Website-based library employee performance application: Efforts to secure annual work targets and evidence of performance

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Abstract. Almost every office needed work support applications. However, it is not easy to make the most suitable, because each office is generally unique. In this study, the waterfall method was used to create a website-based application that was adapted to job characteristics and the number of employees in a college library. As a result, an application has been developed called the Employee Daily Performance Application (AKHP) of the Higher Education Library which contains 8 main menus and is proven to be usable and makes it easy to secure targets and proof of performance.

1 Introduction

Libraries in Indonesia, like in many other countries, can face a number of problems in developing and maintaining library applications. Some common problems that may be faced by Indonesian libraries in making applications include: (1) limited resources, (2) unstable internet connection, (3) technological literacy, (4) language issues, (5) protection of personal data, (6) digital content and licensing, (7) content management, (8) education and training, (9) sustainable development, and (10) community participation. It is important for libraries to consider all these issues holistically in the development of their library applications. Stakeholder collaboration, inclusiveness, and focus on user needs will help overcome many of the problems that may arise.

Regarding the case of the number of library staff who are only a few and do not meet national standards, it is important to present technology that functions to provide jobs that are in accordance with the level of position and specific tasks. In addition, they must be able to store evidence of daily work and assess the progress of work results compared to the work targets that have been prepared at the beginning of the year. Applications like this not only simplify and save leadership work time but can also monitor the level of achievement of the annual work target of the library.

Effective and modern website development faces various global issues that are important to pay attention to. These issues include data security and privacy, security vulnerabilities in suites and apps, responsive and mobile-first design, good user experience (UX), performance efficiency, and technical support. Understanding these issues is critical for the success of any website development project.
optimization, adoption of the latest technology, web accessibility, SEO, enhanced user engagement, and data protection policies and regulations. Developers must keep up with technology developments and employ best practices to address these issues in order to create websites that are safe, functional and provide a positive user experience.

Specifically for the scope of library work, the characteristics of a good and appropriate website-based application for securing targets and proof of employee work generally need to meet the following criteria. Data Security: Applications must have strong security layers to protect sensitive data such as user personal information and library data. The use of encryption and other security protocols must be implemented to protect data in transit and while on the storage server [1]. User Authentication: Only properly authorized users should be allowed to access various features of the app. User authentication must ensure that each employee has access only to information relevant to their roles and responsibilities [2]. Access Management: Role and permission settings for each employee are required. This allows granting appropriate access permissions based on their role in the library (e.g. admin, librarian, service personnel, etc.) [3]. Track Record (Audit Trail): Applications must be able to record user activity, including access, data changes, and other transactions. An audit trail will assist in tracking suspicious or unauthorized activity [4]. Collection and Stock Management: Applications should enable librarians to efficiently manage collections of books and other media, including information on stock, loan status, and collection-related updates [5]. Loan and Return Tracking: Features to record borrowing and returning books must exist, so that these activities can be properly tracked and managed efficiently [6]. Integration with Other Systems: If the library uses other systems, such as a library management system (Library Management System) or financial system, the application must be able to integrate with these systems to avoid data duplication and increase productivity [7].

Intuitive and Easy-to-Use Display: The application's user interface should be intuitive and easy to use, so that users (librarians) can quickly access information and execute the required tasks [8]. Reporting Capabilities: Applications should provide the ability to generate reports on library activity and performance. This report can assist management in making decisions based on accurate data [9]. Responsive and Accessible from Various Devices: Applications must be responsive and easily accessible from various devices such as computers, tablets, and smartphones [10]. Technical Support and Maintenance: Applications need to be supported by a technical team that can provide assistance and carry out periodic maintenance to ensure optimal performance [11]. Performance Monitoring: Applications must be able to monitor system performance to detect potential issues before they become major issues that can disrupt library operations [12]. Data Recovery: The application must have a reliable data recovery system, so that in the event of data failure or corruption, data can be recovered quickly and easily [13]. Compliance with Regulations and Policies: Applications must comply with applicable regulations and policies related to data security and privacy [14].

2 Objective

The purpose of this study is to develop a website-based application for recording the daily work of all librarians that can: (1) check compliance with job descriptions, (2) measure the adequacy of daily workload, (3) compare performance achievements with annual targets, and (4) become the basis for the annual work assessment of all library employees.
3 Method

The method used for making information systems in this study is the waterfall model. The waterfall model is one of the SDLC (Software Development Life Cycle) models which provides a sequential or sequential software life-flow approach. Flow from analysis, design, coding, and testing. Before the waterfall model is used, there are 2 stages that must be completed, namely identifying problems and collecting data. Identification of problems and data collection was carried out through focus group discussions within the internal library team, followed up with focus group discussions involving staffing and technology developers. After the waterfall model is executed, there is still one more stage that must be completed, namely documentation. Furthermore, the application was developed using a waterfall flow followed by several functional tests involving the library team as the end user. So, it appears that there are 4 parties involved, namely: librarian employees, librarian leaders, campus application supervisors, and application developers.

4 Result and Discussion

The stage of identifying needs through a focus group discussion that took place among the employees of the Surabaya State University library resulted in at least 4 main needs in the employee performance management application being developed, namely: (1) an employee position analysis page that functions to evaluate the adequacy of the number of employees based on current year conditions, (2) pages of employee work goals that contain achievement targets at the end of the year for each employee based on the main tasks and functions of the library, (3) pages for recording daily proof of work derived from detailed job descriptions for each employee so that at the end of the year used for evaluating performance achievements compared to employee performance targets that have been prepared at the beginning of the year, and (4) a reminder page that contains all the information needed daily to ensure that no personal or office activity agenda is forgotten. The developed application produces 8 important menus that have been adapted to the needs of the Surabaya State University Library in securing targets and proof of work. The results and specifications are in the following eight discussions.

4.1 Login and Dashboard

On the Login page, users are prompted to enter identification information, such as a username and a password that has been established previously. Once users input this information, the system will perform verification against the existing database. The Dashboard page presents crucial information regarding the number of employees and the composition of positions within the environment. Its function is to provide a clear and comprehensive overview of the librarian’s organizational structure, aiding management in understanding workforce distribution and making data-driven decisions. This dashboard can offer insights into trends in employee count changes and position compositions, enabling management to respond swiftly to any organizational needed changes, detailed in Figure 1.
4.2 User data and role

This user page helps employees to maintain the security of data and information in the system. By carefully managing roles and access rights, libraries can ensure that each team member has the authority appropriate to their responsibilities. This feature, employees can work together in managing who can view and manage important information, and keep existing accounts organized in Figure 2.

Fig. 2. User page.

4.3 Menu description and work volume

Each library staff has a job description and work volume unit related to the details of each work. Biodata pages and job details that have been developed are very useful and in line with the available job options in the college library in Figure 3.
4.4 Measuring employee workload

The number and position of employees in one office may not necessarily be in accordance with their needs and need to be constantly analyzed and the results used for staff mutation and development materials. One of the resulting menus is data entry and standard positions as well as the number of jobs within 1 year. This is of course very easy in analyzing the suitability of positions and the number of employee needs in Figure 4.

4.5 Performance analysis page

In this case, the page will display the assessment criteria used to measure librarian performance, covering aspects such as service to visitors, collection management, information retrieval, and team collaboration. Individual librarian performance data will be presented, including the grades or scores assigned to each criterion [8]. The analysis will also compare the librarian’s performance with the standards or targets that have been set so that the extent of their achievement can be measured in Figure 5.
4.6 Scope of Work

This system allows managers to efficiently manage employee duties and responsibilities, track performance achievements, and monitor predetermined targets, with additional tasks many other jobs can be completed. Thus, the compatibility between the work performed and the strategic objectives of the organization can be maintained [9]. The use of this system also helps in increasing accountability, transparency, and efficiency in managing librarian performance. The scope of the work page is shown in Figure 6.

4.7 Input daily work plan

Every morning every employee should know clearly what work I will do and maybe finish it. By the meeting, this application provides options for the scope of work for each position and for each employee, which can be checked to be included in the work plan sheet. Apart from clarifying work, planning documents can be used to evaluate whether all daily work can be completely divided. If not, then the leadership needs to make adjustments to the work plan for several related staff. The daily work plan page is shown in Figure 7.
4.8 Input daily work results

In addition to each staff need to plan the daily work menu, daily work completion reports need to be reported. The development of this application has produced a report menu that has been adjusted to the type of position and the number of employees [10]. So that the results can be used to evaluate individual staff performance achievements as well as performance achievement targets between offices. The daily work result page is shown in Figure 8.

5 Conclusion

The developed application has produced 8 important menus and is in accordance with the needs of the Surabaya State University Library in securing targets and proof of staff work. This result still needs to be adjusted if it is applied in libraries that have relatively different structures and job descriptions. Therefore, further studies need to be carried out at the level of ease of adaptation of the application so that it is easily adapted to the real situations and conditions that are owned by other libraries.

Acknowledgements

Thank you to Research and Community Service Institute Universitas Negeri Surabaya for funding this research and also thanks to DAPT-EQUITY Program, Lembaga Pengelola Dana Pendidikan (LPDP), Ministry of Finance, Indonesia for supporting this publication.
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