

HARMONY IN PROGRESS:

**INTEGRATING SCIENCE, TECHNOLOGY,
AND
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PSS002 - FSPPP EXAM KIT 2.0: DEVELOPMENT OF A MOBILE/WEB-BASED EXAM INFORMATION SYSTEM

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ABSTRACT

The FSPPP Exam Kit is an innovative initiative introduced by the Faculty of Administrative Science and Policy Studies (FSPPP), Universiti Teknologi MARA (UiTM), to enhance students' access to final examination information. Following the successful implementation of Phase 1 by featuring QR code-enabled access to essential exam documents and phase 2 proposes the development of a comprehensive mobile and web-based application. This next phase aims to provide a centralized, interactive, and real-time platform tailored to the academic needs of FSPPP students and administrators. The proposed application will feature personalized dashboards, downloadable exam documents, real-time updates, examination schedules, and venue locators. This transformation addresses current limitations such as lack of personalization, fragmented communication, and dependency on static QR-based systems. With a focus on user friendliness and accessibility, the platform will leverage technologies such as React Native for cross-platform compatibility and Firebase for secure data management. The target users include FSPPP students, academic staff and admin staff. Phase 2 of the FSPPP Exam Kit not only supports UiTM's digital transformation agenda but also responds to the growing need for sustainable, paperless, and responsive academic solutions. The expected outcomes include enhanced student satisfaction, reduced administrative workload, and streamlined exam operations. This project sets a precedent for future innovations within the faculty and beyond, reinforcing FSPPP's commitment to academic excellence and student success.

Keywords – FSPPP, Exam Kit, Students, Education, Examination

INTRODUCTION

The FSPPP Exam Kit was developed as a digital innovation initiative under the Faculty of Administrative Science and Policy Studies (FSPPP), Universiti Teknologi MARA, to enhance the management and dissemination of final examination information. The first phase of this project was presented at the Convenyen Kumpulan Inovatif dan Kreatif (KIK) UiTM Zon Selatan 2024, where it was honoured with a Silver Medal for its innovative contribution. Initially this project introduced in Phase 1 through a QR code-based system, the kit successfully provided students with quick and easy access to essential documents such as exam timetables, seating arrangements, and examination codes.

Since its implementation in 2024, the FSPPP Exam Kit has received overwhelmingly positive responses from the faculty community. A recent feedback survey involving 254 respondents, including both students and academic staff, revealed that 95% of students expressed satisfaction with the existence of the Exam Kit. Furthermore, a significant majority of the respondents agreed that a more updated and interactive system should be developed to further enhance accessibility and functionality.

Despite its effectiveness, the current system has notable limitations. It lacks real-time updates, personalized user experiences, and relies heavily on static QR-based document access. These shortcomings have posed challenges, particularly during critical examination periods, where timely and centralized information delivery is essential. Additionally, the absence of a fully integrated platform has contributed to inefficiencies and increased administrative workload for faculty staff. According to Moulton et al. (2024), the FSPPP Exam Kit significantly improved communication between faculty and students, reduced confusion during examination periods, and facilitated better compliance with exam protocols. Their study emphasized the importance of structured information dissemination in academic settings. These findings are supported by Yang et al. (2023), who noted that user satisfaction and communication success in academic platforms are closely tied to the quality, accessibility, and timeliness of the information provided.

Motivated by these findings, Phase 2 proposes the development of a mobile and web-based application that will serve as a centralized platform for all examination-related information. The aim is to significantly improve user experience, streamline communication, and support FSPPP's commitment to digital transformation and academic excellence.

OBJECTIVE

The main objective of developing Phase 2 of the FSPPP Exam Kit is to enhance the accessibility, efficiency, and user experience of exam-related information delivery through the creation of a centralized mobile and web-based application. This platform aims to support both students and faculty members by providing a more interactive, responsive, and personalized system for managing final examination resources. Specifically, the objectives of this project are:

- i. To develop a centralized digital platform that integrates essential final examination information such as timetables, venues, examination codes, and downloadable documents.
- ii. To implement real-time notification features that allow timely updates and communication between the examination committee and students.
- iii. To improve user experience through personalized dashboards and student-specific exam data access.
- iv. To align the faculty's examination operations with UiTM's digitalization and paperless initiatives by promoting sustainable practices.

This project is intended to serve as a model for future digital innovations within FSPPP and UiTM at large, offering long-term benefits in terms of accessibility, communication, and operational efficiency.

DESCRIPTION OF THE PROJECT

The FSPPP Exam Kit (Phase 2) is a mobile and web-based application designed to streamline and digitalize the management and delivery of final examination information to students and faculty staff. Building upon the success of the QR-based system introduced in Phase 1, this upgraded platform offers a more comprehensive and interactive solution that supports real-time access, personalized content, and centralized control. The application includes the following core features:

- A. User Dashboard - A personalized dashboard where students can view their specific examination schedule, exam venue, seat number, and downloadable documents. Admin staff will also have a management interface.
- B. Timetable and Venue Locator - Provides students with real-time access to their program's exam timetable and an interactive venue map for easy navigation.
- C. Document Repository - Stores important exam-related documents such as examination slips, seating lists, and examination codes in downloadable formats.\
- D. FAQ and Guidelines Section - A centralized section containing frequently asked questions, dress code requirements, exam regulations, and emergency protocols.\
- E. QR Code Integration - Quick login access or scanning feature for students to retrieve personalized data instantly.
- F. Admin Panel for Exam Committee - A backend system for the exam committee to manage content uploads, scheduling, and notifications with minimal effort.

The usefulness and practicality of FSPPP EXAM Kit are:

- i. For Students: Reduces confusion and stress during the exam season by providing timely, accurate, and centralized information. Encourages self-reliance and preparedness.
- ii. For Administrative Staff: Reduces workload related to manual document distribution and repetitive queries. Enhances efficiency and accuracy in managing exam logistics.
- iii. For the Faculty: Aligns with UiTM's digitalization goals and promotes a paperless, sustainable approach to exam operations. It also sets a benchmark for other faculties to adopt similar digital practices.

The Sample Diagrams of FSPPP EXAM Kit are as follow:

Figure 1: Application Interface Mock up

Link for website: <https://sites.google.com/view/fspppexamkit>

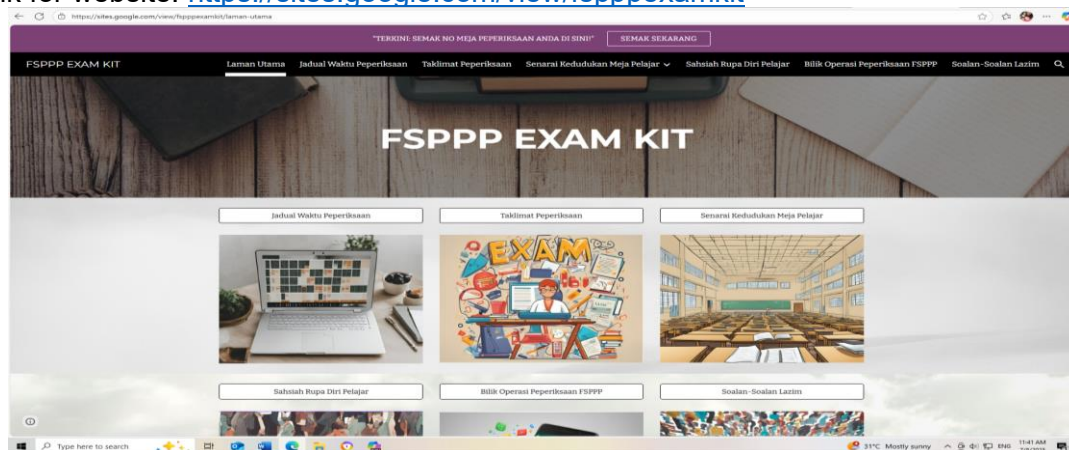


Figure 1: Front page FSPPP Exam Kit

Figure 2: Content of FSPPP EXAM Kit

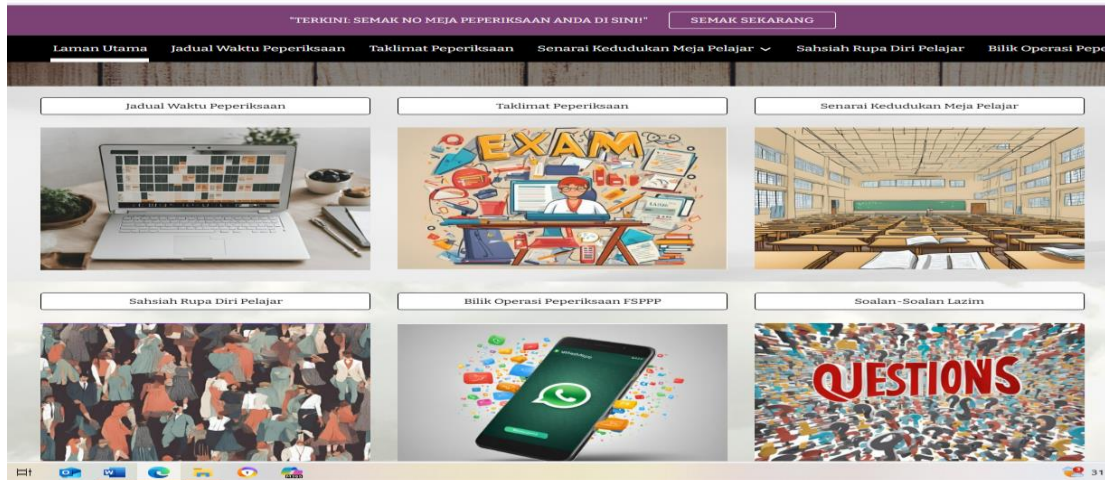


Figure 2: Content of FSPPP EXAM Kit

NOVELTY

The FSPPP Exam Kit (Phase 2) introduces a novel approach to the management and dissemination of examination information by transforming a previously static and document-based process into a dynamic, centralized, and fully digital platform. Unlike conventional systems that rely on manual uploads or general announcements via email or notice boards, this project integrates real-time data delivery, personalized access, and interactive user interfaces into a single application.

The uniqueness of this product lies in its custom-built design for faculty-level examination management, which specifically addresses the operational workflow and user needs within the context of the Faculty of Administrative Science and Policy Studies (FSPPP). It is one of the first faculty-led innovations in UiTM to shift from a QR-based access system to a fully functional mobile/web application dedicated to exam preparedness. In addition, the system's ability to integrate QR code scanning, real-time notifications, and personalized data into one cohesive platform offers a fresh and practical innovation in academic digital services. The solution reflects a scalable model that can potentially be replicated across other faculties or academic institutions, making it not only a unique product but also a pioneer in modernizing examination operations within Malaysian higher education.

CONCLUSION

The FSPPP Exam Kit (Phase 2) represents a significant step forward in digitalizing and enhancing the management of final examination information within the Faculty of Administrative Science and Policy Studies (FSPPP), Universiti Teknologi MARA. Building on the success of the initial QR-based system, this proposed mobile and web-based application offers a centralized, efficient, and user-friendly platform that addresses the current limitations faced by both students and academic staff.

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