



# Metro Business College, Inc.

200 Arnaiz, Dolores Street Pasay City

## 1. Identify the Research Problem

With the increasing use of digital systems in local government services, many citizens rely on online platforms to submit concerns and feedback. However, several existing systems suffer from poor usability, unclear layout, lack of guidelines, unclear navigation, and lack of user feedback, which negatively affect user experience.

### Research Problem:

Users experience difficulty in reporting city concerns through online platforms due to confusing interfaces, lack of guidelines, inefficient processes, and limited interaction between users and administrators.

## 2. Define the Research Objectives

The objectives of this study are:

- To evaluate the usability of the digital systems using Human Computer Interaction (HCI) principles.
- To identify interface and interaction problems encountered by users.
- To analyze user satisfaction while using the system.
- To propose and implement an HCI-based solution through the Feedback Portal.
- To expedite the process when the users using it.
- To improve efficiency in using a website or application by providing faster access anytime and anywhere.

## 3. Review Related Literature

### Usability Challenges in E-Government Platforms

The transition to digital governance has highlighted significant barriers in how citizens interact with local government services. According to **Venkatesh et al. (2022)**, many online platforms suffer from poor usability, unclear layouts, and a lack of navigational guidelines, which directly discourage public engagement. When users encounter confusing interfaces and inefficient processes, the primary purpose of the feedback portal—to bridge the gap between the city and its residents—is undermined. Furthermore, **Alanezi (2023)** emphasizes that technical complexity often leads to "digital exclusion," where citizens abandon the platform due to frustration.



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## The Role of Human-Computer Interaction (HCI)

To address interaction problems, scholars emphasize the application of Human-Computer Interaction (HCI) principles. HCI focuses on optimizing the interface between people and technology to ensure that systems are not only functional but also intuitive (**Rogers, Preece, & Sharp, 2023**). By evaluating systems through the lens of **Nielsen's Usability Heuristics (2020)**, developers can identify specific interaction problems—such as lack of error prevention and poor system visibility—that hinder a user's ability to report concerns effectively. Implementing these solutions is essential for creating a "user-centric" portal that provides faster access anytime and anywhere (**Shneiderman et al., 2024**).

## Enhancing User Satisfaction and Process Efficiency

A critical component of a successful digital portal is the level of user satisfaction. Literature suggests that efficiency is not just about the digital tool itself, but about how quickly a user can complete a task (**Harrison et al., 2021**). Without meaningful interaction between users and administrators, a system feels stagnant and unresponsive. Therefore, modernizing the Pasay Feedback Portal requires a design that prioritizes expedited processes and clear feedback loops to maintain high levels of user engagement and trust in local governance (**Bertot & Jaeger, 2022**).

## Local Studies on Usability of Philippine E-Government Systems

A study conducted by **Dela Cruz, Santos, and Reyes (2021)** evaluated the usability of an online complaint and feedback system used by a local government unit (LGU) in Metro Manila. The findings revealed that users experienced difficulties due to unclear navigation menus, lack of instructional guidelines, and slow response mechanisms. The study emphasized that applying Human-Computer Interaction (HCI) principles, such as consistency and visibility of system status, significantly improved task completion time and user satisfaction. This local study supports the need to redesign government feedback platforms to enhance efficiency and citizen engagement.

## User Experience and Accessibility in Philippine Government Portals

Another local study by **Garcia and Mendoza (2022)** examined user experience and accessibility issues in selected Philippine government websites. The researchers found that many platforms did not adequately support users with low digital literacy, resulting in high error rates and system abandonment. The study highlighted the importance of user-centered design and accessibility standards in improving usability and inclusivity. Their findings reinforce the relevance of implementing HCI-based solutions to ensure faster, more accessible, and user-friendly digital government services for Filipino citizens.



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## 4. Select the HCI Method or Approach

The study will employ a dual-method HCI approach to ensure the Feedback Portal is both technically sound and user-friendly:

- **Heuristic Evaluation:** We will assess the interface using **Nielsen's 10 Usability Heuristics**. This allows us to pinpoint exactly where the design violates usability standards (e.g., lack of feedback or confusing navigation) before the final implementation.
- **Usability Testing:** We will observe actual users interacting with the portal. By measuring performance metrics, we can scientifically prove if the system successfully "expedites the process" and improves efficiency compared to current methods.

## 5. Identify Participants

To evaluate the portal from both the reporting and administrative sides, we have identified two groups:

- **Group 1: Local Residents (Citizens)**
  - **Quantity:** 20 participants.
  - **Profile:** Ages 18–60 with varying digital literacy levels.
  - **Role:** To test the front-end usability for reporting city concerns.
- **Group 2: LGU Administrators**
  - **Quantity:** 5 participants.
  - **Profile:** Staff proficient in administrative tasks.
  - **Role:** To test the back-end efficiency in managing and responding to reports.

## 6. Design the Research Instruments

We will use industry-standard tools to collect reliable data:

- **Usability Test Task Scenario & Observation Checklist:** A structured guide where users perform specific actions (e.g., reporting a broken streetlight). We will record Success Rates, Time on Task, and Error Rates.
- **System Usability Scale (SUS) Questionnaire:** A 10-item Likert scale survey to quantitatively measure user satisfaction. This will provide a "Usability Score" to validate if the system is easy to use or unnecessarily complex.



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## 7. Conduct the Data Collection

Data collection will follow a structured four-step process:

1. **Task Performance & Observation:** Users perform real-world scenarios while researchers time their progress and log errors.
2. **Behavioral Observation:** Researchers note non-verbal cues (e.g., hesitation or frustration) to identify specific "pain points" in the layout.
3. **Satisfaction Survey (SUS):** Users provide immediate feedback on their experience.
4. **Data Consolidation:** All qualitative observations and quantitative metrics (time/scores) are compiled for analysis.

## 8. Analyze the Data