

# Web-based Library Development Using Codeigniter at SD Muhammadiyah 2 Waru

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**Abstract.** Based on (Law of the Republic of Indonesia No. 43 of 2007 concerning Libraries) it is stipulated that libraries are administrative institutions such as written, printed or recorded works that are professional and standardized systems that meet the needs of education, research, information, and preservation, and recreation of visitors (Chapter I Paragraph 1) In the law called "Chapter V Article 14 Paragraph 3" then regulated by all libraries provide good services to advance information and communication technology. Thus the authors try to formulate the problem, namely how to create a computerized school book lending program and use a web-based program using codeigniter at SD Muhammadiyah 2 Waru in order to process data faster and with a minimum error rate.

**Keywords:** Library, Codeigniter

## 1 Introduction

In this era of globalization, computer users are increasing[1] . Almost every job in a school institution needs to use computer aids as a means of supporting every activity, as well as at SD Muhammadiyah 2 Waru which is located on Jl. Jend S. Parman III/5 Waru Kab. Sidoarjo needs to use a computer. Especially in the school library section that has not been able to utilize the sophistication of computer technology in recording school book loans. The problem that is often encountered is that the data processing process is still found errors when recording in conducting Book Loan transactions because it is still processed manually by recording in a book so that the calculation of School Book Borrowing is less accurate and efficient [2].

Thus the authors try to formulate the problem, namely how to create a computerized school book lending program and use a web-based program using codeigniter at SD Muhammadiyah 2 Waru in order to process data faster and with the minimum possible error rate.

So with the problems in the library of SD Muhammadiyah 2 Waru which need to be improved, the researcher gave the title in the research "Web-Based Library Development Using *Codeigniter* at SD Muhammadiyah 2 Waru".

## 2 Methods

### 2.1 Codeigniter Framework

Information technology is one of the tools that support people's lives in various aspects of life, both in the health, political, cultural, sports, security and economic spheres[3] . Technology is characterized by the existence of various information systems. forms of applications, such as applications in the form of websites, desktop computers, and mobile[4] . According to[5] , codeIgniter is a *framework* created using the PHP programming language which aims to make it easier for web programmers to create or develop web-based applications.

The purpose of this School Development Plan (RPS) is prepared with the aim of being a guideline in the development of a web-based digital school library using codeigniter so that the realization of a sophisticated and efficient future library to readers or school residents[4] . The main role of the library is to facilitate the process of retrieving information that is credible and affordable for users/readers[6] . The development of technology and communication brings a series of innovations so that information retrieval can be done as effectively and efficiently as possible[7] . One of the library programs that is now intensified is the implementation of a digital library .[8]

### 3 Results and Discussion

#### 3.1 External Analysis

The main role of the library is to facilitate the process of information retrieval that is credible and affordable for users/readers[9] . The development of technology and communication brings a series of innovations so that information retrieval can be done as effectively and efficiently as possible. One of the library programs that is now intensified is the implementation of a digital library[10] . While what happens in the field is that there are still many school libraries that have not implemented digital libraries, including the library at SD Muhammadiyah 2 Waru, so in the future we will implement the program in our school in order to create a generation of literacy in the environment. [11]

To realize a modern and comfortable library, it is very necessary to renovate the library at SD Muhammadiyah 2 Waru so that the legality and credibility of the library will be better. When viewed physically, the development of the library room will not be sufficient to keep up with the demands of the many books published continuously in the future. The external challenges of digital libraries in the future are, 1) Collaboration with external parties to improve the performance of the school library[12] , 2) Conducting IT training for library human resources[13] , 3) Starting to provide a portion of the budget to create and operate a digital library[14] , 4) Conducting surveys and socialization to school residents to find out information needs and conditions of use. [15]

#### 3.2 Internal Analysis

Literally, a digital library is a library that manages all or some parts of the collection in digital format and has a function as an alternative to conventional collections[16] . The library at SD Muhammadiyah 2 Waru was established since the establishment of the school but until now it is still not perfect in serving school residents, the school library has a room measuring 7 meters x 7 meters enough to be occupied by bookshelves and book collections with a very minimal amount. Internal conditions of the school library, 1) The current human resources of library staff are not in accordance with their educational background, 2) Lack of varied book collections so that students often complain and ask for the addition of new books, 3) Has three bookshelves that are starting to be unable to load many books, 4) There are three types of books in the school library textbooks, novels or readings, history books, 5) The number of books in the school library collection is around 100 books, 6) There is no digitization in the form of computers for school library administration, 7) The internet connection in the library is not yet stable, 8) There is no cooperation with outside parties for the progress of the school library, 9) The library room is quite small for the school library category.

### 4 Conclusion

Web-based library development using codeigniter which is expected to make school libraries advanced and have standards, it must be in accordance with the theories described by several scientists, so in practice at our school it is still not in accordance with what is described by several scientists in this case the school still uses manual methods that are handwritten in the book register both borrowing and data collection of books, so with this we have an idea in order to develop a school library using the *Codeigniter web* in advancing and developing schools with steps: The school, in this case the school library, must provide a laptop or *PC* which will be filled with *software* about *codeigniter* and connected to a supporting *wifi / internet*. Collecting student or user data by library staff who are directly connected to all student data through the school dapodik application. The process of entering student or user data into the *codeigniter software* application and also book data that is already available by school library staff. Socialization conducted by library staff with all school residents on how to borrow and return *codeigniter* web-based library books.

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