

Universiti Teknologi Mara

**Student Diary: Enhanced Activity
Tracker By Using Real Time Schedule**

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ABSTRACT

The digital era presents important obstacles for securing parent engagement in secondary school student education especially in Malaysia because many families face difficulties managing their time and using appropriate communication platforms. Report cards coupled with periodic school meetings deliver late and inadequate feedback that hinders parental support for academic and personal development of their children. The Student Diary mobile application serves as a solution to bridge this connection gap for real-time task follow-ups between learners and their parents. The Student Diary mobile application was created to fix this gap in order to allow real-time task monitoring between students and their parents. The application provides students with daily recording features for academics and personal matters while letting parents check remote student progress through an organized secure interface. This project serves to improve student time management along with academic performance enhancement and it aims to establish meaningful communication between children and their parents. In order to do so, the project applied Waterfall development model, which operates on the step-by-step case basis and has five main steps (requirement analysis, design, implementation, testing, and maintenance). In the requirements analysis, the former was done through analysis of comparable apps and the latter through user needs. The developers constructed the application through Android Studio using Java and XML for interface code creation and integrated Firebase as their cloud database solution with real-time authentication features. The System Usability Scale (SUS) and Nielsen usability model were performed to test the usability of the application, which demonstrated that people found it easy to use an application, efficient, and helpful to track and communicate. It has shown a high satisfaction and effectiveness in establishing student self-discipline as well as improving parental involvement. Student self-discipline expanded through the application while both students and their parents experienced better academic participation. This system demonstrated several drawbacks that consisted of dependency on reliable Internet and restricted offline mode usage as well as issues related to privacy protection. The Student Diary application provides students with a functional solution that unites academic life with household responsibilities

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CHAPTER 1

INTRODUCTION

The initial section introduces an overview of study-related background which addresses the Student Diary mobile application. This section includes the problem statement followed by research questions and research objectives then the scope, significance of study, expected outcome, and limitations of the project.

1.1 Background of study

In today's fast-paced society, parents often struggle to monitor their children effectively, especially during the middle childhood years, which correspond to secondary school levels, specifically Forms 1 to 5 (Kelty & Wakabayashi, 2020). The demands of work and other responsibilities make it challenging for parents to stay actively involved in their children's academic and personal lives (Wilder, 2023). Traditional methods such as parent-teacher meetings and report cards are insufficient in providing the timely and comprehensive information parents need to support their children's growth effectively (Hallet, 2021).

Research highlights the crucial role of parental involvement in fostering emotional security and academic achievement in students, regardless of the setting (Kelty & Wakabayashi, 2020). However, many families find it difficult to remain actively engaged because there are no established or properly organized initiatives that support and encourage their participation (Wilder, 2023). Furthermore, the absence of timely updates on student behavior, tasks, and achievements limits parents' ability to intervene early, weakens parent-child relationships, and leaves students without the necessary guidance and support during critical developmental stages (Arumugam et al., 2021).

This gap in communication and engagement underscores the need for innovative solutions that provide parents with real-time insights into their children's progress while empowering students to manage their tasks effectively. Such as tools that can bridge the gap between academic and family involvement, build stronger relationships and improved outcomes for students (Leino, 2021).