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CANVAS 4 - BSMS4002

DESIGN THINKING FOR DATA-DRIVEN APP DEVELOPMENT



EMPATHIZE (2) NEW CHALLENGES SOLVE (2) ANALYZE (2)

New Challenges or Issues

After testing our EduBridge prototype with users, we found some interesting challenges we need to work on. Several users told us they struggled with knowing where to start when they first opened the app. They also mentioned that while the design looks clean, some important features were hard to find. Let's look at what we learned and how we can make things better.

Revised Customer Journey Maps

Customer Journey Map 1 (The New Teacher)

Before Stage: Our teacher wants to start using EduBridge to manage their classes better. They've been using paper records and multiple apps, which is becoming too time-consuming. They hear about

During Stage: They download EduBridge and create an account. At first, they explore the basic features like taking attendance and posting assignments. They start to discover more features as they use the app daily, like performance tracking and communication tools.

After Stage: After using EduBridge for a while, they feel more confident with the digital tools. They regularly check student progress, manage assignments, and communicate with students through the platform. They also start suggesting new features that could help make teaching easier.

Customer Journey Map 3 (The Principal)

EduBridge from colleagues and decide to give it a try.

Before Stage: Our principal is looking for better ways to run the school smoothly. Currently juggling emails, paperwork, and various spreadsheets for tracking school data isn't working well. When they hear about how EduBridge could bring everything together in one place, they're eager to see if it can help manage the school better.

During Stage: They explore the school-wide dashboard after setting up their account. The clear numbers catch their attention - seeing 1,234 students and 89 staff members all tracked in one place feels promising. They're particularly drawn to the 92% attendance gauge and start using the weekly workload tracking to see how teachers are managing their classes. The leave approval system makes it much easier to handle staff requests.

After Stage: The principal now starts each day by checking their EduBridge dashboard. They love having instant access to school performance data and being able to spot trends early. Processing leave requests has become much smoother, and communicating with staff is easier than ever. They're considering making full use of the announcement feature to keep everyone better informed about school events and policies.

Customer Journey Map 2 (Tech-Student)

Before Stage: The student is tired of juggling different apps and websites for each class. They need a way to keep track of all their assignments, grades, and class materials in one place. When their school adopts EduBridge, they're hopeful it will solve these problems.

During Stage: They set up their account and start exploring the app. They like seeing all their classes in one place and begin using features like assignment submission and grade tracking. They especially enjoy being able to message teachers when they need help.

After Stage: The student now relies on EduBridge daily. They check their progress regularly, submit work on time, and feel more organized. They particularly like getting notifications about new assignments and seeing their grades updated quickly.

Customer Journey Map 4 (The Clerk)

Before Stage: Managing mountains of paperwork and trying to keep track of leave requests has been giving our clerk headaches. They spend too much time chasing paper forms and manually updating records. When they hear about EduBridge's digital system for handling administrative tasks, they're hopeful but a bit nervous about learning something new.

During Stage: Starting with EduBridge, they find the clerk's dashboard surprisingly easy to navigate. They begin by handling leave requests digitally - no more lost papers! The attendance management system helps them keep records accurate and up-to-date. They especially appreciate how the system shows clear success messages in green when tasks are completed successfully.

After Stage: Now fully comfortable with EduBridge, the clerk handles administrative tasks in a fraction of the time it used to take. They confidently process leave requests, manage attendance records, and send out notifications to staff. The best part? Everything is organized and easily searchable - no more digging through file cabinets! They've even started helping other administrative staff learn the system's features.

How Might We (HMW) Questions

How might we make the first-time experience more welcoming and clear? This would help users like Sarah who weren't sure which role to select, and Raj who wanted better guidance for new users.

How might we improve navigation so users always know where they are? This addresses Mike's concern about getting lost in the app and Lisa's request for better search features.

How might we make important features easier to find while keeping the interface clean? This helps users like Priya who had trouble finding document uploads and Tom who couldn't locate profile settings.

Multi Why Analysis

Learning Curve for

Navigation Features

Users find the interface navigation overwhelming during first use.

Why did this occur?

Why did this occur? Advanced features like attendance tracking and grade management require familiarity with the

system layout.

Why did this occur?

Limited initial guidance and feature introduction were provided for users during first login.

Why did this occur? Tutorial features are available but not automatically presented during onboarding.

Why did this occur? Likely Root Cause: Lack of proactive guidance and structured onboarding reduces user confidence in exploring and utilizing system features

Hesitance in Adopting Digital Tools

> Why did this occur? Users, especially traditional teachers are hesitant to fully switch to digital tools.

> > Many users are accustomed to paperbased systems and fear losing control of their

Why did this occur?

Why did this occur? Limited demonstration of the benefits and efficiency gains of digital systems

Why did this occur? Lack of success stories or examples showing how digital tools have benefited

other educators.

Why did this occur? Likely Root Cause: Users need more trust-building measures and evidence to confidently adopt digital educational tools.

User Expectations for Communication

Why did this occur? Users expect more detailed updates about their messages

Why did this occur? The current messaging

system doesn't include

clear delivery

confirmations or status

and submissions.

Why did this occur? Initial development focused on basic

functionality rather than

advanced communication

features.

Why did this occur?

Limited user feedback

was incorporated into

communication feature design. Why did this occur?

Likely Root Cause: The

communication system requires

enhancement to include

predictive notifications and

detailed status updates to align

with user expectations

Initial Profile Setup Assistance

Why did this occur? Users are unable to independently

complete their profile

setup.

Why did this occur?

The setup process involves

multiple steps, such as role

selection and preference settings, which can be overwhelming

Why did this occur?

The app doesn't include a comprehensive stepby-step guide for initial

Why did this occur? Design prioritization focused on functionality after setup, rather than

simplifying the onboarding

Why did this occur? ial user setup complexity

necessitates better guidance

and automated assistance to

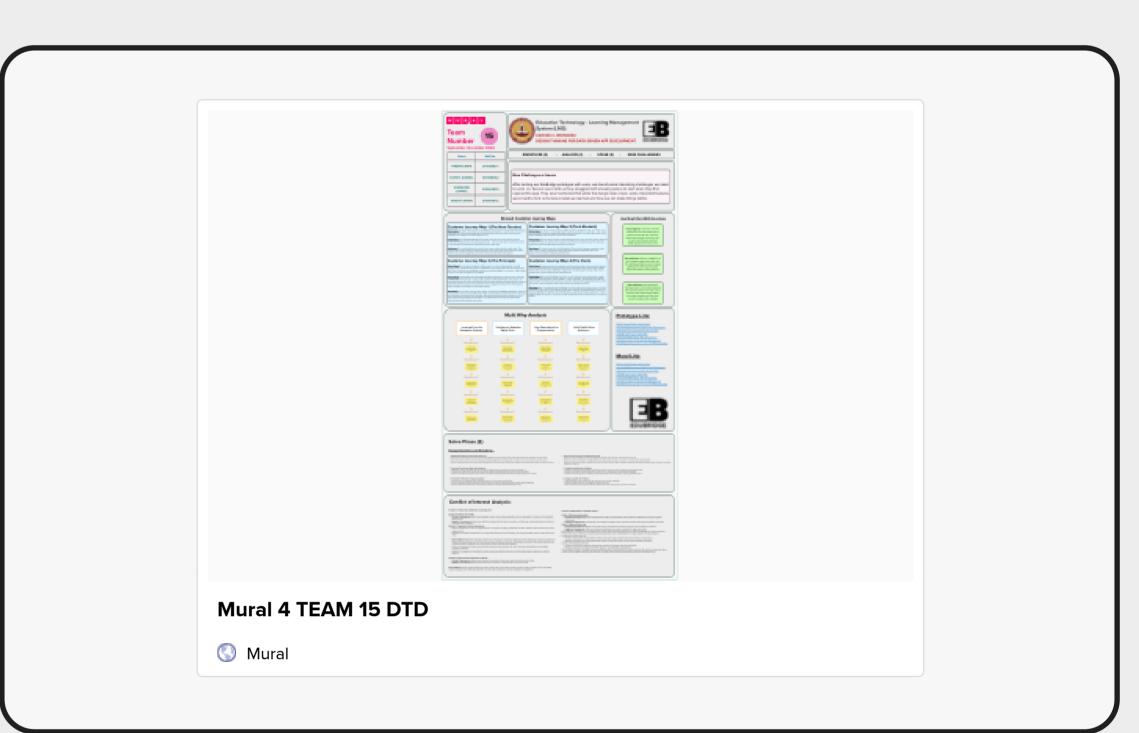
ensure smooth onboarding

for all users.

Prototype Link:

https://www.figma.com/proto/ L2x6NrD3j8eHolAeclZKj6/Final-Prototype-(testing)-copy-by-prem?node-id=193-3352&node-type=frame&t= G7kzP0HbMtidy6yJ-1&scaling=minzoom&content-scaling=fixed&page-id= 0%3A1&starting-point-node-id=193%3A3352

Mural Link:





Conflict of Interest Analysis:

Scenario 1: Feature Accessibility vs. Learning Curve

Option 1: Full Feature Visibility Positive Consequence: Users have immediate access to all

- system capabilities and can leverage the full power of the platform from the start.
- Negative Consequence: New users might feel overwhelmed by too many options and features, potentially leading to confusion and resistance to adoption.
- **Option 2: Progressive Feature Introduction** Positive Consequence: Users can gradually learn the system, building confidence with basic features before advancing to more
- complex tools. Negative Consequence: Advanced users might feel restricted
- and frustrated by not having immediate access to all features they
- **Desired Result:** Implement an adaptive interface that introduces features progressively while allowing quick access to advanced features for experienced users. Include clear pathways for feature discovery and optional tutorials for new functionality.

Scenario 2: Communication Freedom vs. Structure

Option 1: Open Communication System

- Positive Consequence: Enables quick and easy communication between all users, fostering collaboration and immediate response to queries.
- Negative Consequence: Could lead to communication overload for teachers and staff, potentially disrupting their
- **Option 2: Structured Communication Channels** Positive Consequence: Maintains professional boundaries
- and ensures organized communication flow. Negative Consequence: Might limit spontaneous interaction
- and delay urgent communications. **Desired Result:** Create a balanced communication system with structured channels for formal communications while allowing for urgent messages within defined parameters. Include status

indicators and smart notification management.

Scenario 3: Automation vs. **Manual Control**

Option 1: Maximum Automation

- Positive Consequence: Reduces administrative burden
- and streamlines routine tasks like attendance tracking and grade calculations.
- Negative Consequence: Less flexibility for handling exceptional cases and reduced direct oversight of
- important processes.

error-prone, especially for large-scale tasks.

- **Option 2: Manual Processing** Positive Consequence: Maintains full control over all
- processes and allows for case-by-case handling of situations. Negative Consequence: Time-consuming and potentially
- **Desired Result:** Implement smart automation for routine tasks while maintaining manual override capabilities and clear audit trails. Provide easy ways to review and adjust automated processes when needed.

Scenario 4: Data Access vs. Privacy

Option 1: Comprehensive Data Sharing

 Positive Consequence: Enables better decision-making through complete access to information and analytics.

 Negative Consequence: Could compromise privacy and create security concerns about sensitive information.

Option 2: Restricted Data Access • Positive Consequence: Maintains strict privacy controls and protects sensitive information.

 Negative Consequence: Might limit useful insights and collaboration opportunities.

Desired Result: Design a role-based access system with granular permissions that protect sensitive data while ensuring users have access to all information necessary for their roles. Include clear audit trails and consent mechanisms for data sharing.

Solve Phase (2)

Design Iterations and Solutions:

- 1. Simplifying Navigation and Onboarding Experience
- Redesign the initial interface to provide clear role-based guidance during first login, helping users understand which option best suits their needs. • Create an interactive welcome tour that introduces key features gradually, ensuring users feel confident in their initial interactions with the system.
- Develop contextual tooltips and help prompts that appear when users encounter new features, providing just-in-time guidance without overwhelming them.
- 2. Enhancing Communication and Notification Systems

contact when needed.

- Implement a smart notification system that categorizes messages by priority and relevance to each user role.
- Develop clear status indicators for message delivery and read receipts, ensuring users know their communications are successful. • Create structured communication channels with options for both formal and urgent messages, maintaining professional boundaries while allowing for immediate
- 3. Improving Document and Resource Management
- 4. Streamlining Administrative Workflows • Automate routine tasks like attendance tracking while maintaining manual override capabilities for exceptional cases.

• Create batch processing tools for handling multiple administrative tasks simultaneously, reducing workload for staff.

• Develop a comprehensive leave management system with clear status tracking and automated notifications.

- 5. Enhancing Performance Tracking and Analytics
- Implement an intuitive dashboard that displays key metrics with clear visual representations. • Create customizable progress tracking tools that allow teachers to monitor student performance across multiple parameters. Develop automated reporting features that generate insights while maintaining data privacy and security.
- 6. Creating Accessible User Interfaces
- Design adjustable text size options and high-contrast themes for better readability. Implement keyboard shortcuts and navigation aids for power users.

• Ensure all features are accessible through both desktop and mobile interfaces with consistent functionality.

- Upgrade the document handling system to include clear upload progress indicators and success confirmations. • Implement an intelligent filing system that automatically organizes uploaded documents based on type and purpose.

• Create a searchable resource library where teachers can store and share educational materials with appropriate access controls.