"Campus Navigation: TUP Manila Interactive Map"

Chapter 1

Background of the Study

Navigating a university campus can sometimes be a cause of stress for students, especially newcomers. The task of finding specific locations such as school buildings, classrooms, laboratories, and organization rooms can be daunting which leads to frustration and inefficiency. Traditionally, students rely on physical maps, verbal directions from staff or students, or in worst case trial and error to locate facilities and other points of interest. However, these methods are often inadequate or unreliable. Physical maps may lack detail and fail to provide recent changes in campus buildings and infrastructure. Asking for directions from staff and students may lead to confusion, as not everyone is familiar with all the areas within the campus. Moreover, the process of seeking assistance from others can be time-consuming and disruptive to students' schedules.

In consideration of these challenges, innovative solutions can be used to improve campus navigation. The use of interactive maps can be a promising opportunity to address the issue. By having an interactive map similar to google maps but focuses on the university's environment, the students and newcomers will have an efficient way of locating a specific classroom and facility of the school.

This research aims to explore the integration of the interactive map specifically designed for the Technological University of the Philippines (TUP) Manila campus. By leveraging the use of technology, students will have an ease and efficiency of navigating campus. This will increase and enhance spatial awareness through the university as it improves campus navigation accuracy and efficiency.

Statement of the Problem

Despite having great advancement of technology and increasing reliance on digital technology for navigation, university students at the Technological University of the Philippines (TUP) Manila campus continue to face challenges in efficiently navigating the campus environment. Traditional methods of wayfinding, such as physical maps and verbal directions, are proven to be unreliable.

Therefore, the problem statement for this study is to investigate:

1. The extent to which students at TUP Manila encounter difficulties in navigating the campus using traditional wayfinding methods.
2. The effectiveness of existing digital navigation tools, if any, in addressing the navigation challenges faced by TUP Manila students.
3. The feasibility and potential benefits of integrating Interactive map technology in the campus to improve wayfinding for TUP Manila students.
4. The usability, functionality, and user satisfaction of an interactive map as a navigation solution for TUP Manila students.

Conceptual Framework

- **Questions**
    - Difficulty in navigating classrooms and buildings in the campus
    - Student familiarity to the facility location

Independent Variable

- TUP Manila Interactive map integration
    - How will it affect the students on locating specific locations within the campus

Dependent Variable

- Campus navigation efficiency and experience
    - Impact on overall satisfaction
    - Impact on efficiency

Mediator Variable

- Spatial awareness
    - Students will be more aware on the campus facilities
    - Enhanced navigation and efficiency of campus experience

Control Variable

- Familiarity with technology
- Campus size and layout
- Facility designation
- Academic program of students per building

INPUT

- User queries
    - Classroom
    - Faculty room
    - Organization room
    - Building
    - Programs
- Campus Data
    - Map layout
    - Classroom designation
    - Landmarks
- Preferences
    - Shortest path
    - Pwd accessible

Process

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INPUT

- User queries(Classroom,Faculty room,Building, Etc.)
- Campus Data(Map Layout, Classroom Designation, Landmarks)
- Preferences(Shortest path, Pwd accessible)

PROCESS

- Interactive Map (Zoom in, Zoom out)
- Location search (Room search, Building Search,)
- Indoor Navigation (Room direction guide)
- Outdoor Navigation (Outdoor limited, Buildings, Outdoor Restrooms, etc)
- (OPTIONAL) Real time location tracking(seeing current position, providing accurate positions)

FINDINGS

- Pre-Implementation(Surveys)
- Development and Implementation(Collaboration with students and faculty)
- Testing stage(Small group testing: Freshman students)
- Evaluation(Feedback)
- Post Implementation

OUTPUT

- Map Display(Map directions)
- Instructions(How to use the system)
- Location information(Building programs, Etc)