

Assignment P1

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1 QUESTION 1

In this question we are asked to analyze an interface that we encounter as a Georgia Tech OMS student. The interface I chose was Canvas.

1.1 Processor Model for Canvas

The processor model is the model where the human is just a sensory processor. It is concerned with taking in inputs and creating outputs. When looking at an interface from the perspective of the processor model, it is important to first identify what the tasks for the interface are. In terms of Canvas, the tasks are:

- Submit Assignments
- Access the syllabus/calendar
- Access course content
- Access/take any assessments
- Submit/view announcements and forum content

1.2 Analysis of Tasks on Canvas

Canvas can accomplish all these tasks, however, there are different limitations depending on the bullet. For submitting assignments, users can submit different file types as well as through different modes of document storage (google docs, files saved locally, Dropbox etc.). It appears that Canvas has an efficient interface for submitting assignments.

For accessing the syllabus/class calendar, Canvas can save the files on the interface, however, in my previous classes (and this one too) I have not seen a way for the class to have the syllabus/calendar on Canvas rather than a file imported. This may be efficient since syllabi/calendars are generally in word formats, but this could also be because there is a limitation within Canvas to efficiently display a proper syllabus/calendar that conveys the information to the student.

When it comes to accessing course content, Canvas does a good job of being able to show videos in the Media Gallery. In my previous class (ISYE-6740), the lessons were all within Canvas and could also be downloaded to our machines for offline viewing. In addition to accessing course content, taking assessments is good if the assessment is a multiple-choice or short answer assessment. And finally, sending out announcements via Canvas is good.

1.3 Predictor Model for Canvas

The predictor model is concerned with what the user thinks the outcome will be given a certain action taken. There are a few key instances I noticed for Canvas having the predictor model in mind. When a user hovers over any clickable button on the left and right panes, the button will underline, or gray out signifying to the user that if they click the mouse, they will navigate to that specific page. Additionally, when a user clicks, the button will have a blue banner around the button after the click.

1.4 Comparing the Two Predictors

When comparing the two different models, the processor is thinking about how things get done while the predictor model is more concerned with the interaction between the computer and the user. Improvements from the lens of the processor model would be adding additional features or improving current ones for the user to complete tasks. Improvements that the predictor model would suggest would be pop-ups if there are new announcements (rather than an indication of new announcements) as well as a pop-up if an assignment is close to being due.

2 QUESTION 2

In this question we are asked to expand on an activity we perform in our daily lives from the lens of the participant view. I have chosen listening to a podcast.

2.1 Identifying the Activity in Multiple Contexts

I listen to many different podcasts. Especially since the pandemic has started, I have more time to listen while I work as well as before and after work. The different contexts I have chosen to listen to a podcast are:

- Walking my dog
- Working from home

- Out walking alone
- Driving my car

2.2 Constraints/Challenges

I have a pair of AirPods Pro, which have a noise cancelling feature. One major constraint for all situations minus driving will be the inability to hear outside noise. When I am working at home, I won't be able to hear my girlfriend ask me a question which may cause some anguish on one side. Further, and in more potentially dangerous scenarios, when I am out walking alone as well as with my dog, I may not be able to hear cars.

When I am driving and listening to a podcast, I have to focus on the road, so it is harder to choose podcasts and fast forward/rewind. If I am out walking my dog, as I mentioned before, not hearing cars could cause a serious injury, but I or my dog could also get hurt if I am trying to use the podcast app and not notice an oncoming car. Additionally, when I'm listening while working, it can sometimes be distracting, and I could find myself on my phone longer than normal when I should be working. And finally, on podcasts as a whole, they are sometimes very long and 2-3 can take up my whole day.

2.3 Overcoming constraints

There are a few alterations to the interface that come to mind that can combat the constraints outlined above.

The voice assistant is one major change that has many benefits. By using the voice assistant in my car, I can keep my hands and eyes on the road and mitigate any potential crashes. I can also use it while I am out walking my dog and change the podcast or skip ahead without needing to grab my phone and look down at it. In terms of listening to a podcast while I'm working, I can use the voice command features to avoid going on my phone and can continue working on deliverables.

Using buttons, physical and digital, can have an immense benefit as well. When I am in my car, there are buttons on the steering wheel to skip ahead or behind. While these buttons only skip ahead for 15 seconds, one suggestion would be having a long press skip to the next podcast in a queue. Buttons can also be digital. In my car and on my phone, the podcast can have quick access buttons on the phone to be able to quickly adjust the podcast.

Listening to podcasts can take up much of one's day. Some are usually over an hour now. One alteration would be to have the podcast automatically speed up when someone is working to be able to listen to more.

One of the major constraints I identified was listening while having the noise cancelling feature enabled. A possible strategy to mitigate this is to have a feature that uses the accelerometer on the phone to know when the listener is walking and then turn the noise cancelling feature off. If the person wants to turn noise cancelling back on, they will get a notice about how they are walking out.

3 QUESTION 3

This question asks us to talk about the feedback cycles for submitting an assignment on Canvas. The two sections of the feedback cycle we are looking at are the gulf of execution and the gulf of evaluation.

3.1 Overview of Canvas

When a user logs onto Canvas, they are directed to the Dashboard page which has the current day as well as the next few days of the week with a to-do checklist for the user. On the Dashboard page, there are the assignments that are due. The intention of the user is to "submit the assignment", however, this screen does not give a good clue for a user with no prior knowledge on how to do this. If we then assume that the assignment link is a good enough clue for the user, and they click on it, they will be redirected to the assignment page.

There is a big yellow button saying, "Start Assignment", which does not align with the user's intention of submitting the assignment. Below the yellow button, there is metadata about the assignment. The categories are:

- Due
- Points
- Submitting
- File Types
- Available

This provides the user with when the assignment is due, how much it is worth towards their grade, the file type, when the assignment opens, and finally, what the action is. In the submitting section, it says "a file upload" which now shows

the intention of the user. Without any prior knowledge, it appears that this could be somewhat difficult for a user. Additionally, the yellow button says, "Start Assignment", which could confuse the user into thinking that the assignment should be writing within the interface, but rather the interface is solely for uploading the assignment.

Moving forward, when the user clicks on the yellow button, they are redirected again to another screen where they can upload the assignment. There are many buttons, which could cause confusion to a user and there is not a lot of direction of the accurate order of buttons to click. If a user clicks on the yellow button on this screen which says, "Submit Assignment", a pop-up on the screen will appear that says, "You must agree to the submission pledge before you can submit this assignment." If a user then clicks the checkbox to agree to the end-user license, and then clicks "Submit Assignment" again, another pop-up will appear that says, "You must attach at least one file to this assignment". If a user clicks the "Choose File" button, agrees to the end-user license, and then clicks "Submit Assignment, then the assignment will upload, the user will be redirected to another screen, and it will say "Submitted!"

3.2 Gulf of Execution

The three stages of the gulf of execution are:

- Identify the intention
- Identify the action
- Execute in the interface

When considering the first stage of the gulf of execution, identifying the intention, Canvas fails to accurately help the user align with the intention. Initially, there could potentially be confusion around whether the intention is to upload the assignment or submit the assignment by writing it in the interface. Canvas helps solve this issue by showing on the second screen where it says "**Submitting** a file upload". This can help show the user that the goal is to submit the homework and that the file format should be a PDF.

The intention was harder to identify, however, in terms of looking at identifying the action, I think Canvas does a pretty good job. The big yellow buttons help steer the user's eye towards it to show that by clicking this button, it is important, and some action will happen. Additionally, by having the pop-ups for when a

user does not click the end-user license agreement button or attaching the file that is one way to help align the user with the specific action. One note is that this is a reactive approach from Canvas to the user, however it does work.

For the third stage of the gulf of execution, which is executing within the interface, I would say it is good and bad. Although the interface is well organized, the yellow buttons are a good indicator of an important action, and then pop-ups provide feedback to the user, it takes a lot of clicks for the user, and it is a lot of screens they need to click through to submit one assignment. I think an easier approach would be to navigate the user directly to the attach file screen once they click submit assignment.

3.3 Gulf of Evaluation

The three stages of the gulf of evaluation are:

- Interface output
- Interpretation
- Evaluation

When a user submits an assignment on Canvas the interface output will display the text “Submitted!”. If the user incorrectly submits the assignment by either not attaching the file or not checking the end-user license box, they will have pop-ups signifying to the user that they made a mistake. Because of this, Canvas does a good job in the interface output stage of the gulf of evaluation.

Canvas utilizes text and color to communicate to the user. By showing on the screen once a user submits the assignment that it has been “Submitted!”, the user can easily interpret that they have successfully submitted the assignment. Similarly, given the text when an assignment is incorrectly submitted, the user can interpret that they must modify their approach and re-submit.

There are a few elements of evaluation in Canvas. Once a user submits the assignment, if they navigate to the Dashboard page again, they will see that the checkbox next to the assignment has been checked off. Additionally, if they navigate to the assignment page, the yellow button will now show “New Attempt”, which can signify to the user that they have already successfully submitted the assignment before.

Given all the points above, Canvas has a small gulf of evaluation compared to the gulf of execution.

4 QUESTION 4

This question asks to talk about two activities where one has a wide gulf of execution/evaluation and the other has a smaller one.

4.1 Wide Gulf of Execution

Prior to this class I was traveling to Mexico for a much-needed vacation. Due to the pandemic, to get back into America, people flying need to submit a negative COVID test to receive your boarding passes. The airlines were suggesting people to use a new app called “Verifly” which could help speed up showing the negative COVID tests.

I used the app and uploaded my negative test, however navigating through the app and completing the task “Upload negative test” had a very wide gulf of execution.

Initially, you are prompted to create an account and take a picture of yourself, however, after that on the main page, there is not a flow of actions or proper signage to show the user how to complete a task. There is a “Browse” button on the bottom right side, which when clicked, will open different trips for the user to click. An example of one button to press would be “A Trip to Aruba”. This does not show the user if that means they traveled from Aruba or are going to Aruba. There is a search bar at the top, so when I search USA and click the button “A Trip to the USA” a screen with a description of the requirements shows. There is an “Add Pass” button in the top right which will put the pass back into the main page. Then in the main page, by clicking on the newly added pass, on another screen, the user clicks “Add Trip” which is where the user enters the trip information. After the flight information is entered on another screen, you can add a flight companion. If you do not have a flight companion, you click the back button and are taken back to the main page where it has other buttons to press to enter the other requirements.

The reason why this app has a very wide gulf of execution is not only because there are many steps to complete the task within the interface, it also was because the intentions of the task were not clear. The app did not explicitly state the

difference between a pass vs. a flight. Further, when identifying the action, there was not clear indication of which buttons to press as well as it felt that the user was navigating back and forth between the next and previous screens.

4.2 Narrow Gulf of Execution

The app I chose which has a narrow gulf of execution is Instagram with the task of uploading a picture. When you open the app, Instagram has a “+” button to show to add a new upload. When clicking that, the user navigates to a screen which has the user’s photos, but also has a slider of different types of uploads (post, story, reel, live). Once clicking the “Next” button, which is the only blue button on the screen and in the top right corner, the next screen is where the user can enter a caption, geotag the post, tag people, post on other social medias, as well as more advanced settings. Once complete, the user can click the “Share” button which is blue and in the same position as the “Next” button, and the task is complete. This activity has a much narrower gulf of execution because the number of screens, less steps, and less settings and the buttons being the same position and having unique colors helps navigate the user’s eyes.

4.3 Lessons

One major lesson that Verifly could borrow from Instagram would be to have consistency within the screens. That will help navigate the user’s eyes to where they need to click. Another piece of advice is to decrease the amount of moving around on the app. This is hopefully help clarify to the user what needs to be done.