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W.I.L Electronic Logbook System

Project Description

Client: Department of Environmental Health, Mangosuthu University of Technology (MUT)
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The Environmental Health Department at Mangosuthu University of Technology (MUT) is facing challenges with the manual processes involved in managing Work Integrated Learning (WIL) logbooks for students. These logbooks, which are essential for the professional qualification of students, need to be digitised to improve efficiency, accessibility, and compliance with the Health Professions Council of South Africa (HPCSA) standards. This project aims to develop a digital WIL system that will streamline the process of managing logbooks, ensuring that all stakeholders, including students, mentors, and auditors, can easily perform their roles. The digital system will include role-based access, process automation, and secure data management.

Project Overview

Project Name

MUT Department of Environmental Health WIL System

Client Information

The client is the Environmental Health Department at Mangosuthu University of Technology (MUT), a public university in Durban, KwaZulu-Natal, South Africa. The department is responsible for educating and training students in environmental health, preparing them for professional roles that require accreditation from the Health Professions Council of South Africa (HPCSA).

- Digitise the WIL logbook process to enhance efficiency and accuracy.
- Ensure compliance with HPCSA requirements for student qualifications.
- Provide secure, role-based access to various stakeholders.
- Facilitate easy auditing by HPCSA auditors.
- Improve monitoring and verification processes for MUT staff and WIL industry mentors.

Description of the Client's Business

Business Overview

The Environmental Health Department at MUT specialises in training students in environmental health, a critical field that ensures public health and safety through environmental management and control. The department's curriculum includes a Work Integrated Learning (WIL) component, where students gain practical experience under the supervision of industry professionals.

Mission and Vision

Mission: To provide high-quality education and training in environmental health, preparing students to be competent professionals in the field.

Vision: To be a leader in environmental health education and training, producing graduates who contribute to the health and well-being of communities.

Business Goals

- To ensure that all students meet the practical requirements set by the HPCSA.
- To maintain high standards of education and training in line with industry needs.
- To streamline administrative processes related to WIL.

Business Model

Revenue Model

As an educational institution, the department primarily generates revenue through tuition fees and government funding. The department's programs are designed to be cost-effective while delivering high-quality education.

Value Proposition

The department offers a comprehensive education in environmental health, equipping students with the practical and theoretical knowledge required to succeed in the field. The WIL component is a critical part of this education, providing hands-on experience and ensuring that graduates are fully qualified.

Target Market

The primary market includes students enrolled in the Environmental Health program at MUT. Secondary stakeholders include WIL industry mentors, MUT staff members, and HPCSA auditors who interact with the WIL logbooks.

Key Activities

- Providing education and training in environmental health.
- Coordinating and managing WIL placements for students.
- Ensuring compliance with HPCSA standards for student qualifications.
- Facilitating the auditing process for student logbooks.

Cost Structure

The department's costs include faculty salaries, administrative expenses, and the cost of maintaining educational and administrative tools, including the proposed digital WIL system.

Current Processes

Process Description

Currently, WIL logbooks are managed manually. Students are required to document their daily activities in physical logbooks during their placements, using handwriting. These logbooks are then verified and signed by WIL industry mentors, monitored by MUT staff, and audited by HPCSA annually. This manual process is time-consuming, prone to errors, and difficult to manage effectively. There are even stacks of files in the coordinator's office of students' Portfolios of Evidence.

Tools and Systems

- Manual Logbooks: Physical logbooks are currently being used to record and verify student activities.
- Spreadsheets: Excel spreadsheets are used by administrators for tracking and managing student placements and progress, and this process is also mandated by HPCSA.

Process Flow

1. Logbook Creation: Administrators create and distribute physical logbooks to students.
2. Daily Entries: Students fill in their daily activities in the logbook.
3. Verification: WIL industry mentors verify and sign off on the entries.

4. Monitoring: MUT staff members conduct monitoring visits and review logbooks.
5. Auditing: HPCSA auditors review the logbooks during their annual audits.

Problem Statement

Problem Overview

The current manual process of managing WIL logbooks is inefficient, error-prone, and difficult to audit. Physical logbooks can be lost or damaged, and the verification process is cumbersome. They also physically take up a lot of space. Additionally, the lack of a centralised system makes it challenging for administrators to monitor progress and ensure compliance with HPCSA standards.

Impact of the Problem

- Inefficiency: The manual process is time-consuming, requiring significant administrative effort to manage and verify logbooks.
- Error-Prone: Manual entries and verifications are susceptible to human errors.
- Compliance Risks: The current system makes it difficult to ensure full compliance with HPCSA requirements, potentially jeopardising student qualifications.

- Audit Challenges: HPCSA auditors face difficulties in accessing and reviewing physical logbooks, leading to delays and potential issues in the auditing process.

Need for Solution

There is an urgent need to digitise the WIL logbook process to enhance efficiency, accuracy, and compliance. A digital system will provide secure, role-based access to all stakeholders, streamline the verification and auditing processes, and ensure that all records are easily accessible and well-organised.

Project Scope

In-Scope

- Digital Logbook Creation: Development of a digital platform for creating and managing WIL logbooks.
- Role-Based Access: Implementation of access controls to ensure that each user group can only perform specific tasks.
- Process Automation: Automation of processes like verification, monitoring, and auditing.
- Data Security: Ensuring that all data is securely stored and accessible only to authorised users.
- Audit Support: Providing tools and features that facilitate easy auditing by HPCSA auditors.

Out-of-Scope

- Training Programs: Developing training programs for users is not included in the project scope.
- Legacy System Integration: Integration with any legacy systems other than Excel spreadsheets is not covered.
- Post-Deployment Support: Ongoing support and maintenance after the initial deployment are also excluded for now.

Assumptions and Constraints

Assumptions

- All users will have basic digital literacy skills, since the university has training for lecturers and students, workshops and help facilities, this is assumed.
- The necessary hardware and software infrastructure will be available at MUT.
- The client will provide all necessary information and content for the logbooks.

Constraints

- The project must be completed within the allocated budget and timeframe.
- Data privacy and security regulations must be strictly adhered to.
- The system must be compatible with existing tools like Excel.

Risks and Mitigation

Potential Risks

- User Resistance: Users may be resistant to adopting the new digital system.
- Technical Challenges: Potential technical difficulties in integrating the new system with existing processes.
- Data Migration: Challenges in transferring data from physical logbooks to the digital system.

Mitigation Strategies

- User Training: Provide training sessions to ensure that all users are comfortable with the new system.
- Technical Support: Establish a technical support team to address any issues during the transition.
- Data Backup: Implement a robust data backup strategy to ensure that no information is lost during migration.

Conclusion

The MUT Environmental Health Department's transition to a digital WIL logbook system is critical to improving efficiency, accuracy, and compliance with HPCSA requirements. By digitising the process, the department will not only enhance the student experience but also streamline administrative tasks and ensure that all records are easily accessible and secure and will comply with the mandate of HPCSA to transition to digital within the set timeframe.