



2020 Lessons Learned. Are libraries ready for 2021?





Academia Turned Upside Down

The COVID-19 pandemic led to widespread shutdowns that hit institutes of higher education across the world extremely hard. Stay-at-home orders meant people could no longer gather in classrooms, laboratories or libraries, and campuses were closed. This caused major disruptions in teaching, learning and research, as well as in library services and collection management.

Academic libraries contended with three serious challenges as a result of the campus shutdowns: communication, technology, and access.

Suddenly cut off from regular and easy communication with students and faculty, librarians found it difficult to continue providing expected services, such as support for students, research assistance, course list consultation, and the like. They were also faced with technical and systemic challenges connecting to their own systems, consortia and other academic networks, whether local, regional or global. As a result, collaborative resource-sharing and collection building was greatly undermined. The technology challenge also limited or prevented access to administrative and managerial library systems, compounding the impact of the limitations on physical access to the library.

In addition, the general economic impact of the COVID-19 crisis naturally did not bypass the universities. Students are getting refunds for housing, dining and parking, seasonal sports ticket sales have been halted, any invested monies are at risk, students may start dropping out as families find it harder to afford tuition, research grant funding sources may dry up, and the forecast for the next academic year is fewer domestic and international students registering – all of which is placing universities in a precarious financial position.

It therefore quickly became clear that budgets were simply not going to be available for most libraries to rapidly adapt to the novel situation. Yet, a solution was urgently needed for adding remote-access technologies and allocating more resources if continuity in library services was to be maintained.

Responding to Unprecedented Circumstances

The unprecedented circumstances imposed by the global pandemic have forced students, faculty, librarians and administrators to find ways to adapt.

On the one hand, library managers, like many others, now live in a world of greater budgetary uncertainty. Large projects have been put on hold and employment is taking a hit. On the other hand, the COVID-19 outbreak has in some ways accelerated processes that were already underway in many libraries.

For example, expansion in the use of e-books was taking place, with fits and starts, for some time. From 2016-2018, the average number of ebook accesses per user in the United Kingdom's higher education sector increased by 77%, while 2019 saw a 20% global increase in the use of ebooks, audiobooks and digital magazines by library and school patrons. The advent of COVID-19 has focused attention on these alternatives to print collections and forced libraries to take more urgent action, as teaching, learning and research has been negatively affected at most academic institutions.

Similarly, much of academia is innovating or expanding existing solutions in a transition to remote modes of teaching and learning, interacting with colleagues, using institutional services, and sharing academic resources. While most colleges and universities have responded fairly rapidly, it is not easy, nor has it been fully successfully implemented.

A poll in April 2020 by EDUCAUSE, a nonprofit association focused on IT in higher education, questioned respondents from 267 institutions regarding how difficult the transition to fully remote learning has been for the students. The study found that:

- 16% said students find using library resources remotely moderately or extremely difficult, with another 22% said it was somewhat difficult.
- 11% said accessing course materials, such as OER and course texts, was moderately or extremely difficult, with another 20% saying it was somewhat difficult.

Respondents also listed a number of additional challenges they experienced in remote education, which included the use and navigation of their

institution's library management system. The poll further noted some steps that institutional libraries are taking to assist students with remote learning, such as providing e-texts and physically mailing textbooks.

Another issue that libraries were forced to address during the crisis, which is a challenge even during a normal year, was manual coordination among separate systems, channels and technologies. Synchronizing data and workflows for managing electronic, physical, and digital assets cataloged and siloed in different systems consumes a lot of time, technology and labor, and may require external support. This is especially true for digital collections, with the need for user-specific access, integration with remote systems, complex copyrights, digitization conformity, and large-scale content uploads.

Centralized, remote library services: A case study

[The California Community Colleges \(CCC\) libraries transitioned together to a shared, cloud-based platform in response to the closures imposed by the COVID-19 outbreak.](#) Rapid and timely adoption positioned the college libraries to immediately adapt to remote work and learning, with a unified resource management system.

The statewide Library Services Platform has "allowed college libraries to keep the virtual lights on," according to the CCC's Council of Chief Librarians, "enabling library staff, faculty and student workers to transition to an online work environment, while giving students uninterrupted access to library resources." This includes "accessing electronic resources and ebooks to being able to check their library record and renew books online," as noted by Jeffrey Sabol, Librarian at Long Beach City College.

The LSP provides sophisticated e-resource management, shared bibliographic services, powerful analytics, and a seamless discovery interface, supporting researchers and students in all programs and all instruction modalities. The colleges have also reported a significant reduction in operating costs thanks to their collaborative initiative.

The New Normal

The dramatic changes imposed on higher education in the wake of the COVID-19 outbreak can be expected to have some long-term effects. Pre-pandemic behaviors and cavalier approaches to learning continuity are not likely to return any time soon.

Unavoidably, there is now a much greater awareness of the impact of significant disruptions to academic life on students, faculty and administration. However, the lessons to be learned go far beyond handling emergency situations.

A shift in perspective is underway, toward adopting principles of enterprise resource planning (ERP) for academic teaching, research and learning. This includes exploring options for improved provision of services, engagement and responsiveness, in an active infrastructure supporting more online learning and remote services.



Lessons learned in the library

In the academic library, it is clearer than ever that new standards of remote access, agility, automation and cost-effectiveness are necessary.

Library services should be remotely accessible to students and faculty on a regular basis, ideally providing any resource and every type of support, at any time. This can include upgrading and expanding library collections, especially in terms of adding more electronic resources and digital assets. To provide these services and manage collections effectively, librarians must be able to consistently interact with the library management system from any location.

Remote access is also a key component of greater agility. With that infrastructure in place, libraries can quickly respond to volatile changes in demand, including increases in one type of service and decreases in another. Ramping up online services is merely a matter of extending already existing permissions and workflows to additional people or processes, ensuring maximum service continuity. In addition, the agility factor makes it easier and faster for a library to pivot from print to more electronic resources, or to add digital services.

Agile remote services are made much more effective by automation, as automated processes are easier to scale or revise, as needed. They can quickly relieve the pressure of accomplishing certain tasks in the event of an intermittently or suddenly limited workforce, with no learning curve or scheduling conflicts. More generally, automation regularly helps organizations accomplish more, and do so faster, by slashing time spent on routine activities, consolidating workflows, and eliminating human error.

As library leadership explores options for providing greater teaching and learning support, they will need to be cognizant of tighter budgetary constraints. Libraries will seek accurate and comprehensive information on what resources they are spending money on, which vendors are best, and how purchased assets are being used in practice, as well as what staff members are spending their time on. The focus of administrators should therefore be on the total cost of ownership (TCO) when considering transitioning to more remote, agile and automated systems in the coming year.

A cloud-based SaaS is the best option

To most effectively apply the lessons learned, the best option for libraries is transitioning to, or expanding their use of, cloud-based SaaS solutions. Such solutions go beyond merely hosting an on-premises system that has been moved to a remote server; rather, they allow users to take full advantage of what the cloud has to offer with a natively unified system.

- **Effectiveness** - A centralized SaaS platform in the cloud avoids siloes, which is one of the key challenges in today's library management environment. Legacy systems are generally dependent on a patchwork of systems, workarounds, or homemade solutions to manage various types of resources and services, which need to be maintained separately, integrated, and may require different skillsets or training. The weaknesses of siloed systems surfaced even more starkly when remote activity became the only option. A single, shared cloud-based system therefore radically reduces duplication of effort, provides access to shared catalogs, and facilitates remote communications and planning.
- **Efficiency** - Routine library processes can be easily automated in a unified end-to-end SaaS cloud-based solution, streamlining multistage workflows for library staff, and saving significant time and labor. Librarians need not deal with patches, updates, integrations, and staff training for local systems, and can instead focus on true librarianship - improving service for the patron and other value-added activities such as remote learning.
- **Networking** - SaaS is the best vehicle for new and merging models of teaching and learning, many of which became urgently needed during the 2020 pandemic. Virtual classrooms, remote access to library resources and databases, and interactive discovery and reading lists can all be facilitated through a single cloud-based services platform. Similarly, interlibrary and intra-university collaboration and resource sharing processes are dramatically streamlined when there is no need to navigate disparate on-premises management environments. Resource sharing networks, for example, cut management costs and effectively expand the size of each participating institution's collection with collaborative collection development.

Decisioning - A centralized SaaS system is more capable of providing actionable analysis and data mining. This can figure prominently in developing high-quality library collections, with information on cross-institutional usage, budget trends and expenses, circulation, and bibliographic data, as well as overlap analysis for e-resources. Ultimately, this can lead to a dramatic reduction in unnecessary expenses thanks to in-depth and accurate resource use analysis.

- **The cost factor** - Cloud-based SaaS reduces the library's operating costs and increases the institution's return on investment. Even if there is a necessary initial migration expenditure, the total cost of ownership of library infrastructure is lower in comparison to that of a local system. Taking the long-term view, an SaaS solution saves the library expenditures associated with periodic replacement of local servers, technology upgrades, IT support, and changing regulatory adherence demands.



What to Look for in a Remote-ready Cloud-based SaaS

An academic library seeking to optimize its resources, including robust support for remote learning, teaching and service management, should look for the following features in its cloud-based SaaS solution.

- **Versatility**

The best SaaS solutions manage resources using linked data formats as the prime source, rather than cross-walking legacy-based schemas. The result is a consolidation of resources, formats and metadata using common workflows and processes for maximum efficiency, and for all resource types (electronic, print, and digital) – from managing catalogs and acquisitions to administration and analytics. It will ensure quick identification of the right resources and their rapid distribution to the right library patron.

- **Simultaneous and instant updating**

A good SaaS solution provides seamless upgrades, without impacting service continuity no matter how often they occur. Similarly, any updates or changes to data or workflows managed in the system should be instantly proliferated across all instances of the solution currently in use. This ensures all users see the same interface, share asset information, and avoid potential technical conflicts.

- **Customizability**

The system should include strong APIs and have an extendable architecture, providing the flexibility needed to meet current and evolving business or academic needs. The more open-source the solution, the less the library is dependent on vendors for creating branded or specialized applications. Such a highly configurable, easily adaptable and rapidly scalable solution also enables the library to react quickly and effectively to unexpected developments or service disruptions.

- **Easy integration with third-party systems**

The solution should be easily integrated into the institution's technology ecosystem, including frictionless interoperability across third-party and legacy systems. Preferably, the necessary configuration should require no additional coding, with REST APIs providing access to data and workflows, and using standards such as NCIP, SRU, z39.50, SIP2 or OAI/PMH. Such openness is especially valuable for maximizing remote capabilities within the university and across its affiliated consortia.

- **Automation of routine tasks**

The library's SaaS should be completely cloud-based, incorporating automation that eliminates the need for manual local synchronization of records and other routine repetitive tasks. This will also prevent human error in data entry and free library staff for more value-added activity.

- **A digital resources solution**

SaaS-based workflows should manage all types of digital resources, from multimedia to digitized texts, for flexible and coherent curation, safeguarding, discovery, and delivery. Such a system would be able to streamline bulk loads, allow collection-centric management, and provide researchers, scholars and other community members direct remote access to enrich the library's digital collections. In addition, digital storage can be the most cost-effective option for maximum remote access, with no onboarding and no installation necessary at the local library level.

- **An electronic resources solution**

An effective and comprehensive cloud-based resource management system naturally supports acquisition, curation and activation of e-resources, as well as tracking their usage, overlap with print assets, and other performance analytics. Acquisition, activation, and link resolution workflows should be tightly integrated, streamlining a variety of purchasing models for electronic journals and books, preferably within the same management environment as other resources.

- **Multichannel and multipurpose**

The heart of remote access is the capability to use library resources, as a patron or manager, from any device. Delivery of content to patrons should include enhanced search capabilities for print, electronic, and digital collections within a single interface. At the same time, the system should be able to highlight special collections, encouraging users to explore them in accordance with institutional priorities.

- **Strong security**

The SaaS solution should have layered security controls, strong administrative measures, and up-to-date cloud industry standard security practices. It should also be constantly monitored and tested. In addition, a configuration sandbox should be available, to test customizations and mitigate the risk of unintended harmful consequences.

- **Active analytics**

The solution should be capable of fully leveraging its centralized, cloud-based data collection for active, actionable analytics. Librarians will thus benefit from both live recommendations and detailed reporting on such aspects of library services as: technical options for acquisition; real-time academic demands; collection use and development; accessibility status; user experience; and more. Such insights help determine if the library is getting a good return on its investment in specific library assets and how to make available funds go even further.

- **Availability, reliability, and stability**

The SaaS solution should maintain redundant architecture, ensuring always-on availability for the library management system, complete data reliability, and patron service stability. Librarians need to have full confidence in the system, as they depend on it to help them provide teaching and learning support even in the most challenging situations.

- **Vendor support and a community of users**

One of the important factors in deciding on a cloud-based SaaS library resource planning solution is the vendor that stands behind it. Direct and user-friendly vendor support - including implementation, troubleshooting, and configuration guidance - ensures optimal results for the library, faculty and students. Additionally, an active, networked user group can be very useful for sharing knowledge, experience and ideas for purpose-specific optimizations, as well as potentially shaping the product roadmap.



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