Comp 3603 - Human Computer Interaction

Assignment 2

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Project Definition

My UWI is A multifaceted mobile application focusing on assisting members of the University of the West Indies's student population via efficient information delivery and data collection & analysis.

Key Features:

- Information Delivery -
  With the cooperation of the appropriate parties, this application will deliver relevant information to students through an alert/notification system. Some such notifications and parties are; Safety warnings issued by the Campus Police, event reminders from the Student Council and important event dates as well as class/exam relocation from Campus Administration.

- Data Collection -
  My UWI will gather and store usage data. In addition to this, students will be able to submit complaints relevant to the university through the application. By analysing this crowd sourced data the application will be able to ascertain certain trends such as popular meeting areas, unsafe areas and popular parking locations for example. This data will also be passed on to the university, allowing them to make more informed decisions regarding the student body moving forward.

Stakeholders and Users

This application will cater to **students, staff and alumni of the University of the West Indies, St. Augustine.**

Though the application's stakeholders and users include persons along a wide age range it's design will be focused towards its younger generation of users (will not cater for older, persons who are less comfortable with technology). This is due the fact that the bulk of the application's target user population will be students whose average age is between 17 and 27 years old.

The application will be easily accessible to anyone familiar with modern day smartphones, requiring no prior training. It will tackle a myriad of problems the university populace deals with daily, ranging from the inefficient delivery of announcements via emails that often go unread to the frustrating experience of dealing with any changing parking changes often missed as they are delivered in the campus newsletter.

Research

Methods Used:

- **Interview:** Interviews provide a controlled question environment with physical interaction that allows us (the developers) to observe the facial expressions, vocal tone and body language of each test user. This provides the necessary information for us to determine what users want out of our system.A series of selected questions will be used to ascertain the user's feelings towards the current systems, both their successes and shortcomings, as well as how effective they believe our proposed system will be at alleviating those shortcomings. The openness and flexibility of the interview also allows for user input to help us determine what features the application is missing, are redundant or should be modified.

- **Self-testing:** As our development team consists entirely of members of our target user base. That is, students of The University of the West Indies, we have experience with some of the issues the application aims to alleviate. Using our personal experience as a reference we will create scenarios and perform set tasks based on these scenarios using our prototype. Using feedback from each member of the development team, in conjunction with that of the test users a new prototype will be created. This will be repeated until a final lo-fi prototype is created.

- **Controlled observation:** To be performed after the interview and initial review of the prototype. This will allow us to see how users will interact with our proposed designs and form a clearer picture of the user's mental model when dealing with the application.
  This experiment will be conducted using test users and images of the application's interface on pieces of paper. Each piece of paper will have one task/activity on it and the test users will be given at a time. The user will be told to interact the the interface in front of them however they see fit and based on what areas of the paper interface they choose to touch/interact with a different task/activity will be given to them. This will allow us to see how users view our design and how it can potentially be used.

Research Results

Interview questions and general response

Interview Questions :

1. Do you follow UWI social media?
2. Do you get notifications, emails or any form of information digitally from UWI?
    a. If yes, how reliable is it?
    b. If no, were you aware of the platforms?
3. Do you think the UWI news email system is effective?
    a. How often do you read them?
4. Would you prefer a more cohesive platform?
    a. If yes, what kind of platform?
    b. If no, would you modify anything about it?
        i. If yes, what?
5. (describe app features), would you download this app? Yes
    a. If no, why not
6. What are your favourite features, what would you remove, what would you add? Any questions, suggestions?

Interview Responses:

Interview With An Average User

This interview was conducted with someone with no prior knowledge of, or experience in the areas of Computer Science, Software Development or Application Design.

Q: Do you follow UWI social media?
A: Yes I follow UWI on some social media.

Q: Do you get notifications, emails or any form of information digitally from UWI?
A: Yes, sometimes.

Q: How reliable is it?
A: Not very reliable.

Q: Do you think the UWI news email system is effective?
A: No, not really.

Q: How often do you read them?
A: Every other week.

Q: Would you prefer a more cohesive platform?
A: Yes.

Q: If yes, what kind?
A: A social media app.

Q: (describe app features), would you download this app?
A: Yes I would.

Q: What are your favourite features, what would you remove, what would you add?
A: The notifications are my favourite feature. I would not remove any of the existing features but I would like the ability to add classmates as friends

Q: Any questions, suggestions?
A: Make the app as attractive and easy to use.

Interview With An Application Design Expert

This interview was conducted with someone who has a sufficient technical background in Computer Science and Application Design.

Q: Do you follow UWI social media?
A: Yes I do.

Q: Do you get notifications, emails or any form of information digitally from UWI?
A: Not really.

Q: Do you think the UWI news email system is effective?
A: No, not really.

Q: How often do you read them?
A: Once every month.

Q: Would you prefer a more cohesive platform?
A: Yes, I would prefer a social media application.

Q: (describe app features), would you download this app?
A: Yes I would download this app.

Q: What are your favourite features, what would you remove, what would you add?
A: The danger alert feature is my favourite. I would not remove any of the features, but it would make sense to have the application compatible and synchronized across multiple devices.

Q: Any questions, suggestions?
A: Make the app as simple as possible for the user by making it intuitive for them.

Interview with an inexperienced user

This interview was conducted with someone who has minimum experience in computer science but some experience with design.

Q: Do you follow UWI social media?
A: No.

Q: Do you get notifications, emails or any form of information digitally from UWI?
A:Yes.

Q: How reliable is it?
A: Moderately reliable.

Q: Do you think the UWI news email system is effective?
A: Kind of.

Q: How often do you read them?
A: Very rare, only if I'm specifically looking for something.

Q: Would you prefer a more cohesive platform?
A: Yes.

Q: If yes, what kind?
A: Like a social media app.

Q: (describe app features), would you download this app?
A: Yes.

Q: What are your favourite features, what would you remove, what would you add?
A: The map and class status.

Interview with average user

This interview was conducted with someone who has some experience with applications and design

Q: Do you follow UWI social media?
A: Yes, on Facebook.

Q: Do you get notifications, emails or any form of information digitally from UWI?
A:Yes, I get notifications.

Q: How reliable is it?
A: Reliable enough.

Q: Do you think the UWI news email system is effective?
A: Yes effective. But too much clutter emails from them.

Q: How often do you read them?
A: Once a week.

Q: Would you prefer a more cohesive platform?
A: Not really, no. It's good enough.

Q: (describe app features), would you download this app?
A: Yes I would download it.

Q: What are your favourite features, what would you remove, what would you add?
A: It should have an offline version, not too much memory space should be needed. It also should be personalizable.

Self testing and Results

After conducting the interview and getting feedback from the users. We created a simple image prototype and had each member try to explain how to navigate the application according to the scenarios we created. If the explanation caused confusion or seemed convoluted modifications were made to the design.

The scenarios were as follows:

1. An emergency meeting was announced for the faculty of Food and Agriculture. All classes of that faculty will be canceled, some students will also be informed that they can attend the later tutorial. The administration of the faculty will release a publication to the ‘news and bulletin board’ section of the mobile application. Lecturers will change the status of their classes from ‘Normal Schedule’ to ‘Cancelled’ or ‘Rescheduled’. Students will receive notifications from the faculty and timetable. Timetable will show the classes affected as Cancelled or the alternative times given by the lecturer.

   Users: Administration, Lecturers, and Students.

2. At 7:50 pm, a class by the course code of Math 2550, ended. Students who live on campus accommodations are waiting by the designated shuttle stops around campus. The students, using the application’s shuttle services features, can see how many shuttles are currently active, and the route they will take. This allows students who are waiting in the wrong areas to relocate or on nights where shuttles are understaffed, campus security can notify students of the new routes and times.

   Users: Campus police, Shuttle service drivers and Students(lecturers included).

3. Before the university Graduation period, Past students (alumni) can learn more and be up to date on the Awards requirements and schedule. Receive notifications of campus parking areas and additional information. They can also view other campus related things, such as; scholarships donation needs, grants and scholarships available for postgraduates, competitions and campus events.

   Users : Alumni

4. A student is rushing to print an assignment as soon as possible and needs to find the closest printer that they can use to be able to hand in on time. Accessing the app, the student can determine which labs has printing as well as which labs are free of classes.

Results

Controlled Observation

The Same scenarios provided in the self testing section were used during the controlled observation experiment, however only from just the student's perspective. The final design obtained from the self testing experiment was converted into multiple images representing the prototype user interface.
During the controlled observation experiment we observed how long each task took to complete, how confidently the users performed each task and how many attempts a user had to make before completing each task. We calculated the average for each of these and will use those values as our benchmarks going forward.

Scenarios (TASK EXAMPLES):

You received from the App a notification from your faculty that classes were cancelled but tutorials were rescheduled.

Tasks expected:

- View the news item
- Check your classes

It's late and you are waiting on Student Shuttles. It's has been over 30 minutes.

Task expected:

- Check Student Shuttle Status

The shuttle Status is "No shuttles available".

Task expected:

- Check Student Shuttle Status and Alerts
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It's registration time, but my.uwi.edu had been down for 2 days.

Tasks expected:

- Check noticeboard/campus News
- Optional : filter by Department Registration

It's a new semester and your first class of the day is in a building you never knew existed on campus.

Tasks expected:

- Open Campus map and search by classroom name or code

Results:

Observation 1

Random Scenario:
Find an available parking spot in UWI.

Task #	Duration	Observations	Comments
1	1 minute	Performed tasks expected. Additional Tasks performed were : Checking Alerts and Timetable	User hesitated but understood the layout right away.
2	1 minute	Performed task expected	User hesitated and reviewed the scenario statement again. However task was completed and they showed signs of knowing the task was completed before handing over the next task as a sign of completion.
3	30 seconds	Swiftly perform task as layout was fully grasped.	User is becoming confident in actions.
(Randomly added scenario)	40 seconds	User went to Campus Status and UWI maps. Showing that	User confidence is high. Has full understanding of app

		they understood the functionality of both. The user went to Campus status to view available parking and also used the map stating that they can use it to locate that car park.	Activities and features.
4	1 minute	User was unsure and after reviewing, left task incomplete moving to the next one.	User's reaction tho this task means that this Screen objective is unclear. Review is needed so the user knows to view the NewsFeed for this category of information.
5	20 minutes	User immediately went to campus Maps.	

Observation 2

Random Scenario: In the last lecture, you remembered the lecturer saying classes would be held in another venue.

Task #	Duration	Observations	Comments
1	5 minutes	The User clicking on all the menu options available to assess the apps and its features. Task was completed eventually and comments on the interface were given.	This different approach from this user shows that users study and appraise the usefulness and appeal of a product differently.

2	1 minute	Since the user dissected the app in the previous task. The User has a comprehension of the features of the product.	
3	10 seconds		The user made a request that the amount of shuttles currently active when the status is running is made available to users.
(Randomly added scenario)	20 minutes	The user perform the task : View timetable; but that was after viewing Alerts.	
4	1 minute	The user hesitated then proceeded to select campus status. The information to complete the task however was on newsfeed.	Review on what services and facilities are displayed in Campus status. The inclusion status for the University's site, Online payment, etc.
5	10 seconds	User was comfortable with interface.	

Reflection

In our initial design we placed a large focus on being innovative, and as a result our designs usability suffered. Despite its visual appeal its navigation was cumbersome. We switched focus from visual creativity to functionality; the gulf of evaluation and execution for all tasks showed a significant decrease.

The ‘final’ design obtained from self testing was much more fluid and user friendly. Each team member could easily explain how the application flowed and how to navigate when given a random task by another teammate.

This design also fared well in the controlled observation, all problems faced by the users were documented and the design was modified appropriately.

Our new design was then put through the controlled observation experiment again, to determine if the previous problems mentioned had been fixed and to ensure no new ones had become apparent.

After positive feedback and better results we decided to remain with this design.