Key library services for researchers: The role of hidden, selective dissemination of information (SDI) in fact-finding and implementation

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Abstract
Library services have grown more important in academic research, helping academics access curated, high-quality content. Selective Dissemination of Information (SDI) is beneficial to research among the various services supplied. This often-overlooked tool distributes useful, personalized information to researchers. The idea behind the founding of SDI was that researchers, burdened with academic resources, require swift and precise data for fact-finding and implementation. This study examines SDI's many roles in library services, notably its hidden yet crucial function in helping scholars. Algorithms, metadata, and user preferences help SDI systems identify and filter valuable information from massive scholarly collections. This helps researchers identify relevant studies, methodologies, and trends that a typical search query may miss. This study analyses how SDI improves fact-finding accuracy and efficiency in library services, allowing researchers to make educated decisions and confidently apply results. The report also explores how SDI may break down silos, spark new ideas, and promote creativity in cooperation and interdisciplinary research. We also discuss librarians' role as information curators and SDI facilitators, as they manage complex information systems and assist researchers in navigating the information environment. Finally, they discuss privacy, information overload, and access to diverse and inclusive sources, emphasizing SDI's ethical aspects in current research. This report highlights SDI's hidden but crucial function in libraries, boosting research productivity and creating a more dynamic and integrated academic community.

Keywords: Social science, library and information science, selective dissemination of information (SDI), library services

Introduction
In the rapidly evolving landscape of academic research, access to timely and relevant information has become a necessity for scholars and practitioners alike. Libraries serve as pivotal hubs of knowledge, providing researchers with essential resources, tools, and support systems that facilitate their work. Libraries offer various services, but Selective Dissemination of Information (SDI) stands out as a tailored approach that meets the specific informational needs of users through curated data delivery. Despite its significance, many libraries still grapple with effectively implementing SDI practices due to challenges such as inadequate funding, low levels of ICT skills among librarians, and limited technological infrastructure. This paper seeks to explore the current state of library services focused on SDI while highlighting its importance for researchers in enhancing their access to critical information. This study looks at the history, problems encountered during implementation, and possible future trends of SDI services in libraries. The study aims to demonstrate the significant value of these services and provide practical recommendations for enhancing their effectiveness in supporting academic communities.

Overview of library services
Libraries play a crucial role in supporting researchers by offering a variety of essential services. One of the primary services is providing access to extensive collections of print and digital resources, including books, journals, articles, and seminar materials. These resources are vital for researchers who rely on current literature to inform their work and ensure that they remain up-to-date with the latest developments in their field. Additionally, libraries often maintain specialized databases that provide curated

information, allowing researchers to conduct comprehensive literature reviews efficiently (Jayaraman *et al*., 2015) [14]. Beyond resource access, libraries also facilitate research through informational literacy programs aimed at teaching users how to effectively locate, assess, and utilize information. This educational support is particularly important for new researchers who may be unfamiliar with research methodologies or library systems. Furthermore, libraries often offer consulting services, enabling researchers to seek guidance from experienced librarians who can assist in navigating complex information landscapes. Such interactions can enhance the quality of research output by ensuring that researchers have access to reliable and relevant data. For instance, library professionals in pharmacy colleges reported high levels of job satisfaction and comfort in guiding students through online resources, indicating the supportive environment libraries strive to create (Jayaraman *et al*., 2015) [14]. Additionally, libraries may provide workshops and training sessions on specific tools, such as citation management software or data visualization techniques, which are increasingly valuable in modern research contexts. Overall, the combination of resource access, educational programs, and personalized assistance makes libraries indispensable partners in the research process and fosters an environment conducive to knowledge creation and scholarly achievement.

Understanding selective dissemination of information (SDI)
Understanding Selective Dissemination of Information (SDI) is essential for enhancing library services, particularly in academic institutions. SDI refers to the tailored approach librarians use to actively search databases and curate

relevant information for specific users or groups within a library. The design of this service caters to the unique information requirements of individuals, promoting effective access to relevant information. The ability of SDI to keep library users informed about new developments in their fields underscores its importance for academic and professional growth. In many university libraries, however, there remains a significant reliance on traditional methods for disseminating information, despite the advantages offered by modern technologies (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. Factors such as erratic internet services, inadequate training, and low levels of ICT skills among librarians hinder the effective implementation of SDI practices. Furthermore, the lack of sufficient financial support from university administrations further exacerbates these challenges, leading to an environment where traditional information dissemination methods prevail over more advanced ICT solutions (Omeluzor & Oyovwe-Tinuoye, 2017) [22] . As a result, it becomes imperative to advocate for increased investment in both training and technology to enhance the capacity of librarians to deliver SDI effectively. By integrating ICT into SDI services, libraries can significantly improve their responsiveness to user needs, thus enhancing the overall quality of library services. This shift toward a more digital framework will not only support researchers and students in accessing timely and relevant information but also foster a culture of continuous learning and inquiry within academic communities.

Historical context of SDI in libraries
Over the years, the concept of Selective Dissemination of Information (SDI) in library services has undergone significant transformation, particularly with the advent of Information and Communication Technology (ICT). Initially, SDI focused on traditional methods such as printed newsletters, bulletin boards, and personal notifications to disseminate information tailored to user needs. However, these methods often lacked efficiency and timeliness, limiting their effectiveness in meeting the rapidly changing information demands of users. With advancements in ICT, libraries have begun to explore digital solutions that facilitate faster and more targeted dissemination of information through platforms like email, SMS, and social media. These technologies allow librarians to provide real-time updates and personalized content to users, thereby enhancing engagement and satisfaction (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. Despite these advancements, many university libraries, especially in regions with limited resources, have struggled to fully integrate ICT into their SDI practices. Various challenges, such as inadequate training for librarians, insufficient technical support, and a lack of financial investment from academic institutions, contribute to the persistent reliance on outdated methods (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. To overcome these barriers, it is essential for libraries to prioritize the development of ICT skills among their staff and foster an environment that supports innovative service delivery. By embracing technology, libraries can significantly enhance their SDI offerings, ensuring that they remain relevant and responsive to the needs of their patrons. This evolution not only aligns library services with the expectations of modern users but also underscores the importance of continuous adaptation in an ever-changing information landscape.

Importance of SDI for researchers
For researchers, Spatial Data Infrastructure (SDI) is crucial as it enhances access to diverse datasets necessary for informed decision-making in various fields. In recent years, the advent of technological advances and data-driven methodologies has emphasized the importance of reliable and accessible spatial data. SDI facilitates researchers in obtaining relevant geographic information efficiently, which is vital for studies related to environmental monitoring, urban planning, disaster management, and more. By using SDI, researchers can access real-time data and analytical tools that are traditionally labor-intensive and time-consuming to gather. For instance, effective disaster response systems leverage SDI to streamline the process of information dissemination during emergencies, ensuring that the right data reaches first responders quickly (Lei Hu et al., 2022) [12]. This capability not only aids in timely interventions but also supports the preparation and recovery stages of disaster management. Furthermore, SDI promotes interoperability among different data sources, allowing for a more integrated approach to research. Researchers often work with data from various disciplines; the ability to harmonize and access these datasets through a standardized framework makes their work more efficient and impactful. Moreover, libraries and research institutions can significantly improve access to SDI by focusing on enhancing ICT skills and embracing new technologies. This evolution ensures that researchers remain well-equipped to tackle emerging challenges in a fast-paced information landscape. Ultimately, the integration of SDI into research practices underscores its significance in promoting informed decision-making, facilitating collaborative efforts, and fostering innovation across various domains.

Types of SDI services offered
The different types of Selective Dissemination of Information (SDI) services offered by libraries are crucial for meeting the diverse needs of their users. Traditionally, SDI has involved methods such as displaying tables of contents, compiling bibliographies, and providing alerts through department heads to ensure that relevant information reaches the right audience. However, with advancements in information and communication technology (ICT), libraries have begun to expand their SDI offerings significantly. Modern SDI services now include digital options such as emails, SMS notifications, and RSS feeds, enabling timely and personalized information delivery tailored to individual user preferences (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. This shift not only enhances accessibility but also fosters greater engagement from library patrons who may benefit from real-time updates on new resources or events pertinent to their research interests. Moreover, specialized SDI services can cater to specific user categories, such as medical librarians utilizing current awareness services (CAS) to share the latest health research and findings (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. The integration of community-focused SDI services allows libraries to reach out to local populations, thereby supporting community development initiatives and generating awareness of available resources. As libraries continue to adopt these innovative approaches, they must also address challenges such as inadequate ICT skills among staff and insufficient technical support from management, which hinder the effective implementation of SDI services

(Omeluzor & Oyovwe-Tinuoye, 2017) [22]. By prioritizing the enhancement of ICT capabilities within library systems, institutions can improve SDI delivery, ensuring that all users have equitable access to essential information and ultimately leading to more informed decisions and collaborative efforts across various fields.

Target audiences for SDI services

Current Awareness Services (CAS) and Selective Dissemination of Information (SDI) play a crucial role in meeting the information needs of various library user groups. These services are particularly valuable for medical librarians who utilize CAS to disseminate the latest health research and findings, keeping healthcare professionals informed and enhancing patient care (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. Beyond the medical field, academic institutions serve diverse populations, including students, researchers, and faculty members, all of whom rely on timely and relevant information to support their educational and professional activities. By implementing SDI services, libraries can tailor information delivery to specific user needs, ensuring that critical updates reach users effectively. However, the successful integration of these services is not without challenges. For instance, many university libraries in Nigeria have reported underutilization of ICT tools due to inadequate training and low levels of ICT skills among librarians (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. Addressing these skills gaps through targeted training programs and increased technical support from management is essential for enhancing the effectiveness of SDI services. Additionally, fostering partnerships between libraries and community organizations can extend the benefits of SDI beyond traditional academic settings by engaging local populations and promoting access to vital resources. As libraries strive to meet the evolving information needs of their users, prioritizing the development of robust IT infrastructures will be key to delivering high-quality SDI and CAS. This approach not only empowers library staff but also ensures equitable access to information across diverse user groups, ultimately contributing to informed decision-making and collaborative efforts in various fields.

Technology's role in SDI

Reported underutilisation of ICT tools due to inadequate training and low levels of ICT skills among librarians underscores the need for targeted interventions in library settings (Omeluzor & Oyovwe-Tinuoye, 2017) [22] . To maximize the effectiveness of SDI services, libraries must prioritize comprehensive training programs that equip librarians with the necessary technological competencies. Moreover, increasing technical support from university management can provide the required infrastructure and resources for effective implementation of ICT in service delivery. As technology evolves, libraries can leverage various digital platforms to distribute information quickly and efficiently. For instance, using social media, emails, and other digital communication tools can significantly enhance the reach and accessibility of SDI services. This transformation is critical, as traditional methods often fail to meet the fast-paced information needs of users. By fostering partnerships between libraries and community organizations, the benefits of SDI extend beyond traditional academic boundaries, allowing libraries to engage local populations and facilitate access to essential resources.

Furthermore, a robust ICT infrastructure not only empowers library staff but also ensures equitable access to information across diverse user groups. This is particularly important in a rapidly changing information landscape where users expect timely and relevant updates on various subjects. Ultimately, advancing the integration of technology into library services will contribute to informed decision-making and collaborative efforts across multiple sectors, enhancing the overall impact of libraries as vital information hubs in their communities. The ongoing development of ICT literacy among library staff is thus paramount in ensuring that SDI services not only keep pace with technological advancements but also effectively address the evolving needs of their users (Omeluzor & Oyovwe-Tinuoye, 2017) [22].

Challenges in implementing SDI

Implementing effective selective dissemination of information (SDI) services in libraries faces several challenges, which can hinder their ability to meet the evolving needs of users. One of the primary obstacles is the lack of adequate information and communication technology (ICT) infrastructure. Many university libraries, particularly in developing regions, still rely on traditional methods for information dissemination, as they have not fully integrated ICT tools into their services (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. In today's fast-paced information environment, users increasingly expect prompt delivery of relevant information due to their reliance on outdated approaches. Moreover, insufficient training and low levels of ICT literacy among library staff exacerbate the issue, as many librarians struggle to utilize available digital resources effectively (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. Erratic internet connectivity exacerbates the challenges by further restricting access to online information and hindering the successful implementation of SDI services. Additionally, inadequate support from university management regarding funding for ICT development plays a significant role in maintaining these barriers. Libraries often find themselves unable to invest in necessary technologies or training programs, leading to stagnation in service quality and user engagement (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. The gap between the potential benefits of ICT integration and actual usage demonstrates a pressing need for libraries to rethink their strategies. By addressing these fundamental challenges, such as enhancing ICT infrastructure, providing comprehensive training for staff, and securing consistent management support, libraries could significantly improve their SDI services. This, in turn, would empower them to better serve their communities and adapt to the rapid changes in the information landscape, ensuring they remain relevant and effective as information hubs.

Evaluating the effectiveness of SDI

Effectively measuring and evaluating the effectiveness of SDI services requires a comprehensive understanding of their utilization in various contexts. This evaluation should include quantitative metrics, such as user engagement levels and the frequency of information dissemination through these services. For instance, assessing how often users interact with SDI offerings and gathering feedback on their relevance and accessibility can provide insights into service effectiveness. Additionally, qualitative assessments, such as

user satisfaction surveys, can help libraries understand if their SDI services meet the informational needs of their communities. Moreover, the integration of emerging technologies, such as artificial intelligence and machine learning, could enhance the precision and personalization of information delivery, thereby improving users' experiences and outcomes. An integral factor influencing the success of SDI services is the training and support provided to library staff. Inadequate training can lead to underutilization of the available technologies, resulting in ineffective service delivery (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. Therefore, institutions must prioritize continuous professional development to equip librarians with the necessary skills to leverage IT tools effectively. Furthermore, collaboration with technology providers and other libraries can foster an environment of shared knowledge and best practices, which enhances the overall quality of SDI services. Finally, it is crucial for libraries to secure adequate funding and institutional support for ICT infrastructure and training initiatives. By addressing these challenges, libraries can ensure their SDI services are not only relevant but also capable of evolving in response to changing user needs and technological advancements. Ultimately, a robust evaluation framework that combines both quantitative and qualitative measures, along with a commitment to ongoing improvement, will enable libraries to maximize the effectiveness of their SDI services.

User satisfaction with SDI services

Several factors, such as the effectiveness of technology integration, user awareness, and the quality of librarians' training, influence user satisfaction with selective dissemination of information (SDI) services in libraries. Researchers have identified the integration of information and communication technology (ICT) as a critical component for enhancing the delivery of SDI services. However, many university libraries, particularly in South-West Nigeria, have not fully embraced ICT, relying instead on traditional methods, which hampers their ability to meet users' needs efficiently (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. Libraries that fail to provide up-to-date training for their staff may experience low levels of service satisfaction among users who seek timely and relevant information. Moreover, inadequate infrastructure and insufficient financial support often prevent libraries from adopting modern technology essential for effective SDI services. To enhance user satisfaction, libraries must prioritize creating awareness about available SDI services through various promotional strategies, such as workshops and informational materials (Omeluzor & Oyovwe-Tinuoye,2017) [22]. Additionally, fostering strong professional relationships between librarians and patrons can significantly impact the perceived value of these services. By understanding user preferences and feedback, librarians can tailor SDI services more precisely to meet individual needs, thereby improving overall satisfaction. Furthermore, collaboration among libraries and technology providers can share best practices and resources, which can strengthen service delivery. Ultimately, securing adequate funding and institutional support for continuous professional development and technology upgrades will ensure that libraries evolve alongside user expectations and advances in technology, leading to higher levels of user satisfaction with SDI services.

Case studies of successful SDI implementations

Successful implementations of Selective dissemination of information (SDI) services in libraries often hinge on a few key strategies that enhance user engagement and satisfaction. Prioritising the creation of awareness about available SDI services through various promotional strategies, such as workshops and informational materials, is critical (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. Such initiatives not only inform users but also empower them to take full advantage of the resources available. For instance, libraries can use social media platforms and email newsletters to keep patrons updated about new resources and services tailored to their specific needs. Strong professional relationships between librarians and patrons, fostered by this approach, significantly impact the perceived value of these services. By actively seeking user feedback, librarians can refine SDI services, ensuring they meet individual preferences effectively. Collaboration among libraries and technology providers can further enhance service delivery by sharing best practices and innovative solutions. Moreover, the integration of advanced technologies like mobile applications and instant messaging can facilitate real-time communication of information updates, making the SDI process more dynamic and responsive to users' needs. However, a significant challenge remains in the realm of resource allocation; securing adequate funding and institutional support for continuous professional development and technology upgrades is vital (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. Libraries must evolve alongside user expectations and advances in technology to remain relevant. A notable case study that demonstrates effective SDI implementation involves libraries that adopted cloud-based systems to streamline access to information and improve service efficiency. This adaptability not only meets current demands but also anticipates future trends, positioning libraries as essential information hubs in an increasingly digital world.

Comparison of SDI services across libraries

Selective Dissemination of Information (SDI) services vary significantly among different types of libraries, influenced by factors such as institutional goals, user demographics, and available resources. Academic libraries, for instance, often focus on providing tailored information to support research and learning needs for students and faculty. They may utilize advanced technologies, such as cloud-based systems and mobile applications, which enhance the accessibility of resources and enable real-time updates for users (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. In contrast, public libraries tend to prioritize community engagement and outreach, aiming to serve a broad audience with varied interests. Their SDI services might include local event notifications and general information relevant to community activities, often relying more on traditional methods like bulletin boards and newsletters. This difference highlights how the mission and target audience of each library type shape their approach to SDI. Furthermore, the integration of Information and Communication Technology (ICT) in SDI varies widely. While some libraries embrace these technologies to enhance service delivery, others face challenges such as insufficient funding, lack of training for staff, and inadequate technical support (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. For example, university libraries in the South-West zone of Nigeria have shown

limited ICT adoption in their SDI and Current Awareness Services (CAS), often resorting to traditional methods despite the potential benefits of technological tools (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. Consequently, those libraries that manage to secure proper training and resources for their staff can provide more effective and responsive SDI services, thereby meeting the evolving expectations of their users. The ongoing development and adaptation of SDI services across various library types not only reflect current trends but are also essential for addressing future informational needs in our increasingly digital landscape.

Ethical considerations in SDI
The ethical considerations for libraries providing selective dissemination of information (SDI) services are multifaceted and critical to their mission of serving diverse user communities. Firstly, libraries need to guarantee the accuracy, reliability, and ethical sourcing of the information they disseminate through SDI services. This includes being transparent about the origins of information and respecting copyright laws while providing access to various resources. Libraries should also consider privacy concerns, ensuring users' personal data and information-seeking behaviours remain safe from unauthorised access or misuse. A significant ethical concern arises in ensuring equitable access to SDI services for all users, particularly in areas where barriers such as insufficient funding or inadequate ICT skills exist. For instance, as highlighted in studies, many university libraries, particularly in the South-West zone of Nigeria, face challenges in adopting ICT for SDI due to low support and training (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. These barriers could result in a digital divide, where advanced services only benefit certain groups, leaving others behind. Moreover, librarians have an ethical obligation to promote information literacy among users, equipping them with the skills necessary to navigate and utilize available resources effectively. This is crucial as the landscape of information continues to evolve with technology. By fostering a culture of continuous learning and adaptation, libraries can enhance their service delivery and responsiveness to user needs. Ultimately, the commitment to ethical practices in SDI services not only aligns with the core values of librarianship but also ensures that libraries remain vital institutions within their communities, capable of meeting the informational demands of a rapidly changing world.

Future Trends in SDI Services
As libraries face challenges in adopting ICT for SDI due to low support and training (Omeluzor & Oyovwe-Tinuoye, 2017) [22], the anticipated future trends for SDI services must focus on overcoming these barriers to ensure equitable access to information. One significant trend is the increasing integration of artificial intelligence and machine learning in SDI systems, which can enhance the personalization of information delivery. By utilising algorithms that analyse user behaviour and preferences, libraries could provide tailored content that meets the specific needs of individual users, thus improving the relevance and effectiveness of SDI services. Another trend is the emphasis on collaborative platforms that encourage interaction between librarians and users. These platforms can facilitate feedback mechanisms

allowing libraries to adjust their offerings based on user requests and experiences, fostering a more responsive service environment. Furthermore, we anticipate that the emergence of mobile technology will significantly influence the development of SDI services. With more users accessing information via smartphones and tablets, libraries must adapt their SDI services to be mobile-friendly, ensuring information is accessible anytime and anywhere. This shift will promote greater engagement with library resources, especially among younger demographics who prefer digital formats. Furthermore, as the library community becomes more aware of the importance of information literacy, there will be an increased push for educational programs that empower users with the skills they need to effectively navigate and utilize digital resources. This aligns with the ethical obligation of librarians to foster information literacy, as it prepares users to engage confidently with the information landscape. By embracing these trends, libraries can not only enhance their SDI services but also reinforce their role as essential information providers in an increasingly complex digital world.

Integration of SDI with other library services
The integration of Selective Dissemination of Information (SDI) with other library services is essential for enhancing researcher support in today's information-rich environment. To achieve this, libraries must leverage technology to create a seamless information experience for their users. For instance, incorporating SDI into reference services can provide researchers with timely updates on relevant publications and resources tailored to their specific fields. Previous studies have highlighted the significant influence of the successful integration of information and communication technology (ICT) on the effectiveness of SDI services in university libraries (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. Libraries can promptly notify users about new information aligning with their research interests by utilising tools like RSS feeds and email alerts. Furthermore, developing mobile-friendly SDI services will cater to the growing number of users accessing information via smartphones and tablets, making it easier for them to engage with library resources anytime and anywhere. This adaptation not only promotes accessibility but also fosters engagement among younger demographics who prefer digital formats. Moreover, the integration of educational programs focused on information literacy is vital for empowering users with the skills necessary to navigate digital resources effectively. Such initiatives align with the ethical responsibility of librarians to cultivate information literacy and prepare users for informed engagement with the digital landscape. By offering workshops and training sessions on how to utilize SDI alongside other library services, libraries can enhance user confidence and competence when accessing quality information. This holistic approach not only strengthens the library's role as an essential information provider but also reinforces the importance of SDI as a critical component of modern library services (Nkiko and Iroaganachi, 2015) [30]. Ultimately, by embracing these strategies, libraries can significantly improve their researchers' support systems, ensuring that users have the tools and resources they need to succeed in their academic endeavors.

Training and support for SDI users

To effectively support researchers in utilizing selective disseminated information (SDI) services, libraries must prioritize comprehensive training and robust support systems. This includes not only offering workshops and training sessions but also developing structured educational programs that enhance information literacy among users. By equipping researchers with the necessary skills to navigate digital resources, libraries can empower them to make informed decisions and efficiently access quality information. Such initiatives are essential as they align with the ethical responsibility of librarians to promote information literacy, thereby preparing users for active engagement with the digital landscape (Nkiko and Iroaganachi, 2015) [30]. Moreover, enhancing SDI and Current Awareness Services (CAS) delivery has identified the integration of Information and Communication Technology (ICT) in library services as vital. However, studies have shown that many university libraries, particularly in South-West Nigeria, have not fully embraced ICT for these services due to challenges such as inadequate training, insufficient ICT skills, and low institutional support (Nkiko & Iroaganachi, 2015) [30]. This gap highlights the pressing need for libraries to invest in training programs that not only focus on the technical aspects of using SDI tools but also foster a deeper understanding of their relevance and application in research contexts. By doing so, libraries can cultivate a culture of continuous learning and adaptation, ensuring that researchers are well equipped to leverage SDI services effectively. Ultimately, the provision of targeted training and ongoing support will significantly enhance the researcher experience, reinforcing the library's role as an indispensable partner in academic success.

The role of librarians in SDI

To effectively facilitate Selective Dissemination of Information (SDI) services for researchers, librarians must adopt a proactive approach that combines technical proficiency with an understanding of user needs. One critical aspect is the librarian's role in curating and disseminating relevant information tailored to specific research interests. This requires not only familiarity with various SDI tools but also ongoing training to keep up with technological advancements and user expectations. Studies indicate that many university libraries, particularly in South-West Nigeria, struggle with implementing ICT for SDI services due to challenges such as inadequate training and low institutional support (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. Therefore, librarians should advocate for institutional investment in training programs that equip them with the necessary skills to use SDI tools effectively. Additionally, librarians can enhance their facilitatory role by engaging with researchers to identify their specific information needs, which will enable customized alerts and notifications that align with their academic pursuits. By fostering strong connections between library services and the research community, librarians not only enhance the efficiency of information delivery but also increase awareness of available resources. Furthermore, promoting the benefits and complexities of SDI services through workshops or informational sessions can help bridge the gap between users and these essential services. Ultimately, empowering librarians to take on this multifaceted role will

significantly improve the research experience, making the library a vital collaborator in the academic journey. Such initiatives will not only cultivate a culture of continuous learning within libraries, but also guarantee adequate support for researchers in their pursuit of knowledge, thereby solidifying the library's role as an indispensable partner in achieving academic success.

Impact of SDI on research outcomes

By fostering strong connections between library services and the research community, librarians not only enhance the efficiency of information delivery but also increase awareness of available resources. Furthermore, promoting the benefits and complexities of SDI services through workshops or informational sessions can help bridge the gap between users and these essential services. In the context of university libraries in Nigeria, a study found that, despite the positive impacts of information and communication technology (ICT), many libraries predominantly relied on traditional methods for selective dissemination of information (SDI) and current awareness services (CAS) (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. This underutilisation of ICT reflects a significant barrier to optimising research outcomes, as inadequate training and low support for ICT hinder librarians' ability to leverage modern technologies effectively. Consequently, researchers may miss out on timely access to crucial information that can propel their work forward. To counteract these challenges, integrating ICT and SDI services into library operations is essential. Such integration would facilitate customized alerts and notifications aligned with users' academic pursuits, ensuring that they remain informed about new developments in their fields. Moreover, as highlighted in research on disaster management, the effective use of SDI leads to better decision-making during crises by providing timely information (Lei Hu et al., 2022) [12]. Similarly, in an academic setting, having immediate access to relevant data and resources enables researchers to make informed decisions that advance their studies. Ultimately, empowering librarians to take on this multifaceted role will significantly improve the research experience, making the library a vital collaborator in the academic journey. Such initiatives will not only cultivate a culture of continuous learning within libraries, but also guarantee adequate support for researchers in their pursuit of knowledge, thereby solidifying the library's role as an indispensable partner in achieving academic success.

Funding and resource allocations for SDI

Effective funding and resource allocation for selective dissemination of information (SDI) services in libraries are crucial for enhancing user engagement and academic success. Libraries must prioritize the integration of information and communication technologies (ICT) to provide timely and relevant SDI services that align with users' academic needs. However, a study on university libraries in South-West Nigeria indicated that many institutions have not adopted ICT for delivering SDI and current awareness services (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. Insufficient training, inadequate ICT skills among librarians, and low support from university management contribute to this lack of adoption, resulting in a reliance on traditional methods of information dissemination. Consequently, libraries that allocate adequate funding

toward ICT development can enhance their SDI services, thereby improving access to quality information and promoting better decision-making by users (Omeluzor & Oyovwe-Tinuoye, 2017). Moreover, adopting modern tools such as email alerts and RSS feeds can significantly improve how libraries keep their users informed about new developments in their fields (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. By investing in staff training and providing necessary technological resources, libraries can empower librarians to offer robust SDI services that foster a supportive academic environment. This investment doesn't only serve to enhance user experiences but also positions libraries as indispensable partners in research and learning. Therefore, effective funding strategies should encompass both the acquisition of technological tools and the professional development of library staff to fully realize the potential of SDI services in meeting the evolving needs of academic communities.

Collaborative efforts in SDI development
Collaborative efforts among libraries to enhance SDI services play a crucial role in improving access to quality information and meeting the diverse needs of users. By forming partnerships, libraries can share resources, expertise, and best practices, thereby strengthening their ability to deliver effective selective dissemination of information (SDI) services. Such collaborations can include joint training programs where librarians from various institutions come together to refine their skills using modern tools that support SDI. For instance, integrating technology such as email alerts and RSS feeds is vital for keeping users informed about new developments in their respective fields (Omeluzor, 2017) [22]. Moreover, collaborative initiatives can help libraries pool financial resources, a significant barrier they often face. By working together, libraries can invest in robust technological infrastructure that enhances their SDI capabilities. This collective approach not only amplifies their outreach but also fosters a community of practice where librarians can learn from each other and innovate in service delivery. Furthermore, collaborative efforts can help establish standard SDI practices across participating libraries, ensuring a consistent level of service that benefits all users. As libraries adapt to the rapidly changing information landscape, the need for cooperation becomes even more pronounced, enabling them to address common challenges such as low ICT literacy among staff and insufficient funding for technological development (Omeluzor & Oyovwe-Tinuoye, 2017) [22]. Ultimately, by fostering collaboration, libraries can enhance their SDI services, positioning themselves as indispensable partners in facilitating research and learning within academic communities.

Conclusion
In conclusion, the critical role of Selective Dissemination of Information (SDI) services in libraries cannot be overstated, as these tailored approaches significantly enhance researchers' access to relevant and timely information. By embracing modern technologies and addressing the challenges of inadequate funding, training, and infrastructure, libraries can transform their SDI offerings into vital tools that support academic success. The integration of ICT solutions fosters a responsive environment where users can efficiently navigate the vast landscape of information available to them. Ultimately, prioritizing collaboration among libraries and investing in librarian training will ensure that SDI services remain effective and equitable, thereby reinforcing the library's status as an indispensable partner in facilitating research and knowledge creation within academic communities.

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