Ideation Phase Report

Project Title:

Educational Organisation Using ServiceNow

Category:

ServiceNow System Administrator

Skills Required:

ServiceNow, JavaScript, Process Automation, Client Scripting, Workflow Management

1. Abstract

Managing administrative tasks within educational institutions often involves multiple disconnected processes — from student admissions to academic performance tracking. Manual data entry and inefficient workflows can lead to delays, human errors, and inconsistent records.

The project **"Educational Organisation Using ServiceNow"** aims to develop a centralized educational management platform that automates these key processes using the **ServiceNow** platform.
By implementing custom tables, process flows, and client scripts, the system ensures smooth admissions, efficient record management, and automated student progress tracking.

This initiative focuses on simplifying educational operations, enhancing accuracy, and leveraging ServiceNow's low-code capabilities to deliver a scalable and efficient solution.

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2. Introduction

Educational institutions handle large volumes of data daily — including student records, admissions, progress reports, and contact information.
Traditionally, these operations rely heavily on manual input and paper-based workflows, resulting in slow updates and reduced transparency.

ServiceNow provides a cloud-based, low-code platform capable of streamlining workflows through automation and data integration.
This project uses ServiceNow to develop an **Educational Management System** that:

- Manages student and admission data efficiently.

- Automates result calculations using JavaScript client scripts.

- Enables a structured admission process through workflow automation.

The outcome is a smart, interactive system that transforms manual educational processes into digital, data-driven operations.

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3. Problem Statement

Educational institutions face several operational challenges:

1. **Manual Data Entry:**
   Each department maintains separate data, leading to redundancy and human errors.

2. **Inefficient Admission Workflow:**
   Admission processes are often repetitive and lack real-time tracking.

3. **Lack of Automation:**
   Calculating results and updating student performance is time-consuming.

4. **No Centralized Database:**
   Data scattered across systems reduces accessibility and consistency.

The proposed solution addresses these challenges by creating a **centralized ServiceNow-based platform** that automates data handling, streamlines admissions, and integrates result generation in real time.

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4. Objectives

Main Objective

To design and implement an automated educational management system using ServiceNow that integrates admission, student progress, and performance tracking processes.

Specific Objectives

- To create custom **ServiceNow tables** for managing Salesforce, Admission, and Student Progress data.

- To automate repetitive tasks using **Client Scripts** and **Process Flows**.

- To calculate and display student totals, percentages, and results dynamically.

- To design user-friendly **forms and dashboards** for administrators.

- To ensure system scalability and accuracy in academic data management.

5. Literature Review

Several organizations have adopted IT Service Management (ITSM) tools for process automation. ServiceNow, originally designed for ITSM, has evolved into a platform capable of handling enterprise-level operations such as HR, Finance, and Education.

- **Workflow Automation:** Studies demonstrate that automated workflows reduce manual errors and improve response times by over 40%.

- **Client Scripting in ServiceNow:** JavaScript-based scripting allows real-time data validation and field updates, reducing manual input.

- **Process Flow Integration:** Enables visualization of an admission or approval pipeline, increasing transparency and accountability.

However, most existing implementations are generalized.
 This project uniquely tailors ServiceNow's features to an **educational setting**, ensuring optimized workflows for admissions and performance tracking.

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6. Proposed System

6.1 System Overview

The proposed system automates educational processes through ServiceNow modules.
 It connects **three major tables** — *Salesforce*, *Admission*, and *Student Progress* — with **client scripts** that automatically update and calculate data fields.

For example:

- When an admission number is selected, student details auto-populate.

- When marks are entered, the system automatically computes total, percentage, and result.

This ensures faster, more accurate, and transparent academic data management.

6.2 System Architecture

Architecture Components:

1. **Frontend (User Interface):**

   ○ ServiceNow Forms and Dashboards for admissions and student progress.

2. **Backend Logic:**

   ○ JavaScript Client Scripts for automating calculations and field population.

3. **Database Layer:**

   ○ ServiceNow Tables: Salesforce, Admission, and Student Progress for storing structured records.

4. **Workflow Layer:**

   ○ Process Flow controlling admission states: *New → In Progress → Joined → Rejected → Closed → Cancelled.*

6.3 Functional Components

Component	Description
Salesforce Table	Stores school and student data.
Admission Table	Captures admission details and automates status updates.
Student Progress Table	Stores subject marks and calculates results.
Client Scripts	Automate data population, percentage, total, and result calculation.
Process Flow	Visual workflow of admission stages for administrative control.

7. Methodology

1. **Instance Setup:**
   Create and configure ServiceNow developer instance.

2. **Table Creation:**
   Define Salesforce, Admission, and Student Progress tables.

3. **Form Design:**
   Design layouts and link fields for smooth data flow.

4. **Client Scripting:**

   - Auto-populate student details.

   - Calculate total, percentage, and result dynamically.

   - Disable computed fields to prevent editing.

5. **Process Flow Design:**
   Build workflow with predefined admission states.

6. **Testing:**
   Validate scripts, workflows, and data integrity.

7. **Result Verification:**
   Ensure correctness of calculated totals and statuses.

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8. Expected Outcomes

- Centralized student and admission data management.

- Automated calculation of total marks, percentage, and results.

- Faster and more transparent admission tracking.

- Reduced administrative workload and errors.

- Scalable platform that can adapt to future institutional needs

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9. Tools and Technologies

Component	Technology Used
Platform	ServiceNow Developer Instance
Scripting Language	JavaScript
Automation Tools	Client Scripts, Process Flow Designer
Data Storage	ServiceNow Tables
Testing	Manual Testing in Sandbox Instance
Version Control	GitHub

10. Feasibility Study

Technical Feasibility

ServiceNow provides built-in support for workflow automation, table customization, and scripting, making it suitable for this educational use case.

Operational Feasibility

The system can be managed by non-technical staff after initial setup, improving accessibility for administrators.

Economic Feasibility

As the project uses the free ServiceNow Developer Instance, costs are minimal, making it economically viable for small to medium educational institutions.

11. Future Scope

- Integration with external Learning Management Systems (LMS).

- AI-based prediction of student performance.

- SMS/email notifications for admission updates.

- Role-based dashboards for students, teachers, and administrators.

- Mobile interface for quick result viewing and progress monitoring.

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12. Conclusion

The **Ideation Phase** establishes the foundation for developing a fully automated educational management system using ServiceNow.
By leveraging ServiceNow's workflow, scripting, and automation capabilities, the project aims to create a smart and scalable solution for managing admissions and academic records efficiently.

This initiative marks a significant step toward modernizing educational processes, ensuring accuracy, and enhancing administrative productivity through digital transformation.