activity was issue/return of books, however the survey results demonstrate that the library is also used in the extended times by significant numbers of individuals for study space and reading the newspapers.

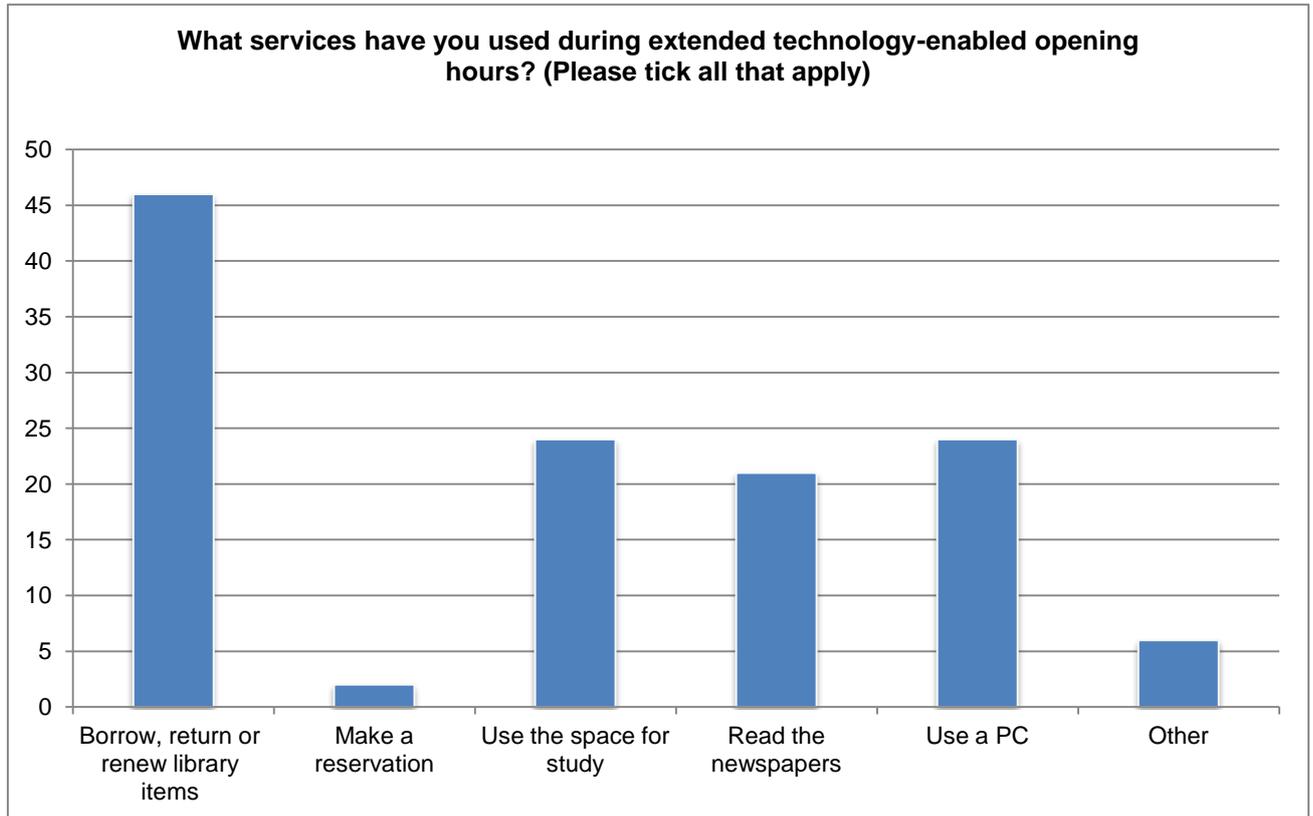


Figure 8: A graph displaying the results of question 13 in the Open+ survey

3.6 Benefits of technology-enabled opening

We asked users whether there were any benefits to them of the library being open for longer. 84% said that there were benefits and their written responses (where given) have been categorised as follows: 31 related to increased flexibility offered by the extended hours, 7 related to the reduced noise levels during the extended periods, 7 related to the increased time available for studying and 2 users gave narrative around greater access to parking in the local area. Some examples of these comments are given below:

'Can visit the library during the day, order a book, pick it up and return after hours'

'I can go more often and at times suited to me'

'Ability to use PC as and when I need, especially when Edgware Library closes early on Mon and Wed'

'Enables me to park right outside or very near to the library as no parking restrictions before 8am and after 6.30pm so no need to carry lots of heavy books long distances.'

'I do shift work so it benefits me greatly. Great job well done'

'Only place that is available during extended hours that offers quiet periods and computing facilities as need for studying, researching and completing essential tasks'

'It's a great space to do some work'

'The extended opening is a wonderful facility, not only enhancing the quality of my lifestyle but making the library a much more important focus for me'

When asked whether there were any additional times of day that users would benefit from the library being open (in addition to the current technology-enabled hours), 81% responded with no, however 19% said yes. The majority of the comments related to longer hours on Saturday and Sunday evenings with a couple of individuals indicating that a 24 hour service would benefit them.

3.7 Difficulties with technology-enabled opening

All users of the extended technology-enabled hours were asked whether they had experienced any difficulties. 10% (8 respondents) had experienced difficulties and these individuals were subsequently asked for the nature of their difficulties. Four options were given:

- Accessing the building
- Using the technology in the library
- Finding the items or information I needed
- Other

Four respondents recorded difficulties being experienced 'rarely' and 3 cited the nature of the difficulty being access to the building. The other individual recorded use of technology inside the library being the reason behind their difficulty. One of the individuals citing difficulty with access to the building recorded that they have a disability however they do not give further detail about their difficulty. None of those citing difficulty with building access are over the age of 65.

Four respondents recorded difficulties being experienced 'most of the time'. One of these cited their difficulty being access to the building. The remaining 3 respondents recording frequent difficulties selected 'other', indicating it was for an additional reason. The comments made by these 3 individuals are covered in further detail in section 3.8.1.

3.8 Additional Comments about technology-enabled opening

Respondents to our survey were given the opportunity to leave any additional comments about the extended technology-enabled hours service. Of the 29 who did, 17 were positive, 6 were negative (four of which were in relation to the lack of toilet facilities) with the rest neither positive nor negative.

Below is a selection of comments left by survey respondents:

'Excellent initiative, I hope it proves to be a success'

'I am thrilled that it is available, wonderful service'

'Congratulations on the obvious care taken in designing the extended opening and technology. It works superbly well and I hope this can be rolled out in the near future to other Barnet Libraries'

'Great service for people who want to work but do not necessarily have space at home in which to do so'

'I think it is an excellent service, hope it continues'

'Great idea! Especially for people who are not able to use the library during regular open times'

'We should have access to toilets as I suffer from prostate problems'

3.8.1. Three of the questionnaires cited a very similar experience which differed substantially from other surveys received. All three were completed in the same handwriting, albeit on behalf of three individuals. These customers all record regular (daily) use of the extended hours service at Edgware. However, all reference bullying, harassment and property damage. There have been no reports referring to incidents of this kind made to staff or to the onsite security guard and, of the remaining 114 surveys received, none report these issues. Therefore this experience/ these experiences appear to be an anomaly and, due to the anonymous nature of the questionnaire and limited detail given, these comments could not be validated. Future plans to adopt live-monitored CCTV (as detailed in Appendix A) will enable the council to be able to form a view as to the nature of incidents reported in this way. Due to the nature of how these allegations have been reported in this instance, (through an anonymous questionnaire with no details of time or date), event recorded CCTV has not enabled the council to assess the circumstances or nature of the allegations. The risk assessment is attached in Appendix K.

3.9 Extended technology-enabled opening hours in the future

All respondents were asked, if the council were to continue to offer extended technology-enabled hours (beyond the pilot scheme), how likely would they be to use them. Their answers indicate that the majority, 76%, would be likely to use the extended hours service if it were to be continued in the future. The results of this question are displayed in figure 9 below.

This is a pilot scheme operating at Edgware Library, if the council were to continue to offer extended technology-enabled hours, how likely would you be to use them? (Please tick one option only)

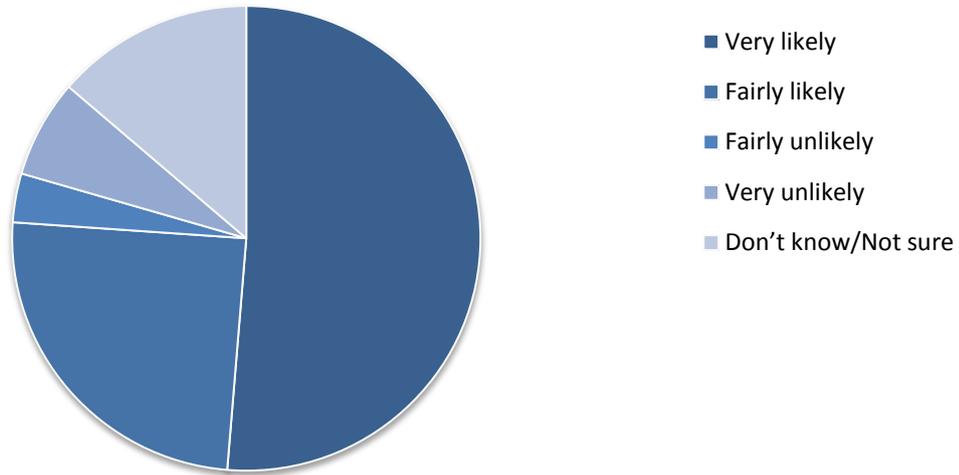


Figure 9: A chart showing the results of question 22 in the Open+ pilot survey

4. Methodology

4.1 Customer feedback – methodology

In February 2016 a survey was sent to 512 registered users of Open+ technology. Completed registration forms were collected from a number of libraries in the borough and surveys sent via email to those with valid email addresses. The remaining customers (those without email addresses) were sent a hard copy survey form.

All returned hard copies were entered and combined with the online responses giving a total of 117 responses.

4.2 Data analysis – methodology

When entering Edgware library during extended technology-enabled hours, registered users are required to scan the barcode on their library card and enter their individual PIN. All entry data captured since the beginning of the pilot until 31st January 2016 was analysed to contribute to this report. Furthermore, data regarding the number of transactions was taken from the Library Management System; the PC Netloan system; and the library wifi system.

5. Issues

Evidence from the pilot indicates that, in general, customers have behaved respectfully with regards both to the library space and to each other.

The service received two reports/complaints during the pilot (not including the matters raised in paragraph 3.8.1):

- An allegation that a library user was seen 'rolling' something. There was no information as to time or date or to suggest that this was a criminal activity. During staff hours, library users are seen preparing cigarettes ready to smoke outside the building.
- That some residents had been knocking on the library window to ask another user to let them in and that some residents were gaining entry without using the barcode and PIN system. The experience of the pilot is that some library users are entering the library behind other people or entering when people leave. These people have been entering the library to utilise its services and not to do harm. The risk of a person gaining entry to do harm is considered in the risk assessment set out in the Appendix K

For the second reported incident, CCTV footage was viewed which confirmed that some residents had indeed gained access without using a registered barcode and PIN. As a result, a reminder notice of TEO terms and conditions was reissued. There was only one further incident in which CCTV footage, was required to be viewed and this related to where library campaigners entered the library in order to pretend to be ill, take books off shelves and pretend to smoke.

There have been three periods where the service was unavailable due to technical difficulties. Two short periods were short. One involved the unlocking of the outer library gate, with the latter due to a minor software problem. Both issues were easily resolved and have not reoccurred. The latest third period was due to a problem with a related system server that took longer to rectify and was not a failure of the TEO technology itself (see Appendix L for further details).

5.1 Fire Evacuation

The Open +™ system is linked to the library fire alarm systems so that in the event of the fire alarm being activated, the locks on the front doors and all fire evacuation route doors are automatically released. New locks were fitted and the evacuation routes remodelled and ramped prior to the beginning of the pilot.

A fire drill was undertaken during one of the early evening extended hours sessions. Customers were not pre-warned about this drill and staff did not intervene to clear the library. All customers left the building as required and all technology (automatic doors, fire exits, auto-release locks) functioned

correctly. A further fire drill is planned to take place during a Sunday morning session.

6. Cost

In order to accommodate the Open+™ system, some significant changes were required to be made to the both the physical fabric of the building and the supporting electrical installations. This was necessary to ensure the building was able to be properly secured when Open+™ mode was initiated, and to make sure that security doors and monitoring equipment were installed to make users feel safe. The total cost of the building and IT upgrades totalled £99,131. In addition, Bibliotheca were selected to provide the Open+™ system. This cost an additional £32,372. The total cost of implementing Open+™ at Edgware therefore totalled £131,503 (excluding project management costs).

7. Risk

An updated risk assessment for technology-enabled opening is contained in Appendix K

8. Interest from other local authorities

During the pilot period, the Library service has hosted over 10 visits and received enquiries from other local authorities in London and elsewhere. This suggests that technology-enabled opening may become a feature of modern public libraries elsewhere. Pilots are now also being developed in several neighbouring boroughs.

9. Conclusion

Technology-enabled opening has allowed library services to offer extended hours. Over 1,100 library users have registered to use the service and so far, there have been over 3800 visits to the library using this service. Some individuals are making use of this service on a daily basis with over 100 entries recorded each. Registrations show that demand for the service is not solely centred in Edgware (figure 5). With very few incidents recorded, the pilot period has demonstrated that customer behaviour has not differed significantly between staffed and technology-enabled opening hours. Only a small percentage of users reported any difficulties using the Open+™ technology with the great majority of users describing multiple benefits that Open+™ offers them. Of those who responded to our survey, 66% had made use of the extended hours service and 76% said they would be very likely or fairly likely to use the service if the offer were continued.