

Award winning digital room booking system: big improvements, small budgets

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Background

The Sydney Children's Hospitals Network (SCHN) Medical Library is physically located at the Children's Hospital at Westmead (CHW). The Medical Library has four group study rooms which are bookable for study purposes. These are very popular with staff and students at CHW and are the only dedicated study spaces available in the hospital. Due to this, there are certain criteria that must be met for booking a room to ensure they are primarily being used for group study and a formal policy called "Library Group Study Rooms – Bookings" is in place. Walk-ins are welcome when rooms are not already in use, however to book a room patrons must be doing some form of study and book for two or more people. During COVID-19 an amendment has been made to the booking policy to allow individuals to book if they are engaged in online training (e.g. a Zoom session).

The Problem

The original Library booking system was a time-consuming two-step process using both Outlook and a separate room booking form. Patrons were required to complete an online booking form which was then manually processed by Library staff who would have to add the booking to Outlook, notify the patron of which room had been booked and print out an updated copy of that room's Outlook calendar to display inside the room. On top of this, many patrons were unaware of the booking form which led to Library staff having to take additional time to complete it on their behalf.

This booking system was highly inefficient for a number of reasons. Firstly, patrons were unable to directly book rooms themselves, leading to high levels of administration by Library staff. Secondly, although the Library is a 24/7 space that staff can swipe in and use, bookings could really only be made when staff were onsite during normal office hours. Thirdly, printing out daily calendars led to a lot of paper waste, particularly as this paper had to be replaced every time a new booking was made that day. This also meant that staff regularly had to disturb patrons by going into the study rooms to replace the calendar printout. Lastly, the booking form was only available via the SCHN intranet, meaning that staff and medical students off-site or without easy access to a work computer were unable complete the form for themselves.

A solution

Our proposed solution saw the HLA/Medical Director Digital Health Innovation Award 2021 awarded to us for "A Digital Room Booking System".

The Medical Library has been using the Springshare LibApps platform since 2016 when we purchased LibGuides. Since then we have purchased a number of modules including LibCal, LibWizard and LibAnswers. We were already using LibCal as a way of booking appointments with library staff, however the LibCal module also allows staff to set up "spaces" which can be booked either as a whole or with designated seats in a space. LibCal is highly responsive and allows for a number of customisations including how calendars are displayed, confirmation, reminder and follow-up emails to patrons, booking forms, and many specific settings such as maximum booking lengths, room check-ins and more.

We were able to secure funding to purchase tablets to be displayed outside each room to replace the Outlook calendar printouts, meaning that patrons would be able to easily see availability when outside rooms and book directly from the tablet.

The perceived benefits of transitioning to a LibCal room booking system were:

- Less time spent by Library staff confirming, making and organising room bookings.
- An integrated booking system with the booking form and calendar all in one.
- A more environmentally friendly booking system which doesn't rely on paper printouts.
- Users would be able to book rooms from anywhere without needing to access the hospital intranet.
- Users would be able to check which rooms are available without having to contact the Library.
- If users were a "no-show", rooms would automatically revert back to being available, providing greater access, particularly after hours.

Implementation

Due to COVID-19, all room bookings had been suspended and rooms were available on a first-come-first-served basis, which made it easier to trial the new booking system in one room initially without having to use two systems at once. A tablet was installed outside Room 1 with the room calendar displayed. The Fully Kiosk Browser app was used to display the LibCal site as this enables for the calendar to be refreshed regularly, which means the calendar outside the room remains up to date and the tablet screen stays on at all times. A sign was put up outside the room with information about the booking system and a QR code to check in, however this proved to be confusing for patrons as most people thought the code was used to make bookings.



Fig. 1: Using tablet to make a booking

During this trial phase feedback was sought from patrons and there were several issues with the tablet which required troubleshooting, such as slow charging and a flat battery. Amazing how an original charger could fix this problem. After a three week trial period these issues were resolved and we felt confident in moving forward to the next phase, which involved installing the other tablets and making all rooms bookable. During this phase new posters were designed with simplified information. QR codes for checking into rooms were placed on the wall above the tablets and on the table inside group study rooms.

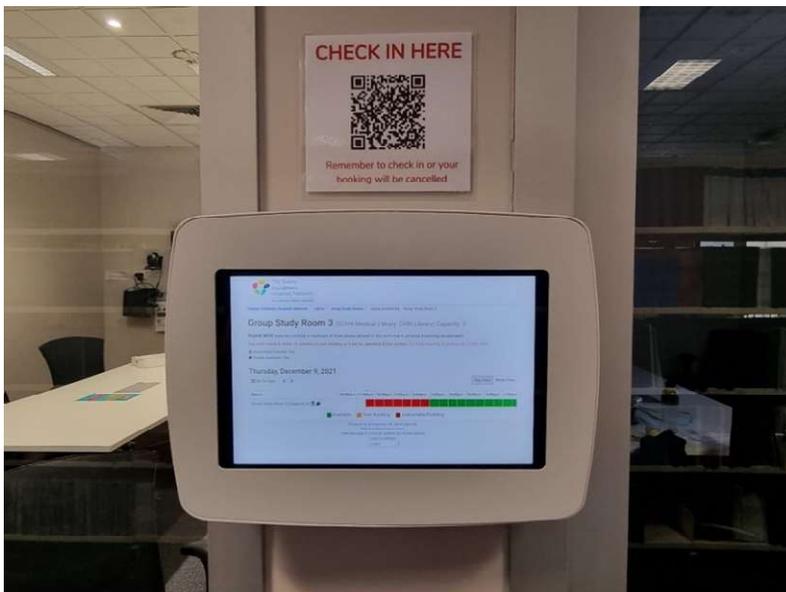


Fig. 2: Tablet with calendar display and QR code to check in.



Fig. 3: Library Group Study Rooms and tablets.

Lessons learned and future directions

- Uptake on the booking system has been excellent so far considering that there are fewer patrons on-site at the moment and we haven't yet officially commenced promoting the booking system across the hospital. We anticipate a full launch and roll-out will commence early in the New Year with education and training provided to hospital staff, as well as providing the URL for them to book from their computers, home or via their phones.
- One ongoing challenge that has been identified is the failure of many patrons to check in, resulting in their bookings being cancelled by the system. In times of high use this may prove to be an issue if patrons think their booking is secure and other users book as the system shows the room as available. We have several strategies we can implement to address this and will trial them going forward to see which is the most effective. These include adding red bold text at multiple points on the booking form, placing the QR code to check in into multiple places, sending a reminder email two hours before bookings with a reminder to check in, and having Library staff monitor bookings and manually sign in patrons and/or remind patrons to check in before the booking is cancelled.
- We have also had some issues with tablets restarting or Fully Kiosk Browser closing and are continuing to troubleshoot this as we go. Altering settings such as stopping automatic updates has helped to resolve most problems, and we recognise that there will always be some technical difficulties that arise.

- A feedback form is currently emailed out to all patrons one hour post-booking, which we will continue to monitor to gauge user satisfaction and identify other areas of improvement. Feedback received so far has been very positive.
- The next step for the project is to install a large touch screen which will display the availability of all rooms at once. We are also investigating the addition of the interactive mapping module in LibCal, which will allow us to display the group study rooms in a map format. This will enable us to highlight other points of interest in the library such as printers and page phone, but the biggest advantage is that patrons will be able to put in their booking requirements such as date and time, and available rooms will show up as green areas on the map. Rooms can then be directly booked from the map, with the same booking form as the calendar page. This means that patrons who are unfamiliar with the Library will be able to see which room they have booked on the map. Our prize money from the HLA/Medical Director Digital Health Innovation Award will enable this to happen.
- We are investigating extending the room booking system to the rest of the Education department, who would then also benefit from the interactive mapping module.
- Using LibCal and tablets has proven to be a cheap, effective way to modernise our room booking system and improve patron services while also saving Library staff significant time.