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# StudyUP

## User Interface Design

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### ***Unique Reference:***

The documents are stored in the [project repository](#). Referenced with [StudyUP - User Interface Design in Github](#).

### ***Document Purpose:***

This document is provided as the report of the User Interface Design of the StudyUP application. This contains the Participatory Design Guide and Protocol, Participatory Design Notes, and the Participatory Design Report.

### ***Target Audience:***

The target audience are: Prof. Solamo, University of the Philippines Diliman Computer Science students, and anyone else interested in the development process of the StudyUP application.

### ***Revision Control:***

<b><i>Revision Date</i></b>	<b><i>Person Responsible</i></b>	<b><i>Version Number</i></b>	<b><i>Contribution/Modification</i></b>
10/15/19	Roberto D. Principio Jr.	1.0	Initial Document
10/15/19	Katrina Mae D. Kopio	1.1	Creation of assets for Discuss Answers Added to documentation
10/15/19	Katrina Mae D. Kopio	1.2	Provided assets for make exam
10/16/19	Karina Kylie Ang	1.3	Creation of screens for make exam
10/16/19	Roberto D. Principio Jr.	1.4	Provided assets for take exam
10/16/19	Karina Kylie Ang	1.5	Creation of screens for take exam
10/17/19	Roberto D. Principio Jr.	1.6	Provided assets for discuss answers
10/17/19	Karina Kylie Ang	1.7	Creation of screens for discuss answers
10/17/19	Katrina Mae D. Kopio	1.8	Invision Presentation
10/18/19	Roberto D. Principio Jr	1.9	Interviewed and transcribed interview with student
10/18/19	Katrina Mae D. Kopio	2.0	Interviewed and transcribed interview with students

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# I. Participatory Design Guide and Protocol

This section provides instructions on how to conduct a participatory design to assess the usability of the prototypes.

## A. Purpose

The purpose of the participatory design is to gather information on how users will interact with the application. It is also done to assess the usability of the application.

## B. Target participants

The participants include UP Diliman students who have taken Math 21 (previously Math 53), in the past 3 years. These participants can provide insight on how useful StudyUP will be, as students who have already finished the course. They can draw from experience on how they could have better studied for this exam, or if the features of the app are sufficient for studying.

## C. Participant's Consent

Participants will sign a consent form to participate in this activity. One copy of the informed consent should be given to the participants, and a second copy should be kept by the team. Participants should be informed that a video recording will be used as data collection.

The participation in this study is completely voluntary, and the participants may refuse to participate or withdraw from the study without penalty or loss of benefits of the group. They may withdraw by informing the team that they no longer wish to participate (no questions will be asked).

## D. Initial Prototype Link

The prototype supports 3 scenarios: making an exam question, taking an exam, and discussing problems.

1. Creating an exam question: the moderator will choose a course, unit number, topic and time limit, then input their question with the correct answer
2. Taking an exam: the student will choose a course, unit number, topic, and decide whether to have a time limit or not. Then, they can take an exam. After the exam, they will be shown if their answers were correct, and will be redirected to discussion forums.
3. Discussing Problems: both the student and moderator will choose a course, unit number, and topic. They will then be presented with a list of problems. Students and moderators can add, edit and delete their own comments. Moderators have the extra option of flagging other people's comments.

**Prototype Link:** <https://invis.io/CZUFME0UJ8E>

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## E. Data Collection

The participatory design are recorded if agreed by participants, and transcribed verbatim for analysis. The recordings need to be securely stored. The transcription shall not contain information that would allow individuals to be linked to specific statements. Confidentiality will be strictly preserved. Another member of the team may take down notes. The notes will be analyzed later.

Google Drive videos: <https://drive.google.com/open?id=1-YclWdqiaTp7-LcWd3yW6w3-FkZJcUxb>

## A. Schedule of the Participatory Design

The participatory design can last about 5 - 10 minutes.

Participant	Date and Time	Venue
Person A	10/18/19 - 1045am	UP Diliman Institute of Civil Engineering
Person B	10/18/19 - 11am	UP Diliman Institute of Civil Engineering
Person C	10/18/19 - 1130am	UP Diliman Institute of Civil Engineering

## B. Participatory Design Protocol

**Welcome** and thank you for volunteering to take part in this participatory design. You have been asked to participate as your point of view is important. I realize you are busy and I appreciate your time.

**Introduction:** This participatory design is being done to help us understand how you will be interacting with our prototype. Please, feel free to state what you feel and think about the prototype of our product.

**Anonymity:** Despite being videotaped, I would like to assure you that the discussion will be anonymous. The transcribed notes of the participatory design will contain no information that would allow individual subjects to be linked to specific statements. You should try to answer and comment as accurately and truthfully as possible.

StudyUP is a web application that aims to provide an avenue for UP students to review for their exams by taking timed practice exams created by moderators of the application. The students are also able to start a discussion on numbers they don't understand, or add to ongoing discussions. Students can share tips, hints, solutions, and clarifications with other students. Moderators can make questions as well, which will be the content for the exams that the students can take.

The participant can try to do 3 things: take an exam, make an exam question, or discuss answers with their classmates. For the use case of practicing exam questions, the student can select the course, unit number, and topic. They can choose whether or not they would like to be timed as well. For the use case of creating an exam question, the moderator can select the course, unit number, topic and time limit, then input the question itself, along with the answer. Lastly, for the use case of discussing answers in a forum, students can create a new discussion, add comments, or delete their old comments. In the perspective of the moderator, they can add comments, edit old comments, or flag student comments to be deleted.

**Conclusion:** Of all the things that you mentioned today, what would you say are the most important thing that we

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(developers) need to keep in mind.

Thank you for participating. This has been a very successful discussion.

Your opinions will be a valuable asset to the study.

We hope you have found the discussion interesting

If there is anything you are unhappy with or wish to complain about, please contact the local PI or speak to me later

## II. Participatory Design Notes

*Video Transcript:*

- Note that [] is the interviewer and <> implies an action

**Person A:**

[Explains Make Questions]

Ah, so this is the Moderator view. Okay, that's nice.

Ah, so this (Make Questions Tab) is like a loop between two pages. Yung Create Questions and the part where you input the question and answer as a moderator.

Next, Practice.

...

Do I answer this?

[No no, basta yung interface]

I was starting to think about the answer. Anyway.

The discussion thread, is this like a chat?

[No it's more like a comment section]

Haha, super cute

Okay take another exam. What happens when I press it?

[You go back to practice]

Bale our last tab is discussion

So what is the discussion supposed to do?

[You can choose specific problems]

So how is practice and discussion different?

[Practice is more interactive

Discussion is just discussion and comments]

[You can click naman to show the solution and it'll just pop up the discussion. Pero by default, it's hidden. You can just click go back and choose another question from the same topic you chose, you can also choose a different topic.]

Okay, choosing a different topic and you go back. Okay, got it.

[Do you have any comments, suggestions?]

I think it just needs some changes in how it looks. Like a homepage for example. Instead of bombarding the moderator or student with all this stuff and tabs, we can start with a home page, with some helpful tips or useful links, instead of bombarding them with fields kaagad, number of units, topics.

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Thank you for your time!

**Person B:**

[Hey, this is our app]

Course, choose course

Oh, it's specific I see

[Yeah, it's just a prototype]

Choose the unit, choose a topic. This is for the moderator. I'm a moderator right now. And I'm making an exam...

Okay, I'll make a 2 minute exam

Input the question here, and I'll put the answer here. Proceed.

Question successfully made. Choose a different topic. But that's just one question, what if I wanna make a new question? So I have to do it over and over again? I feel like that'll be a hassle to do if I have to press a button to input another question.

Okay.

Practice is for anyone?

[No practice is only for students]

Choose a course that I want to learn, to practice. Okay. Choose this topic, time limit, and proceed. Oh, so this is the question I gave earlier?

[No, as a student, that's a randomly generated question given]

So you just input your answer there.

Oh okay.

Next question.

Last question is here.

Right now, it's just showing me question 1, and the thread for question 1 only.

I feel like you should have a long list of questions, showing whether you were right or wrong, and then you click the question to go to the discussion thread.

You can add comments, and all.

Then finally, you can take another exam, or go to discussion page.

What's the discussion page for?

[You can choose specific problems to see the discussion page]

The discussion page is for who?

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[Students and moderators. Students take the exam, but the moderators will be there to flag the content]

After I exit the exam, how can I view the discussion thread again?

[Explaining]

Now that I'm away from the exam instance, how can I see the discussion threads kanina?

[You can't see the same set of questions kanina. It's not something that's saved.]

Ohh.

<Goes to Discussion tab>

[Choose a course, unit, topic, then question]

Ah, it's the same discussion thread.

So all questions come from the moderator. How are you going to..because a different moderator can create a question for the exact same topic.

[Yeah]

But it's not going to be of that moderator's exam?

[Explains the backend process of the app]

Oh. I see. I see. Okay. That makes more sense.

[So that's basically our app, any comments or suggestions apart from what you said?]

No, I think that's it. Yeah.

### **Person C:**

Alright good morning guys. This is StudyUP, I assume a study buddy app for general purpose, but we're focusing on Math

On first glance, I like the UI - very UP, very red, green, very christmas

Let's see here, I have the create

I'm the moderator, I can choose course, math 21 - topic namin is limits of a function. Time limit is 2 minutes. 15 seconds. Proceed tay.

So there we go, we can create questions and answers. Let's say I want to create question and put answer, then I just press proceed. SO question successfully made.

I can submit another question or chose a different topic. So let's choose a different topic. So basically this goes back to the create questions topic.

Okay, let's try doing a practice. Choose a course - math 21. Unit 1, limits of a function, time limit.

Oh wow, what's the answer to this. Okay, next question

Evaluate the limit.  $E = x$ . Finish exam.

So I got 1 thing correctly. I got this item correctly. Right before that, let's check the discussion. Eto yung mga comments. Solid naman yung replies.

Okay, next question. Tama naman ako dito. So bakit daw t, and hindi x, kasi kahit any variable naman.

Okay, wait, check nating discussions kasi gusto ko malaman kung bakit ako nag mamath.



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So I'm choosing ulit

Oh, I want to know more about question #2, <reads the comments>

Go back tayo.

I guess as far as I can see, eto lahat ng pwedeng gawin ng app.

Suggestion ko lang,

Yung units, akala ko 1 unit, 2 units, pero yun pala unit number.

Second feature is navbar. Solid app to kapag may navbar. Pero overall, since october naman, mukhang christmas yung app. Solid app.

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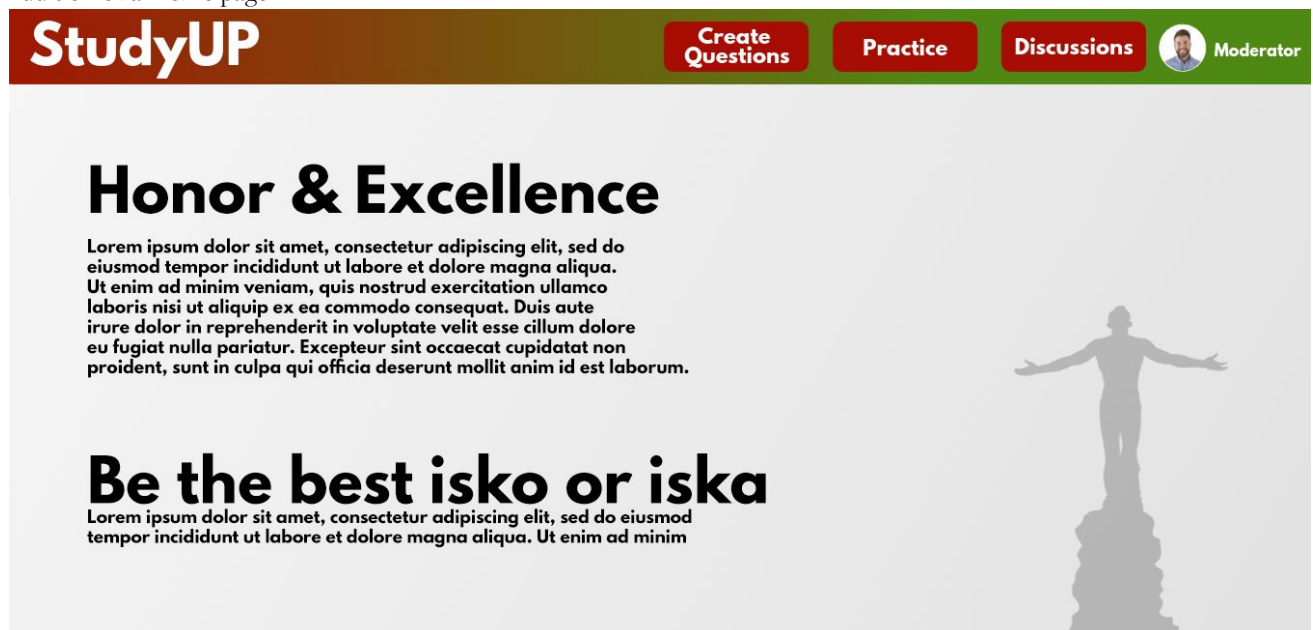
### III. Participatory Design Report

#### A. Observation Summary and Prioritization

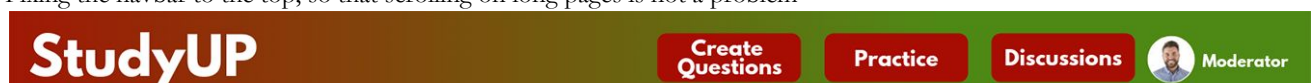
Observation	Prioritization (using MoSCoW)
Addition of a home page to have a frame of reference for the whole site	Must Have
Fixing the navbar to the top, especially for long pages	Must Have
Addition of a “Results” page, after taking the exam that will summarize what answers the student got correct	Must Have
The home page should start with helpful tips or useful links, instead of asking users to input all fields right away (ex. number of units, topics)	Should Have
Change the wording of “Units” to “Unit Number” to avoid confusion on terminology.	Could Have

#### B. Sample Screens of the Revised Prototype

Addition of a Home page:



Fixing the navbar to the top, so that scrolling on long pages is not a problem



Addition of summarizing the correct and wrong answers after an exam:


**StudyUP**


Create QuestionsPracticeDiscussionsModerator

Math 21Unit 1Topic 1


Practice

Choose a question to view the thread

Evaluate  $\lim_{x \rightarrow 2} (8 - 3x + 12x^2)$ , if it exists. 

Evaluate  $\lim_{t \rightarrow -3} \frac{6 + 4t}{t^2 + 1}$ , if it exists. 

GO TO DISCUSSION PAGE



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## C. InVision Link(s):

**Initial Prototype:** <https://invis.io/CZUFME0UJ8E>

**Revised Prototype:** <https://invis.io/MFUFVLKUNHQ>