**CHAPTER TWO**

**LITERATURE REVIEW**

**2.1 Introduction**

The field of the digital diary is a relatively new but rapidly expanding area of research. In this project, the basic diary function was meant to be enhanced by the addition of other elements, such as location tracking and reminder applications, to offer users a better product with greater functionality. This project started with an assessment of the existing dairy applications and known contributions by researchers to see what was currently available.

To fully understand what was already available, research was conducted on some of the most recent publications and apps. This involved trying out several of the apps for a while to completely comprehend their functionalities. In this chapter, we discuss the most known contributions of digital diaries.

**2.2 Literature Review**

(Fernández, Rodríguez, Rossel, Fuentes, & Herskovic, 2019), carried out a study on “A digital diary to promote self-care among elders” called “InMyDay”, specially designed for elderly users. The goal of this diary was to promote self-care and self-reaction, by allowing users to register their activities and emotions. designed and implemented a digital diary that allows self-reporting of emotional state and daily activities. The application stores daily entries in a pre-defined format, and these entries can be viewed again by the users. The application was implemented for the Android system, with local data storage. The diary was adapted from a pen-and-paper version, which consisted of several pages with pre-defined questions about self-care and emotions. The diary consisted of high-contrast images with fixed questions asking users how went their day and how they are feeling at the moment. This project work was more of a research work and was tested amongst 10 elderly.

Moreso (Greenslade, 2019), Developed “A Personal diary application that uses user location and emotion tagging to enrich the user experience”. The application was successful in achieving the projects main aim, the fusion of location and emotion to create a personal and helpful diary application. The user can create entries and view these at any time, these entries can be deleted and edited and basic data analysis provides users with interesting facts about their entries and their relationship with locations. Location is used to assess the user’s current location, the user can customise these location with their own names rather than rely on impersonal generations from services such as Google Maps. The application then uses this to suggest location to the user next time they write an entry. The application offers a range of emotions to tag entries with so users can see where they are often happy, sad or angry with the applications analysis.

Futhermore (Bhosale et al., 2019) researched the “Development of Multipurpose e-Diary application” and came up with a platform that provided online storage with full security. This application was window based. It made it easy to get a reminder for future activities such as upcoming events, deadlines of work, reminders, and daily tasks. They developed the first module Daily Task in that users can enter daily activities such as daily schedules, deadlines of any work, important meetings, notes, and functional plans. Users can view tasks, add a task, update tasks, and delete a task. In the second module, which is Financial Summary users can enter financial entries and receive reports on entries. In the Remainder module, the user can remind his important deadlines, birthdays, important events, and tours notification get on mobile SMS. User data security is guaranteed as there is a password login requirement before data can be accessed or modified.

(Hishobkar et al., 2019) also performed an analysis of “Digital Diary”, this study is an effort to recommend events to users within a social networking site. The system collects event data from users while setting up their digital diaries. It also permits users to rate events they have attended or planned. The main scope of the project is to provide a digital diary, where the user has a hassle-free experience in filling in all his details, An integrated map UI where the user can check out all the locations of the events he’s about to visit, plus with the recommender system, the user will get to know about similar events happening nearby Users can create events according to their suitability like birthdays or any organization event (meeting, etc.) as they want. The event will be created with information like event name, event place, date, and when the user wants a reminder at which time. The user will also get notified when the user is present at a recorded place.

(Orhani, Saramati, & Drini, 2022) carried out a study on “Electronic school diary for statistical analysis of student progress”, this study investigated the effects of using a digital diary to facilitate the calculation of administrative statistics of teachers and classroom caregivers. The purpose of this study was to explore the use of an electronic diary (e-diary) in supporting teachers and classroom caregivers to complete administrative work related to completing the school diary. A quantitative design was used to obtain data from teachers and classroom caregivers through questionnaires. Overall, the study showed many potential advantages of using a digital diary at school to facilitate administrative tasks. Also, the results of the study are showing that the teacher and classroom caregivers were very satisfied with the integration of the e-diary to complete the statistical tasks calculated automatically from the electronic diary.

(Namyenya et al., 2022) conducted a project study on “E-diary: a digital tool for strengthening accountability in agricultural extension”, the E-diary has two categories of users. The first is the field agents, and the second category of users is the supervisors. The user of the e-diary must have an e-diary account, which is protected by a username and password. Each supervisor creates an account for the immediate subordinate. The E-diary works within the existing agricultural extension procedures such as planning, conducting of activities, reporting, monitoring, evaluation, and feedback. The planning is annual and results in the formulation of annual work plans. The E-diary is embedded with special accountability features to enable the supervisors to verify the reported daily activities of the field agent. These include a beneficiary verification mechanism, the location of the activity, and activity photos. Regarding the beneficiary verification mechanism, for each activity, the field agent has to record the name and phone number of the beneficiary or reference beneficiary in the case of a group. Using the captured phone numbers, the supervisor can call the beneficiaries and verify the field agent’s visit. For the location, the field agent has to record the name of the village in which the activity was conducted. In addition, the system automatically captures the GPS coordinates, which verify the location entry. Concerning the activity photos, the field agent has to attach at least one activity photo that also provides evidence of the reported activity.

(Schmitz et al., 2022) also conducted Research on a “Digital Sleep Diary Standard”. This paper rests on an action design research project to design and develop a digital sleep diary as an app. The app was co-designed, involving end-users, researchers, and healthcare professionals in the design process. They used two questionnaires, a survey, and application analytics to collect quantitative data and complemented that with the qualitative data that was gained from the semi-structured interviews. This research was aimed at increasing compliance and counteracting memory bias, which was the main issues found while using the pen-and-paper version. They found that on a piece of paper, it cannot be controlled when and how participants enter information. So they concluded that these issues can be avoided with input control in a digital sleep diary. Choosing native inputs for time, numbers, Booleans (true/false), or text prevents the participant from entering incorrect data and ensures data homogeneity.

**2.3 Summary of Related Literature Reviews**

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| **Author & Year** | **Title & Description** | **Merit and Demerits** |
| Fernández et al. (2017) | A digital diary to promote self-care among elders  called “InMyDay”.  The developers implemented a digital diary, specially designed for elderly users. that allows self-reporting of emotional state and daily activities. The application stores daily entries in a pre-defined format, and these entries can be  viewed again by the users. The application was implemented for the Android  system, with local data storage. | The system had predefined emotions and questions for fast data entry into the diary.  The Pre-defined entry doesn’t allow much self expression as one is restricted to only entries in the diary. |
| Bhosale et al. (2019) | Development of Multipurpose e-Diary application.  This project was window based. It made it easy to get a reminder for future activities and daily tasks, also make financial entries in the financial summary module and receive reports on entries, reminders. | It provides vast user experience as it is an all in one application and user data is protected as there is a login requirement for authentication.  The system was window based as this reduces the portability of the system and restricts it to one section of users. |
| (Greenslade, 2019) | A Personal diary application that uses user location and emotion tagging to enrich the user experience  This project develops an android application that offers the user Emotional tags to identify their feelings within an entry as well as tag them with locations. It also uses emotion and location to produce statistics and information that will help the user learn about their routines and lives. | The App is user friendly and users can tag their diary entries with emoji's and location to always have a record of places visited  Users are not able to search for or categories entries, especially when the user has created many entries. |
| Hishobkar et al. (2019) | Digital Diary  This research focuses on a mobile diary that allows users create events according to their suitability like birthdays or any organization event as they want. The events are created by the information provided like event name, event place, date and when the user want reminder at which time. The user will also get notified when present at the nearby location of the event. | The User interface of the application is simple, fast and smooth functioning.  The system is limited to only Android-based users. |

**2.4 Analysis of the Current System**

The current manual diary system faces several challenges that necessitate the development of a digital solution. One significant problem lies in the potential leakage of personal information due to the physical nature of handwritten diaries. Handwritten diaries are vulnerable to privacy breaches, leading to potential issues such as blackmail and damage to an individual's reputation. Additionally, the manual searchability of information in traditional diaries is cumbersome and time-consuming. The limitations of paper diaries, including security concerns and difficulty in accessing information, highlight the need for a more advanced and secure solution.

**2.4.1 Problem Inherent in the Current System**

The primary problem in the current system is the lack of privacy and security associated with manual diaries. The ease of accessing handwritten entries makes it susceptible to unauthorized viewing, potentially resulting in negative consequences for the diary owner. This issue compromises the confidentiality and trustworthiness of the information stored in traditional diaries. The need for a more secure and confidential diary system is evident to address these inherent problems.

**2.5 Analysis of the New Proposed System**

The proposed system aims to address the limitations of the current manual diary system by introducing a mobile-based digital diary. The new system will leverage technology to enhance privacy, security, and accessibility of personal information. By implementing a mobile diary application, users will have a more user-friendly and efficient way to record and manage their entries. The introduction of features such as password protection and login systems will contribute to ensuring data confidentiality and preventing unauthorized access. The proposed digital diary will also offer a simplified user interface and interactions, making it easy for users to make entries and analyze information.