

GOOGLE APPLICATIONS FOR UTILIZING MODERN LIBRARY SERVICES: AN OVERVIEW

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ABSTRACT:

In this modern era Google applications are best for accessing information, sharing storing and retrieving information. Librarians faced more challenges and opportunities due to technological advancements. Google applications are effective and efficient in providing quality library services. Modern libraries adapted these tools for promoting services and utilising the library facilities and services. In this digital era, library users demanded information quickly which is provided by libraries easily in digital format within a minute through Google tools or applications. This paper is an attempt to study how Google helps in modern library services in the process of store, manage, retrieve and disseminating the information for providing users to satisfy their needs. How Google applications will facilitate opportunities to utilising the modern library services.

Keywords: Google Applications, Modern Library, Google Drive, Google Scholar, Gemini

INTRODUCTION:

Before the advancement of Information and Communication Technology (ICT) in every subject field to searching information on a particular topic is very difficult work for every user. That time it is also difficult and time consuming process. Users search information in printed books, research journals, newspapers, handbooks, dictionary and many other sources. In this digital era, users search for information in Google which retrieved on their fingertips within a second, they got lots of information on the particular topic which the user searched. Traditional libraries are now become modern libraries as transforming into global information hubs universally available and accessible to the users. Modern libraries offer users the main purpose to effortlessly retrieve information across all the fields with a single click. Users can effectively and efficiently utilise the library services 24/7, regardless of physical boundaries, locations, and unlimited sources of information.

Schmidt (2007) founded that the younger generation of born digital library users and even well-established scholars rely increasingly on Google. Google has developed many applications and products aimed to entertain, inform, provide access to the information and many more. Google applications offer great accessibility as compared to traditional sources of information. It saves the time and money of the user and ensures the efficiency of the library staff also. So it will be the best practice for modern libraries by offering services through Google applications in their daily routine services.

GOOGLE: AN OVERVIEW:

Google was founded in September 1998 by Larry Page and Sergey Brin while they were Ph.D. students at Stanford University in California. Originally, it was a research project called "Backrub". The name Google is play on the word "googol", mathematical term for the number 1 followed by 100 zeros reflecting founders' mission to organise a seemingly infinite amount of information on the web. Over the years, Google has evolved from a simple search engine into a tech giant offering a wide range of applications and services, including Gmail, Google Maps, Google Drive, Android, YouTube and many others. Billions of peoples across the world access Google every day.

REVIEW OF LITERATURE:

Pawar (2019) discussed that Google has developed amazing tools which ease to use and can enhance the quality of library services. It provides an opportunity for librarians to improve their service quality by applying technological tools.

Nayak (2017) concluded that Google has been the second most valuable brand in the world for four consecutive years. So these powerful products and services by Google can be used in libraries for the benefits of users. Libraries can attract users in the virtual world by using Google apps for providing ready reference services to the users.

Murugan (2020) stated that the librarians require skills in the Google era. These are many changes in the library fields all over the world. A lot of Google products are related to communication, teaching and learning, marketing and advertisement, storage and preservation etc.

Chandwani (2023) discussed the importance of Gmail account which grants access to a wide array of Google Products which can be effectively utilised by librarians to draw users towards the library. By offering more exposure and training these accessible and cost-free tools, librarian can significantly enhance collection utilisation, foster a culture of reading and efficiency organised the library holdings.

Srinath and Pawan Kumar (2022) identified that librarians and library professionals supposed to update their knowledge, technical skills etc. to provide best effective services to the students, teachers, research scholars, faculty members etc. Also Government and Governing bodies supposed to provide technological tools to encourage and provide opportunities to create virtual libraries across the country to provide quality education for every individual.

Rathod and Nawale (2020) suggested that librarians should attract users towards the library by using this Google tools. More exposure and training on these free and easy to use products can increase collection use, promote reading habits and organise the library holdings.

GOOGLE APPLICATIONS FOR UTILISING MODERN LIBRARY SERVICES:

Google applications offers versatile toolkit for modern libraries, empowering them to streamline operations, enhance user experience and foster collaboration. From Google Drive for document management to Google Forms for feedback collection, these applications enable libraries to digitise services, organize resources efficiently, and engage users effectively in the digital age.

For usage of modern libraries services, Google applications can be categories in four major types which are briefly introducing usage for modern library services as follows:

GOOGLE APPLICATIONS FOR INFORMATION STORAGE AND SHARING:

A. Google Drive: Google drive is a cloud storage service developed by Google, launched in 2012. It facilitates 15 GB free storage that shared between Google Drive, Google Photos and Gmail. Google Drive can be utilised for modern library services as:

- Digital Resource Storage: Libraries can store digital resources such as e-books, articles, research papers, and multimedia content on Google Drive.
- Collaborative Document Editing - Librarian and Staff can collaborate on documents, spreadsheets, and presentations using Google drive real-time editing features. This is useful for creating guide, reports and presentations.
- Virtual Programming: Libraries scan host virtual events and programs by storing resources such as brochures, handouts, slides, and recordings on Google Drive.
- Library Catalogue Managements: Google sheets can be used to manage library catalogues. Librarians can create spreadsheets to organise and track book, journals and other materials, making it easy to update and share information.
- Training and Tutorials: Librarian can create and share tutorials, guides, and training materials for users using Google Drive.
- Backup and Recovery: Google Drive can serve as a backup solution for critical library data and documents. Libraries can regularly backup important files to Google Drive.

B. Google Keep: Use Google Keep for creating separate notes for various tasks such as book recommendations, upcoming events, and user requests. Additionally, libraries can collaborate

with other staff members by sharing notes and assigning tasks. Google keep have ability to add levels and colour code notes can help with the organisation.

- C. **Google Photos:** Google Photos store and organise digital copies of historical photos, documents, and other material related to the library history.
- **Event Documentation:** Capture photos for library events, workshops, and activities. It is used for library marketing purpose or creates digital scrapbooks.
 - **Promotion and Marketing:** Share photos of new books arrivals; library renovations, or special displays on social media platforms.
 - **Virtual Tours:** Create virtual tours of libraries using photos to showcase its facilities, collections, and services for users.
- D. **Google Calendar:** Libraries can use Google Calendar to schedule events like Book Club Meetings, Author Talks, Workshops, and Guest Lectures etc. Google Calendar can be shared to the users for knowing which events are carried out in the library for the whole year.
- E. **Google Tasks:** Libraries can create tasks for various activities such as Cataloguing new arrivals, organising book displays, preparing for events or simply for reminders for regular maintenance tasks.
- F. **Google Contact:** Libraries can maintain Google Contact list which organised contacts by categories like users, authors, vendors, and community partners. It makes easier to reach out for events collaboration, book donations, or notify regular users about upcoming activities.

TOOLS FOR COMMUNICATION AND SOCIAL INTERACTION :

- A. **Gmail:** Gmail, introduced by Google in 2004, serves as a convenient and swift means of communication and data exchange. It is use for various purposes such as communicating with users, sending out news letters or event announcements, coordinating with vendors, and managing inquiries or reference requests.
- B. **Google Meet:** Google Meet, previously known as Hangout Meet, is a video communication service created by Google. Libraries can host virtual events such as Webinar, Book Clubs, Author Talks, Research Assistance Sessions, Reference Sections Utilisation, and more through Google Meet. It allows for face-to-face interaction screen sharing for presentations, or tutorials and even breakout rooms for smaller groups discussions or study services.
- C. **Google Chat:** Using Google Chat for library services can be an effective way to enhance communication and streamline various processes within a library. Reference and Research Support, Library Notifications, Book Reservations and Renewals, Internal Staff Communication, Virtual Study Groups by creating Chat Rooms, Staff Training, Users Inquiry, Sharing Links of e-resources, follow-up of the library schedules etc. are the applications through Google Chat.
- D. **Google Voice:** Integrating Google voice into library services can offer some other applications as
- i. **User Communication:** Provide a direct phone number for users to call with inquires about library services, hours, and events. It offers voice-based support for Reference and Research Queries.
 - ii. **Notifications and Reminders:** Send automated voice messages or text messages to remind users of due dates, overdue books, and upcoming events. It also notify users about new arrivals or special library programs. Collect feedback from users and staff to identify areas for library improvement in the services and facilities.
- E. **Google Handouts:** Google Handouts is now integrated into Google Meet and Google Chat for library services can be significantly enhance the way libraries interact with users and manage internal communications. It is applicable for Notifications, Staff Training and Meetings, Online Workshops, Study rooms and Group work, Promoting library events,

integrating with other Google services like Google Calendar, Google Drive for managing virtual events and sharing documents and links of e-resources.

- F. **Google Spaces:** Google Spaces are useful for creating spaces for book clubs, discussion groups, and special interest groups, different subject areas where users can ask questions and share resources and views, collaboration of different department staff creating spaces, etc. Librarians can provide research assistance and share helpful links and documents.
- G. **Google Assistant:** Integrating Google Assistant into library services can provide users with a convenient voice-activated way to access information and services. Some applications of Google Assistants are as follows:
 - a) **General Information:** Provide answer to frequently asked questions about library hours, locations, and services. It offers information on upcoming events and programs.
 - b) **Catalogue Search:** Allow users to search library catalogues using voice commands find books, DVD's, CD's, and other materials. It provides availability information and directions where items are located in the library.
 - c) **Account Management:** Enables users to check their account status, including due dates, overdue items and fines, renew items or place holds on books using voice command.
- H. **Google Duo:** Google Duo is now integrated into Google Meet. It can be useful tool for enhancing library services. It is applicable as Virtual Reference Services, Online Workshops and Tutorials, Book Club Meetings, Author Talks and Guest Lectures, Study Groups, Story time services, Remote Access to the library staff for personalised access and many more.
- I. **Google Groups:** Google Groups are used in library services as Discussion Forums, Announcements and Newsletters, Subject-Specific Groups, Virtual Book Clubs, Collaborative Projects, Users' Feedbacks and Suggestions, Study and Support Groups, Event Planning and Coordination, Resource Sharing etc.
- J. **Google Blogger:** Google Blogger can be an effective platform for enhancing library services through the creation and maintenance of a Library Blog. This blog having Library News and updates, Resource Guides and Tutorials, Book Reviews and Recommendations, Events Recaps and Highlights, Author Interviews and Guest Posts, User Programs and Activities, Community Stories and Projects, Library Services Spotlight, User Feedback and Interaction, Reading Challenges and Competitions, Technological Tips and Digital Literacy, Volunteer and Donation information, etc. from which libraries can keep their users informed, connected, and involved in the library community.
- K. **Google Sites:** Google Sites is a Google's free website building software. It allows creating the websites of library or college easily. It has a provision of readymade templates so that librarians can create the website quickly without any knowledge of programming.
- L. **YouTube:** Libraries can create YouTube channel for utilising library services. Libraries can create informational videos about their services, tutorials on how to use library resources, virtual tours of library, book recommendations, author interviews and much more. It's a great way to reach a broader audience and engage with users beyond the physical library space. Additionally, it can help promote literacy and learning in a more accessible format.

TOOLS FOR EDUCATION AND RESEARCH :

- A. **Google Classroom:** Google classroom is a content management system for educational institutes that helps in distribution of assignments and providing virtual in a class communication. It is also helpful for the library that can help the library users to attend scheduled information literacy and orientation programs.
- B. **Google Scholar:** Google Scholar is a valuable product for research and academic community. Libraries can use Google Scholar to help users find research articles, theses, books, and conference papers. Libraries can teach users how to use Google Scholar's citation

tools to keep track of their sources, create bibliographies, and manage their references. Libraries can use Google Scholar alerts to stay updated on new publications in specific fields by providing Current Awareness Services.

- C. **Google Books:** The Google Print initiative was renamed Google Book Search in November 2005 and it is known as Google Books. Librarian can search the full text of book on various subject areas. It helps to search rare titles, specific editions required by the users. The option of review helps to know the content and quality of a book. One can read books and magazines, download them, cite them, and translate them on Google Books.
- D. **Google Earth:** Google Earth is a virtual globe, map and geographical information program that allow users to view satellites imaginary maps, terrain, and 3D buildings of various locations around the world. It is useful for creating realistic views of library buildings in 3D manner, real-time views of racks and bookshelves locations are traced out by the users. These way users are interested in the library building for searching the documents which they needed.
- E. **Google Arts and Culture:** Google Arts and Culture is a platform that provides access to high resolution images of artworks, 3D virtual tours of museums, and variety of cultural content from the institutions around the world. Libraries can use these complement their physical collections. By providing access to digital versions of artworks, historical documents, cultural artefacts etc. It is useful for virtual exhibitions, educational programs, research support and interactive learning purpose.
- F. **Google Expeditions:** Google Expeditions is a virtual reality platform developed by Google that allowed teachers to take their students on immersive virtual fields' trips to various locations around the world. It is popular tool in classrooms, offering educational experiences in the subject like history, science, and geography. The users of the libraries also can join in virtual online tours and visit the worldwide libraries without learning their own library space.
- G. **Google Jam Boards:** Google Jam Boards is an interactive white board tool developed by Google, designed for collaborative brainstorming, idea generation, and visual communications. It allow to users to create, edit and share digital whiteboards in real-time, enabling terms to collaborative regardless of their location. Jam board integrates with other Google applications like Google Drive allowing users to easily share and access their boards. Google Jam Boards enhance library services by providing versatile platform for collaboration, engagement and information sharing in both virtual and physical environment.
- H. **Google Alerts:** Google Alerts is a notification service of Google Search Engine. These are emails automatically sent to the users when there are new Google results in their search terms. Google alerts are more useful for libraries for staying updated with current research, latest publications, learning about conferences etc.
- I. **Google News:** Google News is a personalized news aggregator service developed by Google. It uses algorithm to analyse headlines from the various sources worldwide and presents users with personalized news based on their interest and reading habits. Libraries offer to users curate mix of articles, videos and other content form reputable sources, allowing users to stay informed on a wide range of topics.
- J. **Google Patent Search:** Google Patent Search is a specialised search engine that allows users to search through millions of patents from around the world. Integrating Google Patent Search in libraries services can offer access to patent documents and fillings, making it easier for researcher, inventors, to find relevant patents in their field of interest. Users can search by keywords; patent numbers, inventor assignees, and other criteria of discover valuable information about existing patents and technological development.
- K. **Google Charts:** Google Charts is a web-based data visualisation library developed by Google. It allows users to create interactive and customisable charts and graphs for displaying data on websites and web applications. Google Charts supports various chart types including

like Charts, Bar Charts, Pie Charts, Radar Charts, Venn Diagrams, Scatter Plots, QR Codes, etc. Library can create its own geographical charts for presentation purpose.

- L. Google Project Fi:** Google Project Fi previously known as Project Fi is a Mobile Virtual Network Operator (MVNo) service provided by Google. Google Fi also seamlessly transactions between Wi-Fi and cellular networks to ensure a reliable connection. Users pay for the data they use, with flexible plan and pricing. It can access features like international data roaming at no extra cost in over 200 countries. Additionally Google Fi supports wide range of devices including smart phones, tablets, and even laptops.
- M. Google Analytics:** Google Analytics is a web analytic service offered by Google that tracks and reports website traffic. It provides detailed insights into users' behaviour, site performance and marketing effectiveness. Libraries can make data-driven decisions to enhance user experience, optimize resource management and improve overall service delivery by leveraging Google Analytics.
- N. Google G-Suite:** Google G-Suite, now known as Google Workspace. It is a collection of cloud-based productivity and collaboration tools developed by Google. It includes applications like Gmail, Google Drive, Google Docs., Google Sheets, Google Slides, Google Calendar, and Google Meet. These applications are more effective for library services by their various plans with different features and storage capacities to cater to different needs of users, providing seamless integration and real-time collaboration capabilities.
- O. Google 3D Warehouse:** Google 3D Warehouse is an online repository for 3D models. It is used in conjunction with Google SketchUp. Google 3D Warehouse is applicable in library services for users to search donated and share 3D model for a variety of applications including architecture, designs and engineering. This platform hosts a vast collection of user generated models, making it a valuable resource for readymade 3D assets.

TOOLS FOR REFERENCE IN OFFICE WORK :

- A. Google Search Engine:** Google Search Engine launched in 1997. It is the world's most widely used web search engine. Google search indexes billions of webpages and provides results in a fraction of a second, making it an irrational tool for information retrieval on the internet. The search engine's is a useful for library users for resolving the queries and training in how to use Google Search Engine simple search advanced search for their project works.
- B. Google Chrome:** Google Chrome introduced by Google in 2008, is a fast, secure and widely used web browser. Built on the Open Source Chromium project. It is known for its simplicity, Speed and Performance. Chrome features a minimalist user interface, automatic updates, and robust security architecture. Users can personalise Google Chrome by adding their Gmail account. Hence it is easy to use, synchronised the account. It is integrated with other Google applications for providing effective library services.
- C. Google Docs:** Google Docs launched by Google in 2006. It is a web-based word processing application that allows user to create, edit and collaborate on documents in real time part of the Google Workshop Suite. It supports features such as sharing, communicating and version history. Google Docs integrates seamlessly with other Google Services and provides Cloud Storage; ensuring documents are accessible from any device with internet access.
- D. Google Input Tools:** Google Input Tools is a suite of online tools and software that allows users to type in multiple languages easily. It supports various input methods, including transliteration, virtual keyboards and handwriting. These tools enable users to input text in languages that use different scripts or character sets, making it accessible for global audience. It is applied for library services for switching users from one language to another and also for understanding the exact meaning of that information.
- E. Google Fonts:** Google Fonts launched by Google in 2010, is a library of free and open-source fonts accessible to everyone. It offers a wide range typefaces in multiple styles and

scripts designed to enhance web and print typography. Users can browse preview and download fonts or integrated them directly into websites using the simple embed code. A Google Fonts aims to improve the visual quality of online text and topography more accessible, contributing to the better design across the internet.

- F. Google Translate:** Google Translate launched by Google in 2006, is a free multilingual translation service. It support text, speech image and web page translations across numerous languages. Utilising machine learning and neural networks. Google Translate provide quick and increasing accurate translation. The service offers features like real-time conversation translation and handwriting recognition, making it a valuable tool for communication and language learning Worldwide. It is enhance library services effectively by breaking down language barriers.
- G. Google Maps:** Google Maps, launched by Google in 2005, is web based mapping service that provides detailed geographical information and navigation. It offers features such as street maps, satellite imaginary, real-time traffic conditions, route planning for various modes of travels and local business information. Google Maps utilize library services by fixing location of library on Google Maps. Hence new users attracted and reach to the library building through Google Maps applications.
- H. Google Lens:** Google Lens introduced by Google in 2017. It is an AI powered image recognition technology that allowed users to search and interact with information using their Smart phones cameras. By analysing visual inputs Google Lens can identify objects, text and landmarks provide relevant information, translate text and even solve mathematical equations. Integrated with Google Photos and Google Assistant, it enhances user experience by making information retrieval. Libraries creating QR codes for linkages of e-resources and various types of lists such as list of new of arrivals, new publications list by publishers etc. can scanned by library users through the Google Lens.
- I. Gemini:** Gemini, introduced by Google DeepMind, is a suite of advanced AI models designed to enhance various applications with powerful machine learning capabilities. This suite aims to drive innovation across different sectors by offering scalable and adaptable AI solutions. Gemini represents a significant advancement in AI technology, contributing to more intelligent and responsible applications for utilising library services. Gemini is a very useful for guiding users, how to do anything or information, it is helpful for project works; it is provide information on any topic in a fraction of a second.

CONCLUSION:

Google applications of a comprehensive suite of tools have significantly enhanced library services. Tools like Google Search and Google Scholar provide extensive research capabilities, granting access to a worst area of Information and scholarly articles. Google Docs facilitates collaborative documents creation and editing while Google Drive offers robust cloud storage solutions for managing and sharing resources. Google Translate aids in breaking language barriers, making resources accessible to the diverse user base. Google Maps assists in locating libraries and understanding their geographical context.

Additionally Google Lens and Google Input Tools enhance information accessible and input in multiple languages. Collectively Google Applications empower libraries to improve their service delivery, streamline operations, and enhance user engagement making information more accessible, interactive and more effectively.

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