**CHAPTER TWO**

**LITERATURE REVIEW**

**2.1 Introduction**

The purpose of this chapter is to show how the problem under consideration relates to prior research, current practice, or other fields of knowledge by citing relevant works by other researchers who have dealt with a similar issue. Furthermore, this chapter will include a synthesis of current research on the issue, highlighting areas of agreement, disagreement, and gaps in the literature, to establish the significance of the project topic in the field and to recommend opportunities for future study.

**2.2 Literature Review**

(Kingsley et al., 2021). E-Notice Board (ENB) for the Faculty Community. There are several wall notice boards put in various positions across any faculty where persons with announcements typed or written on a sheet of paper can place it on the notice boards for other people to see when passing by those spots. As a result of the irresponsibility of those who deposit them, there is a large collection of littered papers, and no one is responsible for removing or cleaning them. Furthermore, the announcement may not reach the intended recipient since others may not pass via the notice boards. Weather conditions can often disrupt people's movements; some people may not reside on school grounds, making it difficult for them to view the announcements on time. As a result, persons who want to make announcements are under a lot of pressure to publish them everywhere to reach the intended audience. All of this occurs because the ENB isn't employed in this situation.

Furthermore, the study was designed with Object Oriented Analysis and Design Methodology (OOADM) and developed with Hypertext Pre-Processor (PHP), Hypertext Markup Language (HTML), Bootstrap, Cascading Style Sheet (CSS) as the front-end, and My Structural Query Language (MYSQL) database as the back-end.

In conclusion, the implementation of our ENB online application provides an enhanced method of disseminating notices among the University faculties. In comparison to the conventional paper-based wooden noticeboard method, it has the potential to transmit notices in a simple, efficient, and well-organized manner. The usage of the ENB reduces human traffic at the notice board location since information on the notice boards can be accessed electronically on the ENB.

(Sachin, Altaf & Amol, 2018), Mobile-Based Notice Board & College Management System Using Firebase Implementation. In today's world, most universities have websites that display college information. On these websites, students may find timetables, exam schedules, and event schedules. However, to access this information, students must first log in to the website. Students can access the website if they have an internet connection, and these websites can also be seen on mobile phones. There is one issue with the websites in that they cannot be accessed if there is no internet connection. As a result, the website's main problem is its lack of offline connection. College administration entails the execution of several actions, and using various software for various reasons is a time-consuming task.

In conclusion, the software provides institutional activities with mobility and automation. This software is secure and will not drain your battery. The information may be promptly obtained from the backend server while being user pleasant. Because most paperwork is done online, this program saves money on printing and paper. As a result, this software aids in staying up in this mobile era. The android application is designed to assist the institution's workers in their advancement and academic growth. It is simple for parents to obtain information on their children.

(Nirmale et al., 2022). IoT-Based Digital Wireless Notice Board. At the moment, the notice/advertisement boards are administered manually. Putting up notices on the notice board is a time-consuming operation. This wastes a lot of resources such as paper, printer ink, and manpower, as well as time. n. A person is hired to manage this notice board, where the scenario is replaced by the concept that deals with sophisticated wireless notice boards.

Moreso, the proposed system is to create a digital notice board that displays messages sent by the user via the website and to design a simple, user-friendly system that can receive and display messages/information in a specific manner concerning date and time, allowing the user to easily keep track of the notice board every day and each time he uses the system. The system is divided into two parts: transmitter and receiver. The transmitter is in charge of sending essential information over the Website.

When a person clicks on a website link, he or she can input a message and receive room for more information. The essential operating mechanism here is embedded C language and Wi-Fi Module.

In conclusion, to the best of our knowledge, the system has been successfully tested with troubleshooting. Every block in it has been reasoned and justified. The project is both cost-effective and marketable, and the components employed are basic and readily available in the market.

(Istiono & Sampurna, 2021). Notification information system android-based for spreading school information. Some schools still use manual letters or Short Message Service (SMS) or phones to transmit information to their members, therefore with such a manual approach, the institution or school incurs additional expenses and takes more time to spread information to a large number of people or members in their group. The goal of this research is to solve the problem of information spreading by developing an android-based information system with push messaging notifications, where the information sent by the sender will appear on the recipient's main notification page. With this method, it is hoped that spreading information will increase information reception by parents or students while decreasing information spreading costs.

Furthermore, the following are the steps in this research methodology: problem identification, literature study, system design, application development, testing, and assessment. Testing and evaluation take place in a private school in Tangerang, Indonesia. This system development is separated into two parts: the first is the design of a content management system (CMS) for the school as an information provider, and the second is the development of mobile applications for parents and students. The process of providing information notifications begins with a school administrator sending a text message or an image, then the data is sent to the database server for data storage and, at the same time, the data is sent to Google push messaging to be forwarded to members, either in groups or individually.

It can be concluded that employing the information notification system may facilitate and assist school administration in conveying information to parents or students, as evidenced by the 84.67% user acceptance of this system. Furthermore, the information notification system may reduce the cost of distributing information from the school to parents or students, and the school no longer has to pay to send information to parents or students.

(Srisha, Nivedita, & Verita, 2019). College Notification System. Traditional notice boards need a lot of pen effort, paper labour, and paper waste. Generally, colleges use traditional paper-based notice boards, so to overcome the drawbacks of this traditional notice board, we created an Android-based application through which students can receive notifications about any information, activities, or events related to their colleagues from anywhere, at any time.

Moreso, the project is divided into four major components, which are the admin module that serves as application authorization, and the notification management module where teachers and students are added. He delivers messages on scholarships, admissions, holidays, events, timetables, student accomplishments, tests, and other matters. Module for faculty which is where faculty can view their associated alerts. Finally, scholarships, admission, holidays, events, timetables, student accomplishments, examinations, and other notifications are displayed in the student module.

In conclusion, computers and mobile phones are getting increasingly popular in today's environment. As a result, we must transition from traditional notice boards to electronic notice boards. We created an Android software called a college notification system to provide college-related notifications straight to your Android devices. This program provides a simple, convenient, and effective online notification system, reducing the work required by students and instructors. This college notification system solves all of the challenges associated with traditional paper-based announcements.

**2.3 Summary of Related Literature Reviews**

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| **Author & Year** | **Title & Description** | **Merit and Demerits** |
| Kingsley et al. (2021). | E-Notice Board (ENB) for the Faculty Community.  This project, aimed at creating an online Electronic Notice Board (ENB) for the faculty community. | Location constraints in the dissemination of information were eliminated.  The system is limited only to the web. |
| Sachin et al. (2018). | Mobile-Based Notice Board & College Management System Using Firebase Implementation.  The article designed an android application to assist the institution's personnel in their advancement and academic growth. | This system simplified the process with an Android application, which sends immediate messages to students or concerned staff.  Some android operating systems are not supported. |
| Nirmale et al. (2022). | IoT-Based Digital Wireless Notice Board.  This paper aims to present a technology-based online notice board using the Internet of Things (IoT) for the dissemination of information that is cost-effective. | completely capable of sending pertinent information and announcements and keeping users up to date regularly  Components are not easily accessible |
| Istiono & Sampurna (2021). | Notification information system android-based for spreading school information.  The research created an Android-based information notification application with push messaging services to distribute information from the school to students or parents via push notification, and after tapping the notice, the specifics of this information may be viewed. | Reduction in the cost of distributing information from the school to parents or students.  The system is limited to just android users. |
| Srisha et al. (2019). | College Notification System.  This paper implements the E-Notice Board application, which may operate on any computer system through a local area network, a wired network, or a wireless network. | It even reveals the availability of the book before searching, which saves a significant amount of time.  The system has a deficiency in user experience. |

**2.4 Analysis of the Current System**

The existing approach relies on manual means of physically transmitting information throughout the department. Among the procedures are the following: Announcement boards are created and posted in strategic locations around the department, the material is provided by designated persons or groups within the department, Messages are manually posted on the department's announcement board, and students physically go to the announcement boards to read notices.

**2.4.1 Problem Inherent in** **the Current System**

There are several problems inherent in the current system of information dissemination in the department which include:

1. The entire procedure of removing the old message and pasting the new notice on the notice board takes time.
2. It takes a lot of energy to walk back and forth to read the departmental announcement board daily.
3. People mutilate, destroy, or pull out notices from announcement boards, leaving others in the dark.
4. The presentation of information is unrestricted.
5. This results in paper fragments cluttering the department premises.
6. Storage is difficult, and there is no effective way to refer to previously provided pertinent material.
7. There is no official supervisor in charge of the board because everyone is allowed to paste materials at their leisure.

**2.5 Analysis of the New Proposed System**

This study's proposed system is a web-based announcement system. This system is a web application that provides current articles, notifications, and other information to all users linked with the department community. The department announcement board system will address the issues mentioned in the current system. The administrator does all updates such as add, remove, and view so that the user receives the most recent messages. Because the announcement application operates on both personal computers and mobile phones, information transmission is efficient.