

Utilization of Google Suite for Education (GAFE) in the IPDN Library

Pemanfaatan Google Suite for Education (GAFE) di Perpustakaan IPDN



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Abstract

Background: GAFE is designed for the learning processes between teachers and students. Interestingly that GAFE is applied as a new breakthrough in improving the management and services at IPDN libraries. **Purpose:** This study aims to find out the extent of the use of GAFE in the IPDN Library. **Methods:** This research uses a qualitative descriptive method with 15 librarians as the subject of the research. **Result:** The results show that IPDN Librarians feel more effective in managing and giving services in the library, especially in collaboration to make reports, statistical data, promotion slides, surveys, and activity planning. Moreover, it helps the library to carry out cross-campus library meetings/coordination. The most intensely used GAFE features which are used almost every day by all respondents are G-Mail, Google Drive, Google Forms, and Google Meet. While the features that have a moderate level of use are Google Documents, Google Sheets, and Google Slide. The features that are rarely used by IPDN librarians are Google Calendar, Google Classroom, and Google Sites. **Conclusion:** This study concludes that GAFE features have been well utilized in IPDN Library.

Keywords: *Utilization of GAFE; Library Management; Library Services; Google for Education; IPDN Library*

Abstrak

Latar Belakang: GAFE didesain untuk keperluan pendidikan dan pembelajaran guru kepada siswa. Menariknya bahwa GAFE justru dimanfaatkan sebagai terobosan baru dalam meningkatkan pengelolaan dan pelayanan di Perpustakaan IPDN. **Tujuan:** Tujuan penelitian adalah untuk mengetahui sejauhmana pemanfaatan Gafe di Perpustakaan IPDN. **Metode:** Penelitian ini menggunakan metode deskriptif kualitatif dengan 15 pustakawan sebagai subjek penelitiannya. **Hasil:** Hasil penelitian menunjukkan bahwa Pustakawan IPDN merasakan adanya kemudahan dan efektifitas dalam proses pengelolaan dan pelayanan perpustakaan terutama dalam berkolaborasi membuat laporan, data statistik, slide promosi, survey, perencanaan kegiatan, dan mempermudah perpustakaan dalam melaksanakan rapat/koordinasi perpustakaan lintas kampus. Fitur Gafe yang paling intens digunakan adalah Gmail, Gdrive, Gforms, dan Gmeet dimana hampir setiap hari digunakan oleh seluruh responden. Sementara Fitur yang tingkat penggunaannya sedang yakni Gdoc, Gsheet, dan Gslide. Adapun fitur yang jarang digunakan pustakawan IPDN adalah Gcalender, Gclassroom dan Gsite. **Kesimpulan:** Secara umum penelitian ini menyimpulkan bahwa fitur GAFE telah dimanfaatkan dengan cukup baik di Perpustakaan IPDN.

Kata kunci: Pemanfaatan GAFE; Pengelolaan Perpustakaan; Layanan Perpustakaan; Google For Education; Perpustakaan IPDN

I. INTRODUCTION

Background. Information technology plays an important role in all spheres of life (Okhunov & Minamatov, 2021; Olimov & Mamurova, 2021). Since its launch in 1997 (Redding, 2018), all fields have leveraged Google services to make it easier to get work done. Google has opened world data and information rapidly, in accordance with its mission of "Managing and Sharing World Information" (Braha, 2018). Google has gradually penetrated into the world of education by launching Google Apps for Education (GAFE) (Datun & Doembana, 2022; Widiyatmoko, 2021). The existence of GAFE creates thousands of schools or universities in the world based on Google Schools. GAFE services keep growing and transforming since its beginning. It was only providing one or two applications, but it is growing into G Suite Google for Education which provides many applications for education (Insani & Farisi, 2020; Legowo et al., 2019). In 2022, Indonesia become the 4th largest internet user in the world after China, India, and the United States. Approximately 171 million people or more than two-thirds of the Indonesian population are Internet users (Čirjak, 2022). Therefore, GAFE is a useful app to be used by the people and the academic community in Indonesia.

Today's libraries need a new approach model to meet its needs in the new normal era after the pandemic. Libraries need interactive facilities that make it easier to share information, manage, and give services to users. GAFE is one of the tools that can help simplify and systemize the work of librarians. IPDN Library as an institution managing university information takes the chance to adopt the information technology through the use of Google services. Despite of many digital technologies offered, GAFE was chosen as one of the learning support technologies in IPDN because it is considered to support IPDN to become a Smart Campus and help IPDN to eventually be a world-class education.

Problem. GAFE is basically designed by Google for the purpose of education and learning between teachers and students but is used by the IPDN library as a new breakthrough to improve library management and services. GAFE is designed to be as simple as possible so that even beginners can operate it quickly. Even so, some librarians still cannot take full advantage of it. Google, which continues to evolve and innovate update products, presents its own challenges for IPDN librarians, especially since most librarians are no longer young (generation X). Compared to the productive age, those from the generation X will find it more difficult to follow the development of GAFE features. Another problem is the high subscription cost of GAFE. The institution cannot fully fund the subscription considering the post-pandemic conditions which have resulted in an unstable budget. Even the existence of IPDN library Chromebook services which have been running well since 2019, must be stopped because the PC used was renting. Furthermore, the limited bandwidth/network provided for IPDN libraries is insufficient to meet user needs. Considering as many as 6000 students, IPDN library needs to prepare a bandwidth of 500 Mbps (Indonesian Library Regulation on library accreditation assessment components). Furthermore, as many as 53 librarians in total, none of them have

information technology background so that no one was able to give suggestions related to the policies for developing and utilizing IT in the library (IPDN Library, 2022).

Previous Research Studies. The features offered by GAFE are generally intended to support educational or learning activities by teachers to students. The first research about GAFE was done by Ok & Rao entitled "Article Digital Tools for the Inclusive Classroom: Google Chrome as Assistive and Instructional Technology". The research stated that Google Chrome applications and extensions can support information literacy, mathematics, and organizational skills and provide flexible options and features (Ok & Rao, 2019). Further researches are also largely related to online learning and teaching (Awuah, 2015; Brown & Hocutt, 2015; Chiablaem, 2021; Datun & Doembana, 2022; David, 2019; Legowo et al., 2019; Lestari et al., 2022; Lutfiana & Dintarini, 2022; Park & Suh, 2018; Setiahati et al., 2022; Widiyatmoko, 2021; Widodo, 2017; Wijaya & Aliyanto, 2016).

State of The Art. This research is a new study because the authors have not found any previous research related to the use of GAFE in libraries. In fact, the entire study in general leads to the ease of managing a job/organization. The ease of using GAFE and the collaborative service builds critical thinking and allows users to be creative without limits. This research is compelling to work on because it is considered applicable to increasing the effectiveness of management and services at the IPDN Jatinangor Library.

Purpose. This study aims to find out the extent to which the GAFE feature is utilized in IPDN Library.

II. METHODS

This research uses a qualitative descriptive method with 15 librarians as the subject of the study and GAFE utilization as the object. The author chooses to use this type of research with the aim that the author can convey facts selectively, clearly, and in detail through direct observation, both sight and hearing. The respondents were chosen by using purposive technique, which is based on goals or needs set by the researcher (Moleong, 2019). Moreover, the snowball technique is used to determine a few samples/respondents who will choose or appoint their friends to be the next respondents (Sugiyono, 2013). The researcher is directly involved in the observation process through involvement in library management and services activities. The data on the use of GAFE in the library were obtained through interview collection techniques, observation, and documentation (Sugiyono, 2013), and equipped with a simple questionnaire. This research was conducted approximately during the period from October 2021 to February 2022. Data analysis was performed through a data reduction procedure adapted to the case study model (Creswell, 2018). The author presents research data based on the types of services/apps/features GAFE offers including *Google Mail*, *Google Drive*, *Google Forms*, *Google Meet*, *Google Docs*, *Google Sheets*, *Google Slides*, *Google Classroom*, *Google Calendar*, and *Google Site*.

III. RESULTS AND DISCUSSION

This research will discuss the use of GAFE as a new breakthrough in improving management and services in IPDN Library, which in line with the initial purpose of GAFE

launching which is for education and learning from teachers to students. This research was carried out at IPDN Library which is addressed on Jl. Ir. Soekarno Km. 20, Jatinangor, Sumedang, West Java Province. The Researcher provided written questionnaires with essay answers to a total of 15 librarians. Moreover, in-depth interviews were carried out with 8 respondents as a follow-up to the questionnaire results. This research was carried out for approximately four months, from October 2021 to February 2022.

During a pandemic or the new normal times, the use of technology in the library sector became an urgent need, and whether they like it or not, it must be mastered by librarians (Pambayun, Personal Communication, 2021). Therefore, GAFE technology was adopted by IPDN with the aim of making it easier for librarians to serve Praja and ensure user satisfaction. This has been agreed by all 15 respondents out of 56 librarians coming from 2 central libraries, 6 regional campus libraries, 3 faculty libraries, and 1 postgraduate library. Most of the respondents occupy expertise positions such as first-class librarians and junior librarians. It happened because of the number of librarians who become the respondents in this study and other librarians are dominated by the position of expertise as illustrated in table 1 below.

Table 1.
Number of IPDN Jatinangor Librarians Based on Their Positions in 2022

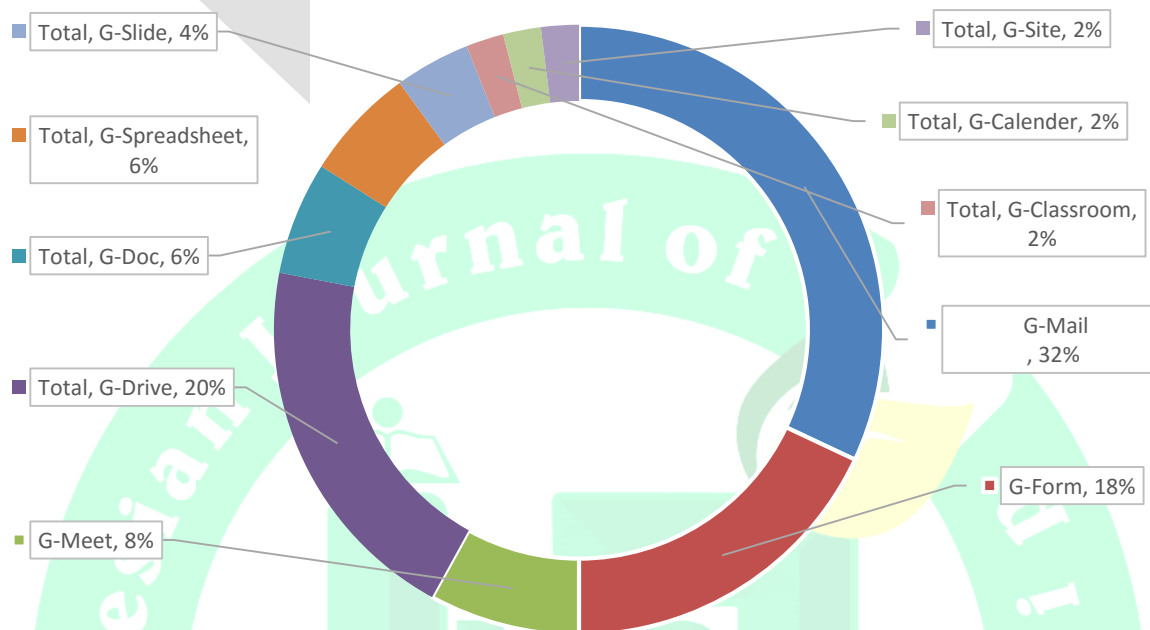
Librarian Position	Total
Skilled Librarian (Pustakawan Terampil)	1
Supervising Librarian (Pustakawan Penyelia)	5
First Expert Librarian (Pustakawan Ahli Pertama)	11
Young Expert Librarian (Pustakawan Ahli Muda)	25
Associate Librarian (Pustakawan Ahli Madya)	14
Main Expert Librarian (Pustakawan Ahli Utama)	-
Total	56

Source: IPDN Library, 2022

The researcher also performed observations on the number of GAFE services utilized by IPDN librarians as depicted in Figure 1.

Figure 1.

GAFE features utilized by IPDN Librarians



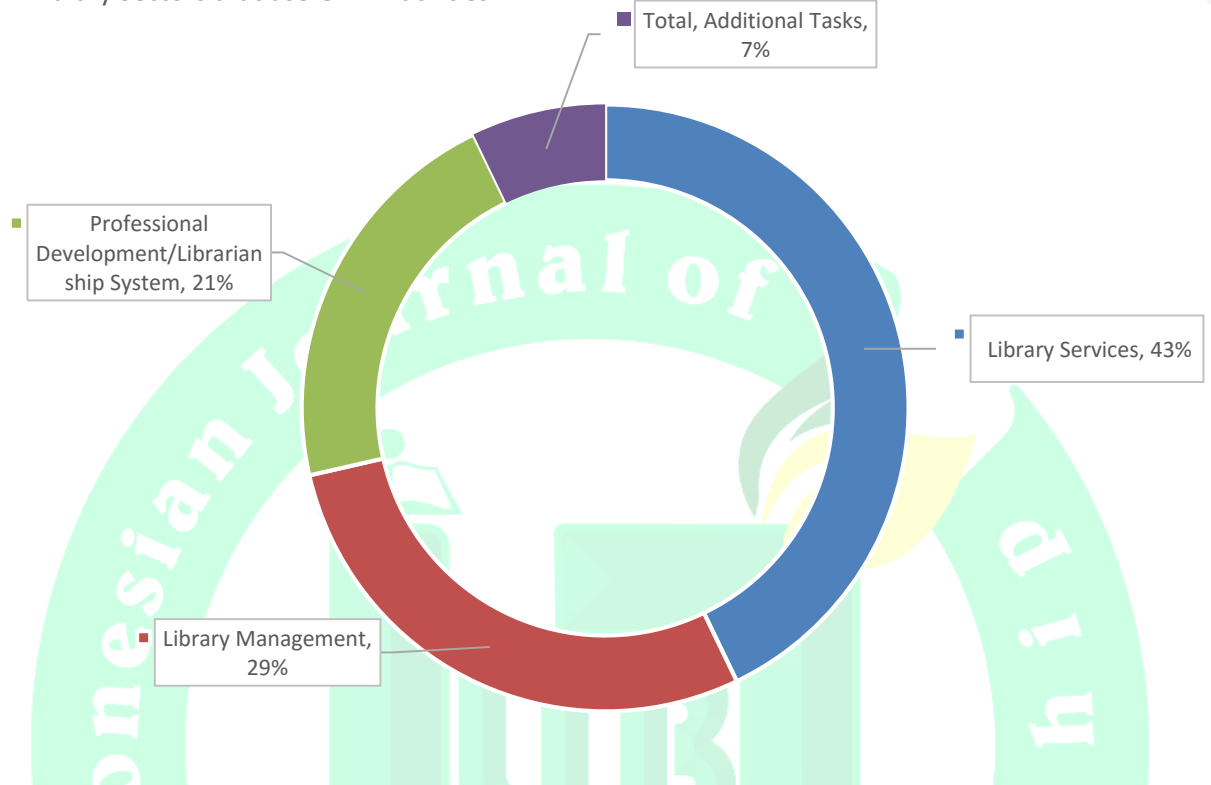
Source: Research Data, 2022

Figure 1 shows that the most used GAFE feature by librarians is G-Mail. Although librarians can take advantage of all GAFE facilities, most librarians think that G-Mail is the main portal for librarians to log in by using institutional email account (ipdn.ac.id), where they can also get activities report through it. This is most likely what makes G-Mail service the most frequently used and accessed by librarians. The next facility that is often accessed is G-Drive. One of the advantages offered by GAFE is the unlimited storage drive capacity, offering collaborative storage, and all forms of work will be stored on the G-Drive. It makes G-Drive to be the main attraction that influences any institution willing to spend a large enough budget to subscribe to GAFE. The next frequently used facilities are G-form and G-meet which are indeed very helpful in data collection activities and virtual/online interactions. Furthermore, librarians often use G-docs, spreadsheets, and G-slides in completing work and reporting in the form of collaborative working papers. The last, GAFE facilities that are only used by a few librarians are Google classrooms, calendars, and sites.

The use of GAFE supports the main work of librarians as depicted in Figure 2 as follows.

Figure 2.

Library Sectors that use GAFE Facilities



Source: Research Data, 2022

GAFE is widely applied by librarians in the library services section to meet users' needs. It is because the library services section is mostly needed by users. Therefore, almost all GAFE facilities are utilized in library service activities. In the next order, GAFE is useful in library affairs management activities which are related to administrative work starting from planning, implementing, and evaluating. The existence of GAFE makes library management activities become more effective and efficient. Meanwhile, other sectors such as the professional development sector, is in the last order to use the GAFE feature.

The author conducts this research based on the facilities/applications offered by GAFE as the indicators, including G-Mail, G-Drive, G-Form, G-Meet, G-Doc, G-Sheets, G-Slide, G-Calendar, G-Class, and G-Sites.

Google Mail. G-Mail is said to be the initial portal to connect to all google services through email login. All notifications from every activity on all google services are sent via G-Mail according to their settings. Through a G-Mail account that is connected to multiple devices, librarians can get notifications especially when they connect it to their mobile phones, so they can stay informed even when they are out of work and provide a quick response if there is an urgent matter. Most IPDN librarians have G-Mail accounts on their phones that they use to support library management and service activities (Rahmadanita,

Personal Communication 2021). Likewise, the opinion of the thesis service officer stated that with the existence of G-Mail, the process of collecting Undergraduate Thesis PDFs as one of the graduation requirements became easier. This year, a number of approximately 1993 Praja who will graduate collect their Undergraduate Thesis PDF via email perpustakaan@ipdn.ac.id, the officers will check and if there are any shortcomings, they will immediately send a message of what shortcomings need to be completed directly to the user (Hidayati, Personal Communication, 2022).

Google Drive. Google Drive is a cloud-based storage service used to store, organize, and share documents (Quick & Choo, 2014). This tool is ideal for collaboration considering that GAFE offers unlimited storage space. Librarians can upload work results, meeting videos, socialization videos, and all activity documents to the "IPDN Library Shared Drive" folder that has been shared with all library members. By uploading the documents to G-Drive, they can do collaboration in reviewing their respective work while continuing to complete it. One of the essential elements of this process is to clearly communicate to the librarians about the roles, tasks, and timing of completion of the work. Before using G-Drive, documents were only stored on each PC or even using a pen drive/hard drive which was prone to virus infection or other risks of damage. By using the unlimited drives offered by GAFE, all recorded meetings that may take an entire day can be automatically stored on the drive (Pambayun, Personal Communication, 2021). The digital book subscriptions since 2011 that have reached thousands of titles can also be saved and shared via drive. Storing all forms of documents can be done easily, securely, and without any concern of running out of storage space (Putrajaya, Personal Communication, 2021). Moreover, the implementation of shared Google Drive can be used as a digital library (Pudjastawa & Cantika, 2020).

Google Form. Google Form is used to create Problem Reporting Forms due to its ease of use and cloud-based format (Beis, 2018). Google Form is also used as a student satisfaction assessment tool (Sianipar, 2019). IPDN librarians use this feature almost every day, starting from filling out forms for membership registration purposes, webinar/workshop attendance, Turnitin service application, user guidance, attendance, user satisfaction survey, reading favorites survey, user needs survey, research surveys, library free terms forms and so on (Rahmadanita, Personal Communication, 2022). G-Form is very helpful and it supports IPDN library management and service activities. Based on the survey results, G-Form is one of the GAFE features used by all librarians in IPDN which is also used intensely almost every day.

Google Meet. IPDN libraries are located in several regional campuses, and because of that, it requires effective and efficient liaison media. Before knowing GAFE, video conferencing was a tool used to connect libraries between regional campuses. However, they must submit a request for the use of video conferencing facilities to the Technology Service Unit (Educational Technology Division) which will also install cameras and other devices needed. By using G-Meet Premium feature, the library can schedule whenever and wherever they need meeting activities with regional campus libraries easily and practically. The recordings can also be directly stored on the drive with unlimited duration

and it can be shared with all users. Libraries only need to match the schedule regarding the time difference in each regional IPDN Campus if they want to hold an online meeting. G-meet is also very useful in user education activities (Pambayun, Personal Communication 2021). During the pandemic, G-meet helped to minimize face-to-face activities in IPDN Library. At that time, the IPDN library implemented a policy regarding library services from home (Hapsari et al., 2020). The existence of Google Meet facilitated online interaction between librarians and users without worrying about the distance, they could even have discussions from their own homes or even when they were in the libraries on regional campuses.

Nevertheless, the process of delivering information through G-meet cannot be fully conveyed. It turned out that during the new normal period, many users want face-to-face user guidance for the reason that they will get a better understanding in fulfilling their information needs. Praja (Personal Communication, 2021) supports the statement by saying that in fact the information will be absorbed better face-to-face rather than having to go online. G-meet is quite protective, therefore if the user is not using the ipdn.ac.id account, they must go through strict admin verification that it becomes an impediment as well. Moreover, Zoom Meeting as its competitor offers a variety of convenience features and free features that almost everyone takes advantage of. Librarians often make use of G-meet for internal purposes, but utilize Zoom for external purposes, especially when there were many daily online activities by external parties that were followed by IPDN librarians during the pandemic/new normal (Pambayun, Personal communication, 2021).

Google Docs. G-Docs is a free web-based word processor application where documents can be created, edited and stored online. G-Doc files can be accessed from any computer with an internet connection and are compatible with most presentation software and word processor applications (Lin & Yang, 2013). In addition to collaboration as an advantage of G-Docs, one of its interesting features is the comment feature. Librarians can provide notes to review each other's writings/reports before being sent to the supervisor, before publication, etc. G-Doc is also used to collaborate on scientific work as one of the components of the main duties of librarians based on the Regulation of the Indonesian Ministry of State Apparatus Empowerment and Bureaucratic Reforms Number 9 of 2014 concerning Librarian Functional Positions and Credit Scores. G-Doc helps librarians a lot in co-writing without having to meet face-to-face. This activity can be done by many librarians at once so that the manuscript is completed faster even under pandemic conditions (Pambayun, Personal Communication, 2021). G-Doc is also used like Google Spread as a medium for sending information to users in IPDN Library, just like what is also done in Surabaya University Library called Electronic Document (Lasi, 2015).

Some librarians have taken advantage of this facility, although they also still use Ms. Word. It is undeniable that Microsoft products are still on top of the chart with their various advantages and other facilities offered. However, it still allows the use of G-Doc in IPDN Library.

Google Sheet. G-Sheet has almost the same features as Ms. Excel. Just like G-Doc and G-Slide, it can create, edit, share, analyze, track document changes online, and collaborate with other users in real-time (Rutledge & Gunter, 2014). G-Sheet is usually used to support G-Form. Once submitted, the form data is automatically transferred into Google Sheets (Beis, 2018). Google Sheets is very useful in collecting information. 6 librarians who are used to use GAFE facilities said that they are able to maximize the use of G-Sheet and utilize it every day, but 9 other librarians still consider Ms. Excel to be irreplaceable (Rahmadanita, Personal Communication 2022). Even so, 4 out of 6 librarians who were intensively using G-Sheet claimed that they were still using Ms. Excel as well. Therefore, the results of the questionnaire indicate that the use of G-Sheet by IPDN librarians is classified as moderate.

Google Slide. G-Slide has almost the same features as Ms. Power Point (PPT). Besides its collaboration features, what distinguishes it apart is that user can create and innovate without limits since users can surf the internet to find any design/image/animation (Rutledge & Gunter, 2014). Compared to G-Sheet and G-Doc, G-Slide is rarely used by IPDN librarians. The main reason is that librarians are more familiar with PPT. There is a small percentage of IPDN librarians who often use G-Slide, which are those who usually make presentations/promotions, especially on online user education activities (Rahmadanita, Personal Communication, 2022).

Google Class Room. G-Class is an online learning medium that allows teachers and students to connect from anywhere and anytime (Arifin, 2022). Google Classroom became an example of an E-Learning system that began to be implemented by teachers by creating quizzes, worksheets, uploading assignments, assessments, etc (Ambarita, 2021; Hernawati & Pradipta, 2021; Khomisah et al., 2021). Integration of Google Suite products is able to make it easier for students and teachers to share files through G-Drive such as G-Docs, G-Sheets, and G-Slides for writing, G-Mail for communication, and G-Calendar for scheduling, which can be accessed through various devices. In some cases, Google Classroom is integrated with the college academic system to improve the efficiency and effectiveness of online learning activities (Saraun et al., 2022). As well as the lecturers, IPDN Librarians also utilize various GAFE applications to provide learning to Praja. For librarians, GAFE is specifically used as a new medium for socializing and assisting users online during the pandemic. Nevertheless, this service only lasts a short time because in 2020 there were many Praja who did not have an institutional G-Mail account (Pambayun, Personal Communication, 2021). There are only 1 out of 15 librarians use G-Class for socialization activities. On the other hand, 5 other librarians find it easier to deliver knowledge by using G-Meet because they don't need to upload the materials to G-Class and invite Praja accounts which also takes more time. It happens because socialization activities/user education is not based on the curriculum and it is dynamic, as well as the existence of other applications such as G-Meet and Zoom which are more familiar to be used by IPDN librarians.

Google Calendar. The Google Calendar application is also provided free of charge (no enterprise subscription required), and users can freely use it as an integrated online

calendar designed for teams (Google, 2022). Nowadays, smartphones have included G-Calendar as the default application. Therefore, as long as users use the same email account, the notification can still appear even if they use different devices. G-Calendar is used by IPDN librarians to schedule online socialization activities via G-Meet. All librarians will get notifications and reminders to their respective emails so that they can carry out user education activities in a timely manner and other librarians can monitor the activities. In addition, the meeting activities for regional campuses, socialization, or internal workshops of IPDN librarians via G-Meet are also scheduled through G-Calendar (Pambayun, Personal Communication, 2021).

Google Sites. G-Sites are used to create websites without having to have design or programming skills (Google, 2022b). The outstanding feature is that when a new site is created, it is automatically added to Google Drive and also connected to mobile phone devices. IPDN library website for the last decade, from 2011 to 2021, is a portal created by IPDN librarians that can be accessed through the page <https://sites.google.com/ipdn.ac.id/library> using G-Sites application. G-Sites is very helpful for facilitating library publication and promotion (Rahmadanita, Personal Communication, 2021).

Discussion of Research Findings. As a library today, IPDN Library has a priority to develop the skills of its librarians so as not to be oppressed by the rapid development of technology. IPDN Library tries to be friends with technology by utilizing GAFE in library management and services. The most intensely used GAFE features are G-Mail, Google Drive, Google Forms, and Google Meet which are utilized almost every day by all respondents. G-Mail is the number 1 application that is always used by librarians because it is the initial portal to connect to all GAFE services and to receive notifications from every GAFE activity (Saf et al., 2020).

The next facility that is actively accessed is G-Drive, which also be the main attraction of GAFE since all IPDN librarians use G-Drive in parallel with G-Mail. The storage capacity of G-Drive in GAFE is unlimited. As well as free drives (up to 15 GB), GAFE offers collaborative storage, and any form of work will be stored on G-Drive. In line with Trilaksono's research that G-Drive mostly affects students' satisfaction as a storage medium (Trilaksono, 2020). Moreover, the implementation of shared Google Drive can be used as a digital library (Pudjastawa & Cantika, 2020).

All IPDN librarians also use G-Form and G-Meet which are indeed very helpful in data collection activities and virtual/online interactions. Google Form is also used as student satisfaction assessment tool (Sianipar, 2019). Other findings revealed that G-Form is effective in giving assessments to students at SMP Negeri 9 Purworejo (Santoso, 2019). Likewise, online learning at SMK Negeri 1 Koba is more effective with the existence of G-Form (Septiawan, 2020). Moreover, G-Form is able to increase the effectiveness of student online learning evaluation during the Covid-19 period (Ngafifah, 2020).

Other features that are used moderately are G-Docs, G-Sheets, and G-Slides. IPDN librarians take advantage of those features to complete work and give reports in the form

of collaborative working papers. The use of the application is at a moderate level because most of IPDN librarians are still using Microsoft products, such as Ms. Word, Ms. Excel, and PowerPoint. The finding shows that librarians do their offline work papers more often by using Microsoft products, whereas GAFE features are usually applied when there are tasks that involve collaboration between several librarians and when they cannot meet face-to-face. Similarly, Ngafifah found that G-Sheets had not been used optimally because they use Microsoft Excel more often (Ngafifah, 2020). Meanwhile, G-Slides for the online presentation was only used by one lecturer and 13 students out of a total of 77 respondents (Ngafifah, 2020).

The last, GAFE facilities that are only used by a few librarians are Google classrooms, calendars, and sites. The utilization of G-Class is ineffective in the IPDN library since the activities carried out are only limited to socialization/user education which is not included in a curriculum and is dynamic. The existence of other applications such as G-Meet and Zoom are more familiar to be used by IPDN librarians than G-Classroom. These findings are different from Ngafifah's. Her finding showed that G-Class is very effective and supportive learning to be used by teachers (Ngafifah, 2020). Other research findings show that G-Class is an example of an E-Learning system that teachers are starting to apply by making quizzes and worksheets, uploading assignments, giving assessments, etc (Ambarita, 2021; Hernawati & Pradipta, 2021; Khomisah et al., 2021). In fact, G-Class is integrated with the college academic system (Saraun et al., 2022).

Another finding revealed that the use of G-Calendar became less effective because meetings and other activities are more often carried out offline. Moreover, at the level of institutes or other work units, G-Calendar is rarely used to make a schedule or academic calendar. The scheduling activities and information distribution at IPDN tend to be done through WhatsApp group. This is what makes G-Calendar rarely used by IPDN librarians. It is different from other findings that said G-Calendar is well utilized because it is used as an academic calendar (Faroqi & Suryanto, 2020). Meanwhile, G-Sites is also widely used as a library portal (Kumbhar, 2020) Similarly, G-Sites is used to create IPDN library website. However, it is not familiarly used by IPDN librarians to create personal portfolios.

It is generally found that IPDN librarians feel that the process of managing the library and giving services becomes more effective and efficient. Librarians are pampered with GAFE features that are used to collaborate and communicate with each other to increase creativity and innovation in library services. It is the same with Park & Suh's research findings that GAFE is appropriate for developing 21st century 4C (creativity, critical thinking, communication, and collaboration) skills at Chaminade Honolulu University (Park & Suh, 2018). It happens because GAFE is very easy to use (Brown & Hocutt, 2015), can support information literacy and organizing skills, and it provides flexible options and features (Ok & Rao, 2019). Therefore, GAFE strongly supports the activities of librarians as a tool for library productivity and collaboration.

IV. CONCLUSION

IPDN Library has integrated library management and services with new technology in the field of education launched by Google (GAFE) in 2020. It makes the productivity and effectiveness of librarians increased. The work of librarians is well-facilitated, especially in the collaboration of making reports, statistical data, promotional slides, surveys, activity planning, and cross-campus library meetings/coordination activities. Furthermore, during the Covid-19 pandemic, the adopted GAFE technology strongly supports the LSFH (Library Services from Home) policy. This study concludes that GAFE feature has been well utilized in IPDN Library.

V. ACKNOWLEDGMENTS

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