

PG Track APB - A Dashboard Approach to Postgraduate Information Management

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ABSTRACT

Efficient access to accurate information is essential for the effective administration of postgraduate programmes. However, in many institutions, data related to postgraduate students remains fragmented across multiple sources and requires staff to contact various persons-in-charge individually. This process often results in delays, inconsistencies, and an increased administrative burden. To address this challenge, this study introduces an innovative dashboard system designed to streamline the retrieval and management of postgraduate information. PGTrack@APB is a system developed to facilitate the process of obtaining information related to student and postgraduate matters at the Academy of Language Studies (APB), UiTM Shah Alam. The dashboard integrates key data points such as student enrolment, supervision status, DRP and VIVA status as well as administrative records, into a single, accessible platform. It provides real-time access to information such as the number of postgraduate students by semester, individual student records (including programme details, thesis-related matters, and study status), as well as supervision information for each lecturer. By consolidating scattered information, the system enhances efficiency, reduces reliance on manual communication, and improves the reliability of postgraduate data access. Preliminary implementation demonstrates that the dashboard substantially reduces time spent on information searching and increases user satisfaction among administrative staff. Its centralized, scalable design supports UiTM's goals of improving efficiency and enabling data-driven decision-making. This in the long run would be a leverage to suit various stakeholders' needs while maintaining a standardized framework for managing postgraduate studies.

Keywords: Postgraduate Matters; Data Management; Postgraduate Management System; Effective Administration

INTRODUCTION

Efficient access to accurate information is essential for the effective administration of postgraduate programmes. In Universiti Teknologi Mara (UiTM), Pusat Pengajian Siswazah (IPSiS) is the central operating body that oversees and manages the overall postgraduate administration. IPSiS coordinates and formulates admission and academic regulations policies, providing support to enhance research and learning for postgraduate students across various colleges, faculties, and academies within UiTM. As Malaysia's largest comprehensive university, with 13 autonomous state campuses, four colleges of studies, 14 faculties, and nine academic centres throughout the country, IPSiS uses several online systems to manage its postgraduate programs offered to students at these places. Some of the systems are SIMS, AIMS and UPTRACKS (Aziz et al., 2025). All these systems were prepared to assist the management of postgraduate in UiTM. For instance, SIMS includes information regarding students' personal information, enrolment and registration status, financial information and academic records. AIMS is a curriculum management system that records information related to all the courses offered in UiTM. UPTRACKS is postgraduate management system which among other things includes students' DRP and VIVA status.

The postgraduate management committee at APB utilizes these systems to run its operations. APB UiTM Shah Alam is also responsible in managing the operation postgraduate programs by research at the branch campuses despite given the autonomy to offer the programs. Postgraduate management meetings were conducted monthly to discuss various matters including admissions, curriculum development, supervision, assessment, and administrative processes such as deferment, withdrawal, transfers, and study extensions. Efficient access to student, supervisor, and examiner records is essential, as delays or outdated information can hinder decision-making and prolong meetings. Such circumstances undermine the efficiency and effectiveness of postgraduate management. Barde, Shaibu, and Daudu (2019) confirmed that slow and delayed retrieval of students' academic records may be resulted by the poor record organization. Therefore, to counter this issue, efficient academic record management is called for to ensure a fast and more accurate data retrieval (Ukaogba & Nwankwo, 2020).

Problem Statement

Although multiple information management systems such as SIMS and UPTRACKS are available, the retrieval of postgraduate-related information remains largely manual. In many cases, information is obtained through direct communication with the respective persons-in-charge (PiCs). The postgraduate administrator then compiles the data, downloads the files, and shares the links when necessary. However, issues emerge when such information is needed during meetings but is not immediately accessible, often resulting in unnecessary delays and an increased risk of inaccurate decision-making.

Objectives

1. To develop a centralized platform for APB management of postgraduate information.
2. To streamline administrative processes that enables the efficient retrieval and updating of information for APB postgraduate.

PRODUCT DESCRIPTION & METHODOLOGY

This innovation project was initiated as a result of a need analysis that enables the identification of various issues related to data retrieval of postgraduate matters, determining the causes of the issues identified, suggesting possible solutions and developing prototype. A short survey was distributed among 23 administrative staffs that directly involved in the management of postgraduate in APB. The survey includes 10 questions which focused on the staffs' satisfaction of data retrieval of postgraduate matters and suggested solutions to the issues. Table 1 below illustrates the issues and solutions proposed by the respondents.

Table 1 Needs Analysis Result Analysis

Satisfaction Level	Disagree (%)	Somewhat Disagree (%)	Agree (%)	Strongly Agree (%)
Postgraduate students' enrolment information (total number, name, ID, semester, etc) is easily accessible		50.5	30.4	13.1
Postgraduate students' enrolment information (total number, name, ID, semester, etc) is readily accessible	4.3	43.5	34.8	17.4
Supervision information (supervisor and student) is easily and readily accessible		50.5	39.1	
Number of supervisions is easily and readily accessible		69.6	30.4	
Postgraduate matters namely NOI, VIVA Voce, thesis correction, etc are easily and readily accessible		52.2	34.8	8.7
Students' information needs to be constantly updated to ease the decision-making in meetings (JKAPS, JAF, JKIPA)			34.8	60.9
Students' information needs to be easily and readily accessible to ease the decision-making in meetings (JKAPS, JAF, JKIPA)		13	43.5	43.5

APB needs a centralized system that is easily and readily accessible to ease the data management and retrieval for increased efficiency.

21.7

78.3

POTENTIAL FINDINGS AND COMMERCIALISATION

Findings

Based on the information gathered from the survey with the administrators of the postgraduate management, PGTrack@APB is an innovative dashboard system designed to streamline the retrieval and management of postgraduate information. It is developed to facilitate the process of obtaining information related to student and postgraduate matters at APB, UiTM. The following features are included in the system:

1. **Postgraduate enrolment** information: total number of APB PG students by campus, number of enrolment based on year, academic semester, program code, locality, status (active/non-active)
2. **Supervisor** information: number of students (main and co), students' details (name, program code, semester, DRP and VIVA status, study mode, progress, status and campus.
3. **Student** information: name, student ID, program, SV, semester, DRP and VIVA status, mode of study, campus and research title.

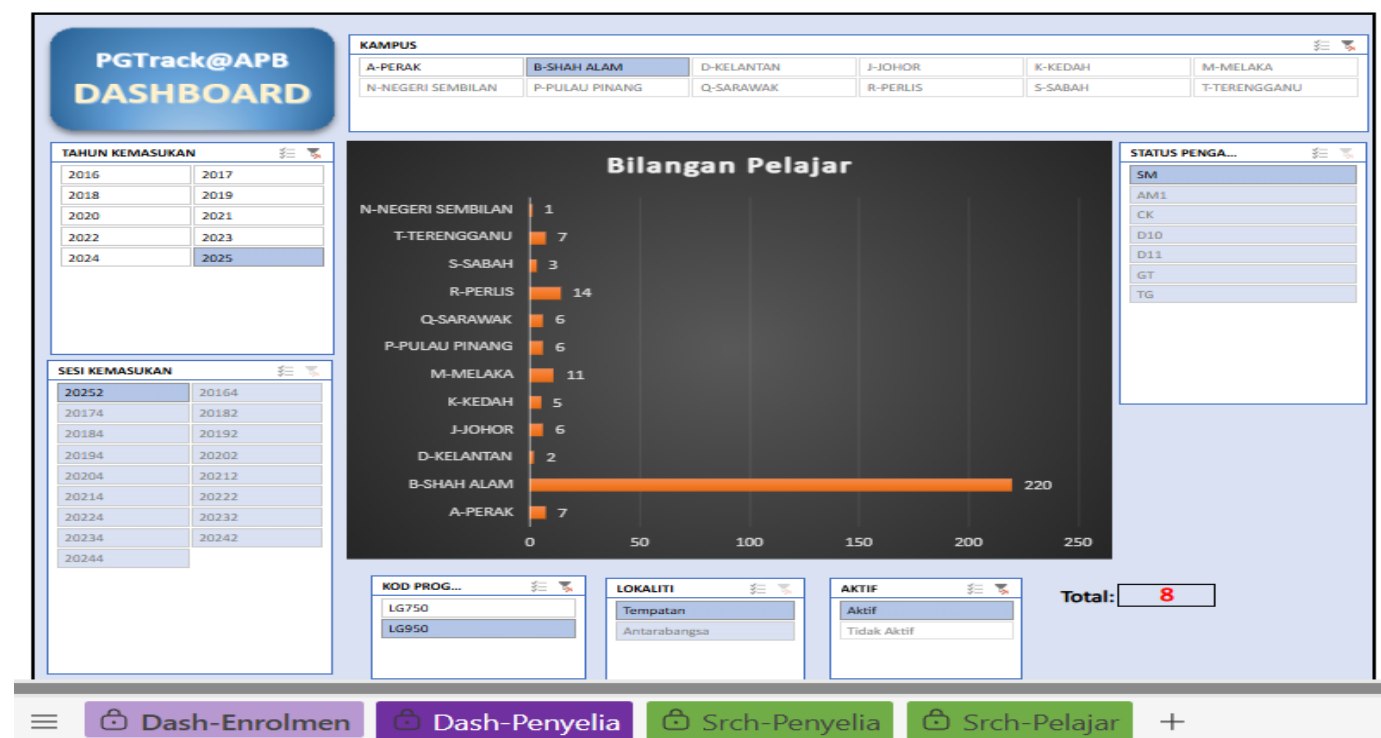
Example of Project

The key features of the PGTrack@APB dashboard are as follows.

Postgraduate Enrolment Tab

One of the features included in the system is the enrolment tab. In this tab, various information regarding postgraduate matters is included namely year, semester, different campuses, program, status, and chart that illustrates the total enrolment of PG students by research in APB, UiTM.

Figure 1 Enrolment tab



This tab also enables its user to extract information with regards to the number of students enrolled in specific program offered in APB, namely LG950 (Doctor of Philosophy, PhD by Research) and LG750 (Master by

Research). Information also filtered by the locality (local/international) and status (active/non-active). This can be seen in Figure 2 and Figure 3.

Figure 2 Program Tab (LG950)

KOD PROG...	LOKALITI	AKTIF	Total:
LG750	Tempatan	Aktif	8
LG950	Antarabangsa	Tidak Aktif	

Figure 3 Program Tab (LG750)

KOD PROG...	LOKALITI	AKTIF	Total:
LG750	Tempatan	Aktif	13
LG950	Antarabangsa	Tidak Aktif	

Supervisor Tab

Another feature of the system is the supervisor tab which provides a detailed list of supervisors and their supervisees. By simply selecting a supervisor's name, administrators can automatically view information about the supervisor, including number of students (main and co), students' details (name, program code, semester, DRP and VIVA status, study mode, progress, status and campus. This page allows administrators to track supervisory responsibilities and assignments, showing which supervisors are responsible for which supervisees. Figures 4 and 5 illustrate the supervisor tab.

Figure 4 Supervisor Dropbox

Nama

Penvelia

Gelaran

Sila key-in / Pilih nama

NOR FAZLIN BT MOHD RAMLI

NOR FAZLIN BT MOHD RAMLI

NOR NADIA BINTI RASLEE

NOR SHIDRAH BINTI MAT DAUD

NOR SYAHIZA BINTI SHAHABANI

NORAZRIN BINTI ZAMRI

NORHARTINI BINTI ARIPIIN

NORHASLINDA HASSAN

NORHAYUZA BINTI MOHAMAD

Kod

rogra

LG95

LG75

LG75

LG95

Kod

rogra

LG95

LG75

LG75

LG95

Figure 5 Supervisory Load

PGTrack@APB

Sila key-in / Pilih nama

Nama NOR FAZLIN BT MOHD RAMLI

Pernvella

Gelaran PROFESOR MADYA DR.

Main SV	Co-SV1	Co-SV2	Total
4	5	0	9

HASIL CARIAN

Penyelia Utama	Kod Program	Semester	Status DRP	Status VIVA	Mod Pengajian	Peratus Siap (%)	Status Pengajian	Kampus
FARAH HANI SHAHARUDDIN	LG950	5	11-10-2024	Belum	S	30	GT	B-SHAH ALAM
SITI NUR BADRIAH BINTI MOHD TAHIR	LG750	11	22-04-2022	Belum	SP	75	SM	B-SHAH ALAM
RONG CHUANWEI	LG750	6	24-11-2023	Selesai	S		SM	B-SHAH ALAM
WANG NA	LG950	10	13-9-2024	Belum	S	25	SM	B-SHAH ALAM

[sh-Enrolmen](#) [Dash-Penyelia](#) [Srch-Penyelia](#) [Srch-Pelajar](#) +

Student Tab

The student tab provides detailed information about all postgraduate by research students in APB. By selecting a student's name, data such as name, student ID, program, SV, semester, DRP and VIVA status, mode of study, campus and research title can be automatically extracted. This feature allows administrators to readily access students' details, thereby streamlining information retrieval and reducing reliance on manual searches. Figures 6 and 7 display the interface of the students load page.

Figure 6 Student Dropbox

PGTrack@APB

Sila key-in / Pilih nama

Nama Pelajar DAYANG ZULAIQHA BINTI HASHIM

No Pelajar

ZUHAIRAH SYAFIQAH BINTI DZUL KARNAIN
 MUHAMMAD NUJAD BIN KHAIRUDDIN
 DAYANG ZULAIQHA BINTI HASHIM

Nama	SITI FARHAH FAZIRA BINTI SHAMSUDIN
Program	AHMAD SOFWAN BIN OTHMAN
Semester	HASNIZAM BIN HAMDAN
DRP	NUR NAS NILIA BINTI NASRI
VIVA	NOUSIN LAILA BRISTI
Peratus	0
Mod	S
Status Pgjn	SM
Kampus	B-SHAH ALAM
Tajuk Kajian	PERBANDINGAN SOSIOBUDAYA ANTARA BAJAU SAMAH D

[Dash-Enrolmen](#) [Dash-Penyelia](#) [Srch-Penyelia](#) [Src](#)

Figure 7 Student Load

PGTrack@APB

Sila key-in / Pilih nama

Nama Pelajar

DAYANG ZULAIQHA BINTI HASHIM

No Pelajar

2022294402

HASIL CARIAN

Nama	DAYANG ZULAIQHA BINTI HASHIM	
Program	LG750	Penyelia Utama
Semester	6	NORMAH BINTI AHMAD
DRP	22-09-2023	Penyelia Bersama 1
VIVA	Belum	BADLI ESHAM AHMAD
Peratus	0	Penyelia Bersama 2
Mod	S	0
Status Pgjn	SM	
Kampus	B-SHAH ALAM	
Tajuk Kajian	PERBANDINGAN SOSIOBUDAYA ANTARA BAJAU SAMAH DAN BAJAU SEMPORNA	

Dash Enrolmen

Dash Penyelia

Srch Penyelia

Srch-Pelajar

+

Commercialization

The centralized and scalable design of PGTrack@APB positions it as a system with strong commercialization prospects. It offers significant leverage by catering to the diverse needs of various stakeholders while maintaining a standardized framework for managing postgraduate studies. This adaptability not only ensures sustainability within UiTM but also opens pathways for replication and adoption across other faculties, campuses, and potentially other higher education institutions.

Novelty And Usefulness

The PGTrack@APB includes several novelties namely centralization, efficiency, intelligent design, time-saving, real time response and user-friendly interface.

- **Centralization:** PGTrack@APB combines data for APB postgraduate matters, supervision, students' information into a single, cohesive platform.
- **Efficiency:** Streamlined administrative processes provide a unified system for information retrieval and updates.
- **Intelligent Design:** Excel-based dashboard enhanced with Visual Basic application to improve data entry and search functions.
- **Time-saving:** Reduces the time needed for administrative tasks, allowing users to focus on more critical academic activities.
- **Real time response:** Provides real-time responses, ensuring immediate access to accurate and updated information.
- **User-friendly Interface:** Offers an intuitive and user-friendly interface, making it accessible to users with varying levels of technical expertise.

The PGTrack@APB contributes a range of benefits to postgraduate programs which includes:

- Provides streamlined administrative processes.
- Offers fast access to comprehensive reports.
- Enhances efficiency and reduces reliance on manual communication.
- Improves the reliability of postgraduate data access.

CONCLUSION

In conclusion, the PGTrack@APB enhances postgraduate management by centralizing data and streamlining administrative processes. Preliminary implementation demonstrates that the dashboard substantially reduces time spent on information searching and increases user satisfaction among administrative staff. Its centralized, scalable design supports UiTM's goals of improving efficiency and enabling data-driven decision-making. It improves efficiency and strengthens institutional reputation and sets a sustainable benchmark for effective postgraduate management that other institutions can adopt. This in the long run would be a leverage to suit various stakeholders' needs while maintaining a standardized framework for managing postgraduate studies.

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