TECHNICAL PUBLICATION ON DIGITAL TRANSFORMATION OF POST GRADUATE TRAINING PROGRAMME

Rawalpindi Medical University and Allied Hospitals

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TECHNICAL PUBLICATION	
Abstract	This technical publication presents the design, development, and implementation of a software solution aimed at enhancing the research capabilities, data analysis processes, and academic capacity of Post Graduate Trainee (PGT) programs at Rawalpindi Medical University and Allied Hospitals. The software integrates various functionalities to support research activities, streamline data management, and improve academic performance tracking. This document details the system's architecture, key features, implementation strategy, and potential benefits for postgraduate trainees and faculty members.
Purpose	The purpose of this publication is to provide a comprehensive overview to all stakeholders (researcher, supervisors, residents, and faculty) of the proposed software solution, including its design, key features, and implementation strategy. The software aims to enhance the research, data analysis, and academic capacity of the Post Graduate Trainee program, ultimately contributing to the overall quality of medical education and research at the university.
Background	Post Graduate Trainee programs in medical universities play a crucial role in developing the next generation of medical professionals and researchers. However, traditional methods of managing research activities, data analysis, and academic tracking often lead to inefficiencies and hindered research capabilities. To address these challenges, Rawalpindi Medical University has initiated the development of an integrated software solution tailored to the needs of postgraduate trainees.
Key Features	1. **Research Management Tools**: Facilitate research project planning, documentation, and tracking. 2. **Data Analysis Module**: Provide advanced tools for statistical analysis, data visualization, and reporting. 3. **Academic Performance Tracking**: Monitor and assess academic progress, coursework, and examination results. 4. **Collaboration and Communication Tools**: Enhance communication and collaboration among trainees, mentors, and faculty. 5. **Reporting and Analytics**: Generate comprehensive reports and analytics to support data-driven decision-making. 6. **Research Dashboard:** Statistical Data and analysis patterns.
Benefits & Impact	**For Post Graduate Trainees** • **Enhanced Research Capabilities**: Integrated tools for planning, documenting, and tracking research projects. • **Improved Data Analysis**: Advanced statistical analysis and data visualization tools. • **Efficient Academic Tracking**: Real-time monitoring of academic progress and performance.

	For Faculty and Supervisors • **Streamlined Supervision**: Efficient tracking of trainee progress and research activities. • **Enhanced Communication**: Improved communication and collaboration tools. • **Data-Driven Decision Making**: Access to comprehensive analytics and reporting tools. **For the University Administration** • **Improved Efficiency**: Streamlined processes reduce administrative burden. • **Cost Savings**: Reduced operational costs through automation and efficiency gains. • **Scalability**: The system can scale to accommodate growing numbers of trainees and faculty.

Main Components	The following are the main components of research software
	
	• PGT (Post Graduate Trainee) Profiling.
	• Supervisor's Profiling
	• Research Logbook
	    1. Workshops
	        a. Mandatory
	        b. Elective
	    2. Disease Statistical Report
	    3. Appointments
	    4. Synopsis
	    5. Meetings
	        a. IREF
	        b. Fortnightly
	    6. Literature work
	    7. Thesis
	    8. Oric Rotation
	• Rotational Logbook
	    1. Rotational Cases
	        a. OPD
	        b. Morning Reports
	        c. Indoor
	        d. Emergency
	    2. Lectures
	    3. Journal Club
	    4. Publications
	    5. Meetings
	    6. Procedural Skills
	    7. Workshops
	    8. Appraisal Form
	• General Logbook
	    1. Cases

	2. Workshops
	   3. Publication
	   4. Lectures
	   5. Meetings
	      a. Morbidity
	      b. CPD
	      c. M.D.M
	   6. Procedural Skills
	
	• QEC
	   1. MSF (Multisource Feedback System
	• Attendance
	• Assessments

Risk Management	**User Adoption:** Deliver thorough training and support to facilitate a seamless transition. **System Downtime:** Establish redundancy and failover mechanisms to minimize operational disruptions. **Data Security:** Implement robust security measures such as encryption and multi-factor authentication to prevent breaches.
Feedback and Comments	We are writing to seek your valuable insights and feedback on a new research software that our IT department is in the process of developing. As esteemed professionals in the medical research field, your expertise and opinions are crucial to ensuring that our software meets the needs and expectations of researchers like yourself. The primary objective of this software is to streamline and enhance various aspects of medical research, including data collection, analysis, and collaboration. We aim to create a user-friendly platform that addresses the unique challenges faced by medical researchers, thus improving efficiency and accuracy in research processes. The Department of Information will be highly obliged for your valuable comments and suggestions. Please send your Feedback, Reviews, Comments, and Suggestions to assistantit@rmur.edu.pk Additionally, we would like to invite you to participate in a focus group or a one-on-one discussion with our development team to provide more detailed feedback. Please let us know if you are interested, and we will be happy to arrange a meeting at a time that is convenient for you. Regards: Hafiz Shahid Rasool Director IT directorit@rmur.edu.pk 051-9334759