



## Virtual Campus Libraries' Role in Community Colleges: Benefit, Challenge and Future

Jane Jiang

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This paper explores the role of virtual libraries in community college settings, focusing on strategies to enhance access, inclusivity, and collaboration. Drawing upon examples from UCNJ Libraries, the paper examines how virtual libraries can address challenges such as digital literacy gaps, collaboration with academic departments, and technology infrastructure limitations. It also highlights opportunities for virtual libraries to expand their reach globally, foster collaborative partnerships, and leverage emerging technologies to innovate service delivery. Through initiatives such as live chat support, screen-sharing features, and strategic collaborations with academic institutions and industry stakeholders, virtual libraries can enhance user experiences, promote knowledge sharing, and advance academic excellence. By embracing these opportunities, virtual libraries can effectively support the diverse needs of community college students and faculty, ultimately enriching the educational landscape and fostering a dynamic and inclusive learning environment.

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## **Virtual Campus Libraries' Role in Community Colleges: Benefit, Challenge and Future**

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### **ABSTRACT**

This paper explores the role of virtual libraries in community college settings, focusing on strategies to enhance access, inclusivity, and collaboration. Drawing upon examples from UCNJ Libraries, the paper examines how virtual libraries can address challenges such as digital literacy gaps, collaboration with academic departments, and technology infrastructure limitations. It also highlights opportunities for virtual libraries to expand their reach globally, foster collaborative partnerships, and leverage emerging technologies to innovate service delivery. Through initiatives such as live chat support, screen-sharing features, and strategic collaborations with academic institutions and industry stakeholders, virtual libraries can enhance user experiences, promote knowledge sharing, and advance academic excellence. By embracing these opportunities, virtual libraries can effectively support the diverse needs of community college students and faculty, ultimately enriching the educational landscape and fostering a dynamic and inclusive learning environment.

**Keywords:** Virtual Library, Community College, Collaboration, User Experiences

### **INTRODUCTION**

The emergence of virtual campus libraries in recent years, particularly accentuated by the impact of the COVID-19 pandemic from 2019 to 2020, has transformed the landscape of higher education by providing equitable access to educational resources and support services for college students and professors. These virtual libraries offer flexibility and convenience, enabling students to access materials and services from anywhere, at any time, and on any device, catering to diverse learning needs and enhancing student success. By offering a wide range of resources and support services such as virtual reference assistance and online tutoring, virtual libraries play a crucial role in promoting inclusivity, accessibility, and academic excellence in community college settings (Flierl & Henkalin, 2023).

Through the utilization of digital technologies, these virtual libraries overcome traditional physical constraints, offering unparalleled flexibility and accessibility to users irrespective of their geographical location or time constraints. They provide access to an extensive array of resources including books, articles, journals, streaming videos and other educational content, thereby enriching the learning experience and facilitating research endeavors for students, academics, and

lifelong learners alike. For example, during library closures, patrons still have the ability to access library resources and leave questions on chat platforms. Librarians can then pick up these inquiries and provide responses when the library reopens, ensuring continuous support and assistance for users regardless of temporary closures or limitations. This seamless accessibility enhances user experience and ensures uninterrupted access to essential resources and services.

## BENEFITS AND ROLE

### Enhanced Collaboration and Innovative Technologies

Virtual libraries serve as dynamic platforms, offering tools like online meetings via Webex or Zoom, and virtual reference assistance to foster collaboration among users. These platforms facilitate discussions, group projects, and knowledge exchange, enriching the learning experience. Moreover, virtual libraries harness cutting-edge technologies like virtual reality, augmented reality, and artificial intelligence to craft immersive and engaging learning environments, pushing the boundaries of traditional education and enhancing the exploration of academic content. We will discuss emerging technologies further in the “Challenges and Opportunities” section of this paper.

### Support Services and Academic Success

Virtual libraries offer a range of support services, including virtual reference assistance, online tutoring, research guides, and instructional materials, to help users navigate resources effectively and achieve academic success, thereby serving as integral components of the modern educational landscape (Cox, 2020).

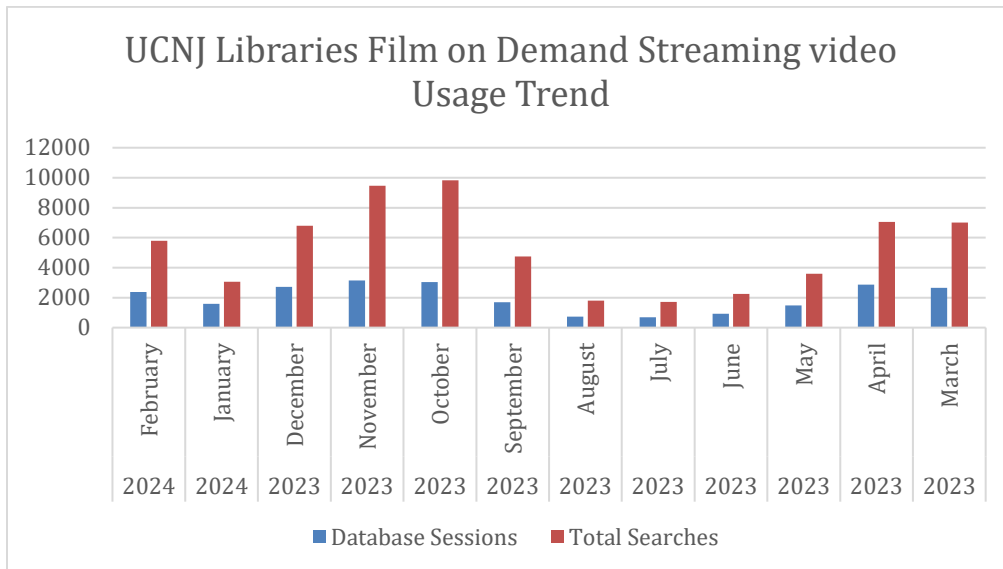


Figure 1. UCNJ Libraries Film on Demand (FOD) Usage Trend

Another example, during campus closures, University of California (UC) campuses have exhibited a steadfast commitment to supporting their academic community by harnessing virtual library resources and services. Despite the inability to access physical library spaces, scholars are

equipped with comprehensive support through the libraries' websites. This initiative underscores the significance of virtual libraries in ensuring uninterrupted access to essential resources for teaching, learning, and research, even in challenging circumstances (Fortney, 2020). Noteworthy services include expanded and complimentary access to select materials during campus closures, online research tools, electronic delivery of interlibrary loan articles, virtual research consultations, eBook acquisition requests, streaming audio and video collections, as well as copyright guidance tailored for remote instruction.

Before the onset of the COVID-19 pandemic, UCNJ Libraries of Union College of Union County, NJ, had already established a live chat service to assist patrons with their inquiries. Over the years, this service steadily gained traction, witnessing a growing number of interactions annually. However, in 2022, recognizing the evolving needs of patrons and the increasing demand for efficient assistance, UCNJ introduced a screen-sharing feature to enhance the support provided through the live chat service. This addition marked a significant advancement in the library's ability to aid patrons effectively. By allowing patrons to share their screens, librarians could better understand and address their queries in real-time, leading to more streamlined and immediate assistance. As a result, the introduction of the screen-sharing feature represented a pivotal moment in improving the overall user experience and support provided by the UCNJ libraries.

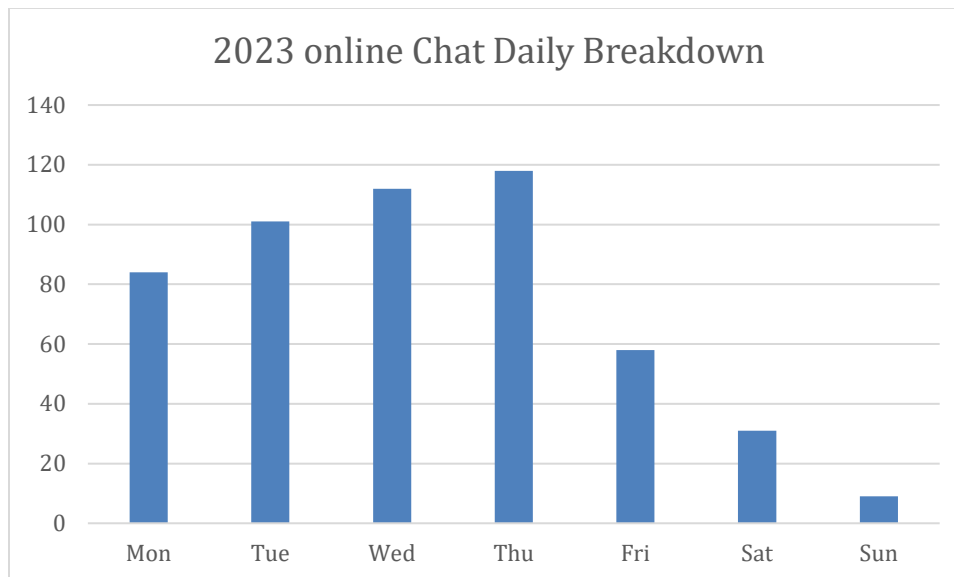


Figure 2. UCNJ Libraries Online Chat Daily Breakdown in 2023

Recognizing the constraints posed by limited personnel resources, the UCNJ Library made strategic adjustments to its service model. One such adaptation involved the consolidation of the reference desk with the circulation desk, streamlining operations while still maintaining accessibility to patrons seeking assistance. However, to ensure that patrons continued to receive effective reference help despite the consolidation, the library introduced a new initiative in 2022 - weekly virtual research help sessions. This innovative approach aimed to bridge the gap for faculty and students who had general reference questions but lacked the time or opportunity to

visit the library in person. By offering virtual research assistance, the library expanded its reach beyond the confines of physical space, catering to the needs of a broader audience while maintaining a commitment to providing high-quality reference services.

The implementation of weekly virtual research help sessions represented a strategic response to the evolving needs and preferences of library users. Through these sessions, patrons could access personalized assistance and guidance from librarians, regardless of their location or scheduling constraints. This initiative not only facilitated greater convenience for patrons but also promoted inclusivity by ensuring that all faculty and students had equitable access to reference support. Moreover, by embracing digital platforms for reference assistance, the library demonstrated its commitment to leveraging technology to enhance service delivery and adapt to changing user demands. Overall, the introduction of virtual research help sessions underscored the library's dedication to providing efficient and accessible reference services in an increasingly digital and dynamic academic landscape.

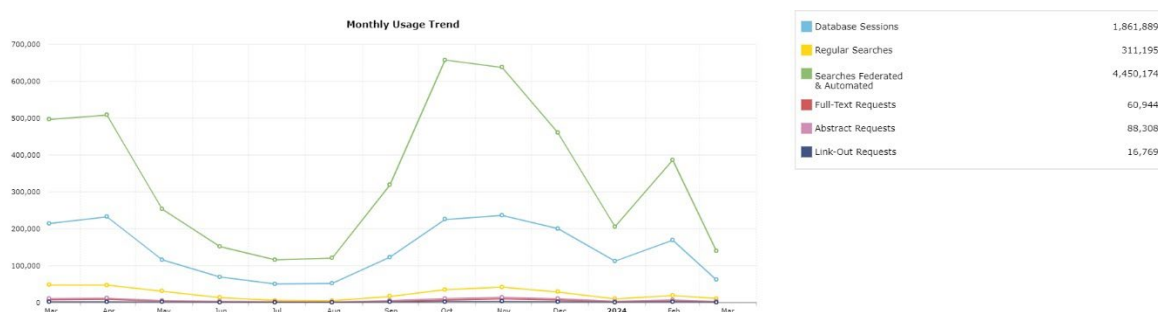


Figure 3. UCNJ Libraries' EBSCO Databases Monthly Usage Trend (March 2023-March 2024)

## FOSTERING INCLUSIVITY AND DIVERSITY

The UCNJ Libraries are steadfast in their commitment to fostering inclusivity and diversity within the university community. As part of their mission, the libraries actively seek to support the diverse needs of students and faculty from various backgrounds and academic disciplines. At the start of each semester, when the academic landscape is bustling with over 200 courses, including a mix of in-person, online, and synchronized classes, the libraries recognize the importance of accommodating different learning environments and preferences. In response to the diverse course offerings, librarians proactively engage with faculty and students to provide tailored information literacy instruction sessions. These sessions are designed to equip learners with the necessary skills to navigate the vast array of library resources effectively, regardless of their mode of instruction.

To ensure inclusivity and accessibility, librarians adopt a multifaceted approach to engagement. They not only visit classrooms to deliver instruction but also embed themselves within specific courses, collaborating closely with professors to integrate library resources seamlessly into the curriculum. ("What is", 2023). Additionally, recognizing the value of flexibility and convenience, the libraries offer recorded instruction sessions, allowing students to access library services at their own pace and convenience. These recorded sessions, affectionately referred to as "canned" class recordings, serve as invaluable resources for students and faculty,

providing immediate access to library support and feedback in a format that accommodates diverse learning styles and schedules. Through these initiatives, the UCNJ Libraries strive to create an inclusive learning environment where all members of the university community feel empowered to engage with library services and resources in a manner that best suits their individual needs and preferences.

## **ENHANCING COLLABORATIVE LEARNING AND ENGAGEMENT**

In the realm of virtual libraries, fostering collaborative learning and engagement is essential for facilitating enriched educational experiences. A. Facilitating virtual group projects and discussions allows students to collaborate seamlessly regardless of their physical locations. For example, UCNJ Libraries could host virtual group workspaces where students from different disciplines can collaborate on projects, share ideas, and collectively solve problems in real-time. B. Promoting interaction through online forums and discussion boards provides a platform for students and faculty to engage in meaningful discourse, share insights, and seek assistance from peers and instructors. By curating discussion topics relevant to course content or research interests, UCNJ Libraries can cultivate a vibrant online community conducive to intellectual exchange and collaboration. C. Leveraging multimedia resources and interactive tools for engagement offers diverse learning opportunities that cater to different learning styles and preferences. For instance, UCNJ Libraries could curate interactive tutorials, virtual tours, or multimedia presentations to complement traditional textual resources, catering to visual, auditory, and kinesthetic learners alike. By embracing these strategies, virtual libraries can enhance collaborative learning experiences, promote active engagement, and empower students to succeed in their academic endeavors.

## **CHALLENGES AND OPPORTUNITIES**

### **Challenges**

Initiatives such as cooperative reference services and interlibrary loan systems, as mentioned in the article, demonstrate the commitment of libraries to overcome barriers and provide equitable access to resources for distance learners (Koenig, 2019). By incorporating such collaborative strategies, virtual libraries can enhance their support services and ensure that online students have access to the resources they need to succeed academically.

The proactive measures taken by UC campuses reflect the resilience and adaptability of virtual libraries in addressing challenges and seizing opportunities in the digital age. Expanded and free access to materials, online research tools, and virtual research consultations are among the initiatives implemented to support scholars during campus closures (Fortney, 2020). These initiatives not only address immediate challenges but also pave the way for innovative approaches to enhancing virtual library services and support in the future.

Firstly, Digital Literacy Gaps: Addressing disparities in digital literacy skills among students, faculty, and staff poses a significant challenge for virtual libraries striving to ensure equitable access to resources and services. For instance, while some students may be proficient in

navigating online databases and utilizing advanced search techniques to locate scholarly articles, others may struggle with basic computer skills, such as navigating a library website or accessing electronic resources. This discrepancy in digital literacy levels can result in unequal access to information and hinder academic success. To illustrate, consider a scenario where a first-generation college student lacks experience with online research tools and struggles to locate relevant resources for a research paper, while their peers with stronger digital literacy skills effortlessly access and analyze information. In this case, the digital literacy gap becomes a barrier to equitable access to educational resources and support services provided by the virtual library. Additionally, faculty and staff may also face challenges in adapting to new technologies and incorporating digital resources into their teaching and research practices, further exacerbating digital literacy disparities within the academic community. Addressing these gaps in digital literacy requires targeted interventions, such as offering workshops, tutorials, and online guides to enhance students' and educators' digital skills and ensure equitable access to virtual library resources and services.

Secondly, Technology Infrastructure: Ensuring the reliability and scalability of technology infrastructure is a significant challenge for virtual libraries striving to meet growing demands and accommodate future digital advancements. For example, UCNJ Libraries encountered issues with frequent downtime and slow response times due to outdated hardware and limited network bandwidth. This situation hindered access to online resources and eroded user confidence in essential support services (Askin, et al., 2021). Recognizing the importance of infrastructure investment, UCNJ Libraries prioritized upgrades, expanding network capacity, and implementing cloud-based solutions. By investing in modern hardware and robust network infrastructure, UCNJ Libraries improved service reliability and responsiveness, ensuring seamless access to virtual resources for students and faculty. Additionally, ongoing monitoring and maintenance efforts were implemented to identify and address potential issues promptly. These proactive measures enabled UCNJ Libraries to effectively meet the evolving needs of users, foster digital innovation, and remain competitive in the digital age.

## **Opportunities**

Expanding the global reach of virtual library resources and services offers an exciting opportunity for UCNJ Libraries to connect with a broader audience, fostering collaboration and knowledge sharing on an international scale. For example, UCNJ Libraries could provide access to its digital collections and support services to students and educators worldwide. Through targeted marketing and outreach efforts, the library can attract users from diverse geographical locations, transcending traditional boundaries and facilitating cross-cultural exchange. This expanded reach enables students and researchers from different countries to access valuable educational resources and engage in collaborative projects and research endeavors. For instance, a student in South America could access an online tutorial on research methodologies hosted by UCNJ Libraries, while collaborating with peers from Europe and Asia on a group project facilitated by virtual meeting platforms. Additionally, UCNJ Libraries can leverage partnerships with international institutions and organizations to enhance the breadth and depth of its collections, offering users access to a wealth of diverse perspectives and scholarly insights. By embracing the opportunity to extend its reach globally, UCNJ Libraries can contribute to the democratization of knowledge and promote cultural understanding and cooperation on a global scale, enriching the learning experience for all

participants and fostering a dynamic and inclusive virtual community united by a shared pursuit of knowledge and academic excellence.

Embracing emerging technologies such as artificial intelligence (AI), machine learning, and data analytics presents significant opportunities for virtual libraries to revolutionize service delivery, personalize user experiences, and enhance resource discoverability. By employing AI-powered chatbots, virtual libraries can offer immediate assistance to users seeking research help or navigating resources, streamlining service delivery, and empowering users to find information more efficiently. Additionally, machine learning algorithms can analyze user behavior to personalize recommendations and content suggestions, tailoring resources to individual interests and past interactions. Furthermore, data analytics tools provide valuable insights into usage trends and user demographics, enabling libraries to optimize services and make data-driven decisions to improve the overall user experience. In summary, leveraging these technologies allows virtual libraries to innovate and transform their services, ultimately enhancing their value and impact in the digital age.

Collaboration with other departments to support the college mission provides exciting opportunities for libraries to enhance their services. For example, UCNJ Libraries collaborate with the Academic Learning Center, Distance Education, ESL, and Health Programs to expand access to educational resources and support services for underserved student populations. By providing access to digital collections and online tutoring services, while the community college offers physical space for study sessions, both institutions can address the diverse needs of students more effectively.

Additionally, partnerships with technology companies can grant UCNJ Libraries access to cutting-edge resources and support. For example, collaborating with OCLC and other streaming video providers could offer a comprehensive collection of eBooks and multimedia resources, while OCLC's proxy server support ensures seamless access to these resources from off-campus locations, exemplifying the utilization of innovative technology to enhance user experience and accessibility.

Furthermore, partnerships with community organizations enable UCNJ Libraries to extend their reach beyond academic settings, addressing the information needs of diverse populations and promoting lifelong learning initiatives. Through such collaborative efforts, UCNJ Libraries can tap into a wealth of resources and expertise, fostering innovation, expanding access, and advancing their mission to serve the needs of their communities.

Table Examples of UCNJ Libraries Collaboration with Other Departments

<b>Collaboration Partners</b>	<b>Nature of Collaboration</b>	<b>Outcomes/Benefits</b>
Academic Learning Center (ALC)	Shared space and computer lab services	Improved academic support
Distance Education	Joint development of online resources, workshops, training, etc.	Expanded access to digital learning materials



ESL Program	Coordinated language learning initiatives	Enhanced support for English learners
Health Programs	Collaborative health and wellness events, virtual and in-person classes	Enhanced instruction and Improved student well-being and awareness

## CONCLUSION

In conclusion, virtual libraries play a pivotal role in community colleges by democratizing access to educational resources and support services, fostering inclusive and engaging learning environments, and empowering students to succeed academically. By providing 24/7 access to a wealth of digital materials, accommodating diverse learning needs and preferences, and offering personalized support services, virtual libraries ensure that all students have equitable opportunities to pursue their educational goals. Additionally, virtual libraries serve as catalysts for collaboration, innovation, and lifelong learning, facilitating knowledge sharing, interdisciplinary collaboration, and the exploration of emerging technologies within the academic community.

Moving forward, it is imperative for community colleges and educational stakeholders to prioritize continued investment in virtual library resources and support. This investment should encompass ongoing efforts to expand and enhance digital collections, improve technology infrastructure, and provide professional development opportunities for library staff to adapt to evolving user needs and technological advancements. Furthermore, community colleges must advocate for policies and funding initiatives that prioritize digital equity and accessibility, ensuring that all students have the necessary resources and support to thrive in the digital age.

Looking ahead, future research in the field of virtual libraries should focus on exploring innovative approaches to enhance user engagement, improve resource discoverability, and assess the impact of virtual library initiatives on student success and academic outcomes. Additionally, there is a need for research that examines the intersectionality of digital literacy, equity, and inclusion within virtual library environments, as well as studies that investigate the effectiveness of emerging technologies such as artificial intelligence, virtual reality, and augmented reality in enhancing the delivery of library services and promoting student learning and engagement. By advancing knowledge and best practices in these areas, virtual libraries can continue to evolve and adapt to meet the evolving needs of community college students and support their academic success and lifelong learning journey.

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### About the author

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