

# Creating a Project Engagement Portal for WPI Students

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## Introduction

WPI prioritizes **project-based learning (PBL)** in its curriculum, emphasizing hands-on problemsolving skills across disciplines. Projects frequently involve **surveys** of other students to obtain primary data from peers. However, common survey distribution methods collection face challenges such as selection bias and inefficiency.

As a solution, we propose a centralized survey portal: the WPI Project Engagement Portal (WPI PEP). By providing a single platform for survey distribution, this portal would mitigate biases and streamline the data collection process.

We aimed to design a prototype portal where WPI students can post and respond to class-related surveys. To accomplish this, we attempted to **understand** how WPI students interact with peer surveys, **evaluate** the portal's feasibility, and **plan and design** a prototype portal using Mendix, a low-code application development platform.

# **Key Survey Findings**

We surveyed **137 students** (121 undergraduates and 16 graduates) to understand how the WPI community interacts with surveys. Our findings support the need for a centralized survey portal.

92%

of student respondents are asked to complete multiple surveys each academic year

60%

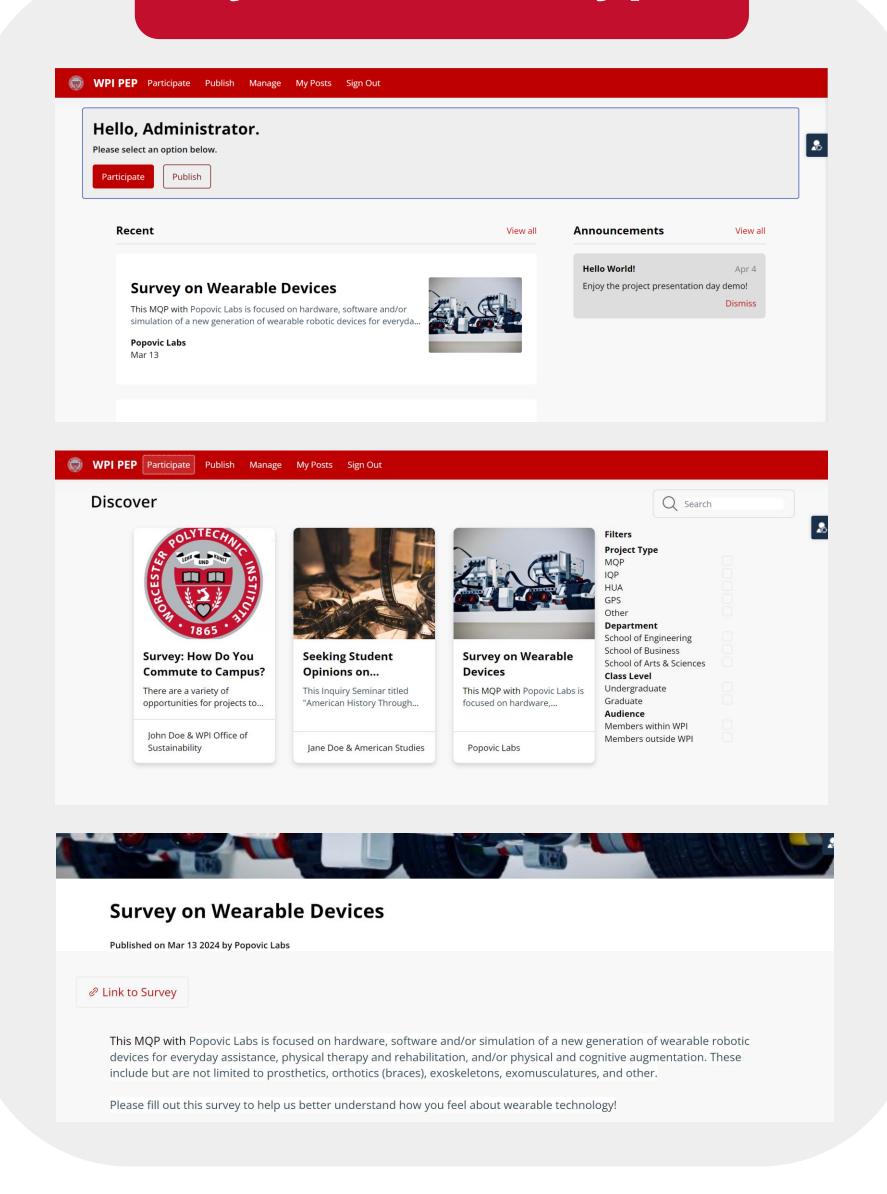
of student respondents conduct at least one survey per academic year

#### **System Design Data Flow Diagram** Valid Request User Login **Invalid Request** Database Post Info WPI Publish **Post Confirmation** Member New Post Info 1.3 Edit Current **Edit Confirmation** Post Database Non-WPI Filter Constraints Filter for Member Filtered Results Search Constraints Search **Searched Results Mendix Domain Model** UserRole ModelGUID (String) Content ScheduledEventInformation\_XASInstance Name (String) Description (String) Title (String) XASInstance FreeText (String) XASId (String) AverageRating (Decimal) astUpdate (Date and time URL (String) SessionId (String) CSRFToken (String) PartnerName (String) PublishedOn (Date and tim... LastActive (Date and time) ustomerName (String) Keyword1 (String) Session\_User Keyword2 (String) Keyword3 (String) Featured (Boolean) Token\_User Read (Boolean) ForUndergraduate (Boolean) DecryptedToken\_User ForGraduate (Boolean) User\_Language ForSchoolOfEngineering (B... ForSchoolOfBusiness (Bool.. Anonymous (Boolean) ForSchoolOfArtsSci (Boole.. Description (String) ForInsideWPI (Boolean) User\_TimeZone ForOutsideWPI (Boolean) TimeZone NameOrGroupName (String) Announcement (Boolean) Code (String) Description (String) LinkToSurvey (String) RawOffset (Integer) WorkflowUserTask\_TargetUsers | WorkflowUserTask WorkflowUserTaskOutcome User

Scan the QR code to try out the demo!



# **System Prototype**



### **Future Considerations**

To continue development of the WPI PEP, we recommend considering the addition of the following features:



Integration with existing WPI platforms such as eProjects, Canvas, and the WPI webpage



Implementation of SSO
login compatibility (with assistance from IT
Services)