

IT IS-6400--HUMAN COMPUTER INTERACTION

PROJECT GROUP 17

**TEJASWI SUSARLA
RAJESH VANGA
LIKESH PAMMINA
NITI RANJAN MOHAPATRA**



PROJECT: YESPLUS @UNCC

YOGA ON YOUR FINGERTIPS

GROUP 17



Table of Contents

1. Introduction
 - 1.1 Features of the application
2. Design Description
 - 2.1 Design Goals
 - 2.2 Functional goals/User goals
 - 2.3 Usability goals
 - 2.4 Conceptual design implemented
 - 2.5 Prototype Description
 - 2.5.1 Creation of Mobile app
 - 2.5.2 Unique features of the application.
 - 2.5.3 Design goals to prototype mapping.
3. Visual design, interaction, affordances
4. Evaluation
 - 4.1 Goals of usability evaluation:
 - 4.2 Participants
 - 4.3 Methodology type
 - 4.4 Tasks
 - 4.5 Heuristic evaluation
 - 4.6 Analysis of data
5. Interpretation of results:
 - 5.1 Lessons learnt
 - 5.2 Future enhancements
6. Conclusion
7. References

1. Introduction:

Community: *Yesplus at UNC Charlotte*

Yesplus, A program of The Art of Living Foundation emphasizes on integrating empirically-breathing techniques, meditation and yoga with practical wisdom to help individuals better manage stress and live with greater peace, happiness and well-being. Yesplus program teaches students to thrive in life and lead with clarity of mind, resilience, purpose, and belongingness. UNCC has its own community of the Yesplus program.

1.1 Features of the application

We envisioned to develop ‘Yesplus@UNCC’ - It is the mobile application which can be accessed by the members of Yesplus community @ UNCC. This application will be used by the following set of users.

- UNCC Student members.
- Instructors.
- Organizers.
- Non- UNCC members.

The features and functionalities are depicted in the actual prototype design. This is adhered to in the design as per the initial project proposal plan.

- Meditation.
- Live streamed Mass yoga events.
- Organizing and conducting events.
- RSVP to events.
- Discussion forums (To share and exchange opinions on various topics and activities).
- Social and fun-filled activities.
- Social Networking.
- Live events & Archived events
- Ratings are provided in the discussion pages.
- Videos are auto played to the user so that he can get a glimpse of the video without opening it.
- Push notification service
- Top rated videos, Latest videos and unwatched videos are categorized for the convenience of viewing in the Live and archived videos page.

User Access to Feature mapping

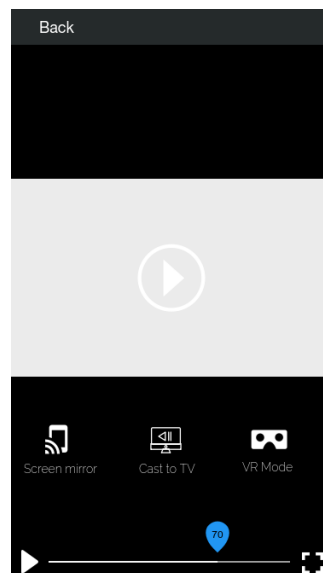
User Category	Functionality
Organizers	Schedule and post event updates Discussion forums Organize & Conduct Events Social Networking

	Live events & Archived Events page
Instructors	Live stream videos of meditation & Yoga, Organize & Conduct events
Students & Non-UNCC members	Watch Live and archived events. RSVP to various events. Access social and fun filled activities page Social Networking Discussion forums

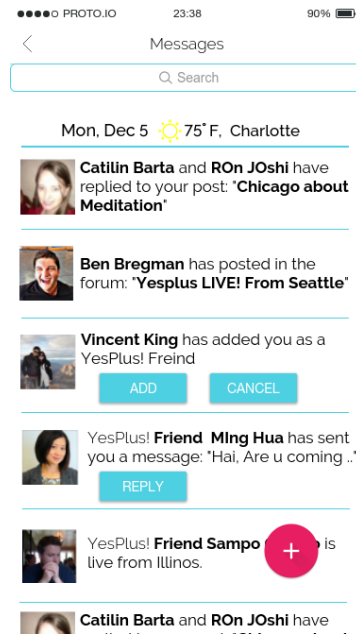
We have zeroed on the above features for the application based on the Survey that was conducted during initial phases of the project as part of our Need Finding strategies.

Justification for the features

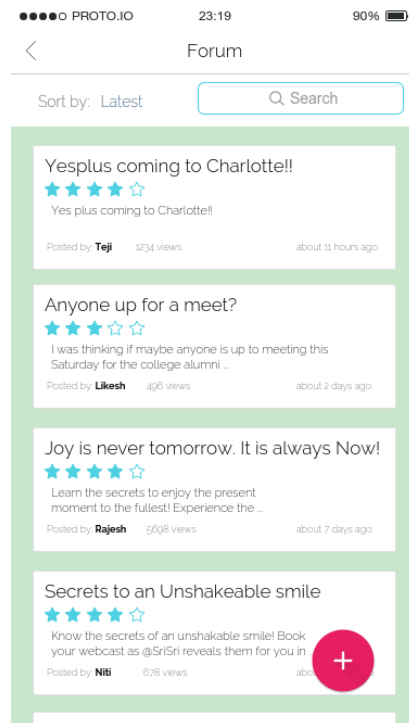
- 70% of the community members preferred Live mode of instruction for practicing Mass Yoga. Hence, we have designed a feature specifically to implement live streaming of videos. User can either access directly on the mobile app or cast it to any external graphical input device.



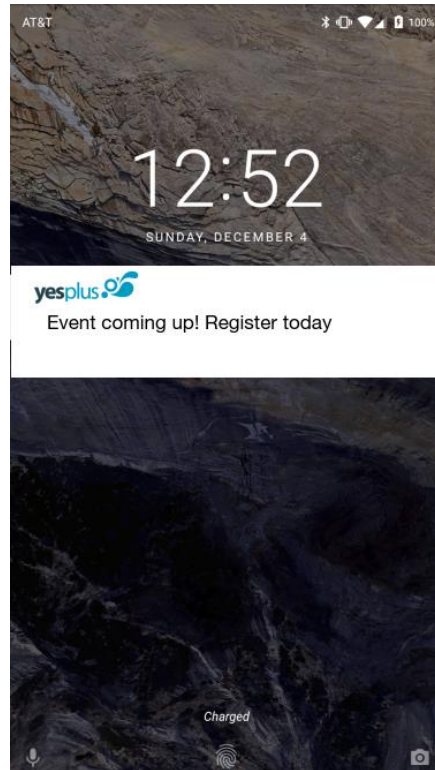
- 80% of the people have voted for email and in boxing to notify about the events and activities happenings in the community.



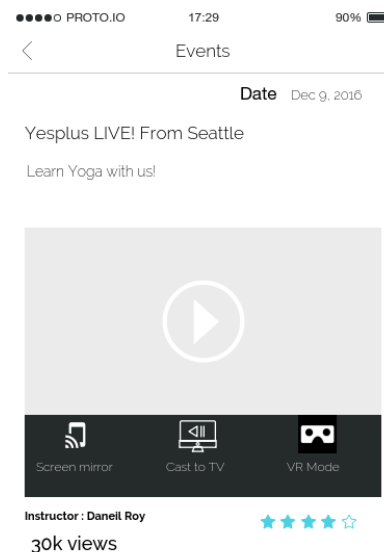
- 40% of the users asked for inclusion of the forum discussion like features to discuss and exchange conversations about various topics. Hence, we have included forums.



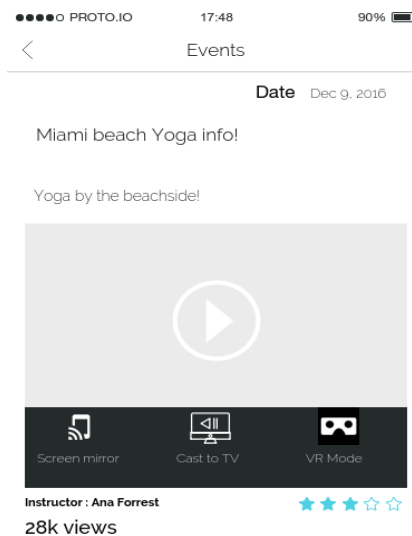
- Faster updates and notification services are mostly preferred modes of communication. Hence Push Notification service is included as a feature alongside including email and inbox feature.



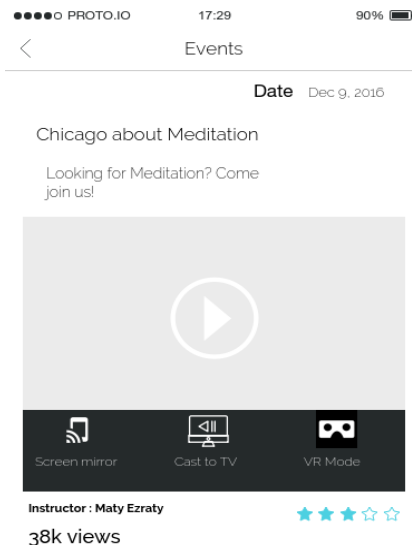
- 34% of the people have voted for Meditation as the most exciting feature to be viewed over the mobile app when it is live streamed. Hence this activity is chosen to be live streamed in virtual reality mode as well as normal mode.



- Videos are shot using 360 degrees' virtual reality camera in a panoramic view so that the end user can view the videos in Virtual reality enabled glasses.



- Videos are also shot in normal mode and all the videos can be chrome casted or webcasted to external graphical adapters/devices.



2. Design Description

2.1 Design Goals identified as part of project proposal plan:

- **Enhancing Sociability**
The application should help users to feel more connected to other people.
- **Providing Flexibility**
The new mobile application should provide flexibility to the users by allowing them to attend various sessions from their home.
- **Better clarity**
The organizers and administrators should have more clarity regarding number of users attending any event and make plans accordingly. So implementation of RSVP functionality provides better planning and discipline when organizing events.
- **Convenience (Functionality integration)**
To make the mobile application one stop solution for all the activities inside the community. The app provides single medium for accessing all the features to have forum like discussions, event planning, Video streaming and online chat.
- **Emotionally fulfilling**
Since the user is able to interact with the other members and friends on this mobile platform, he doesn't feel disconnected or at loss to share his feelings with the rest of the team. Hence it is important for the application to be emotionally fulfilling.

Design goal - Feature Mapping:

Design Goal	Implemented Feature
Sociability	Discussion forum, photo sharing, fun events
Flexibility	Live streaming of videos. Push notification service Easy to record videos. Pivot head wearable glasses.
Clarity	
Convenience	Virtual reality glasses
Emotionally fulfilling	

The above design goals are created as per the survey results and interview conducted with all the stakeholders and partners. Later the design goals have been tailored to suit the features that are derived as per the convenience of technology being used and user requirements.

In the second phase of the project all the design goal aspects have been justified with the features that are introduced as part of the mobile application.

2.2 Functional Goals/User Goals:

Students:

- Registering for any event posted in the events page so that the user can add to his subscribed list of events. (Designed as one of the primary features)
- Subscribe to the club membership- This feature is implemented as part of the registration page so that user gains default access to all the courses or events being organized in the community.
- Connect with existing members online and do social networking.

Administrator:

- Schedule meetups: This is achieved in RSVP/Register to events in the register events page.
- Host events - This functional goal is achieved as part of the Live and archived Events page.
- Broadcast event content. - This goal is implemented as part of virtual reality enabled live streaming/ Chrome casting.

Instructors:

- Initiate Live stream video session of meditation: This goal is implemented in the live events page.
- Update weekly and monthly schedules: This goal is tracked as part of events page where instructor can post the events for upcoming week/month.
- Connect with students: This is done as part of the discussion boards and email page.

Functional/ User goal - Feature mapping

Functional/User goal	Feature
Look up & Register for a meditation course	Events Registration Screen
Weekly & Monthly schedules	Events screen
Join the club Membership	Registration & Sign up page
Connect with existing members & Instructors	Discussion forums, chat window screens, Email feature
Participate in live streaming session	Live events screen & Video library screen
Schedule a meet up	Events page
Host events page	Events page

Livestream a video session of yoga	Live events & Video page
------------------------------------	--------------------------

2.3 Usability Goals:

The below usability goals have been identified which should go along with the functional and design goals that need to be implemented in the mobile prototype design:

- **Efficiency:** Application design should make the registration to the events process easy meaning that the no of membership and enrolments will increase than the current enrolment rate
- **Utility:** Students can easily use the app to connect with the members of the community, event enrolment and socializing.
- **Memorability:** The design has been very simple and adhered to standards while designing by choosing Industry standard conventions of **signifiers, affordances and Interactions.**
- **Effectiveness:** Effective integration of services provided by all external applications onto a single platform which has Email, Socializing, Virtual video streaming, Live events page, Discussion board.

Usability Goal	Design Implementation
Efficiency	<ul style="list-style-type: none"> • Pivot head glasses for video streaming • Virtual reality glasses for lively experience of yoga • Chromecast and webcast of live events and videos
Utility	<ul style="list-style-type: none"> • Course registration and discussion forums. Easy to carry mobile phone wherever we go
Memorability	<ul style="list-style-type: none"> • Good use of Interaction, Signifiers and affordances so that the user cannot memorize the usage of the application.
Effectiveness	<ul style="list-style-type: none"> • The application is effective in handling integrated functionalities and services offered by the Yesplus community

2.4 Conceptual design Implemented:

Mobile application has been chosen as the best approach to deliver all the features and functionalities since it achieves all the usability goals that have been set up in the initial project proposal plan.

Usability Goal	Conceptual Design
Efficiency	Integrated services into one single lightweight app (Texting, social networking)
Utility	All the functionalities are delivered on mobile, the user can utilize all these wherever he takes his mobile thus enhancing the utility
Memorability	Simple design of the user interface by using appropriate <i>Interactions.</i> <i>Affordances.</i> <i>Signifiers.</i> Industry standard conventions are used. There by user doesn't have to memorize how to use the app

2.5 Prototype Description: -

2.5.1 Creation of the Mobile app prototype:

We have created the mobile app prototype using the following tools:

- Just in mind
- Proto.io

The prototype design process has been initiated as part of project phase 2. Storyboards and wireframes were designed to zero in on the prototype evolved at a later stage. A systematic approach has been adopted to create the prototype.

Steps involved in creation of the prototype:

Each feature has been depicted in the wireframe for

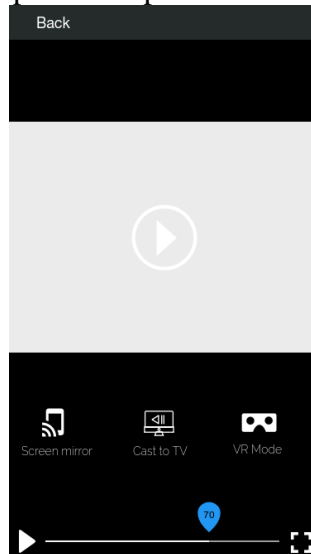
1. Receiving Notifications.
2. Push Notification Service.
3. Email and messaging services.
4. Events page for registration.
5. Discussion board.
6. Live Streaming of video.
7. Chrome casting/ Webcast of videos.

Wireframes were helpful in pointing out the flaws in our initial architecture and design.

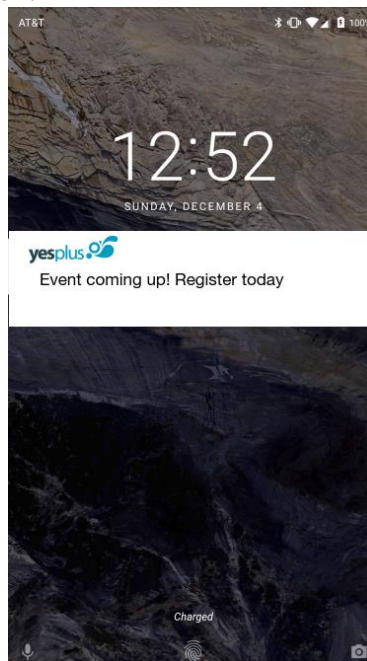
We had objective approach due to the wireframing technique to observe the mobile apps ease of use, Conversion paths, Naming of links, Navigation Placement and feature placement.

2.5.2 Unique features covered in the prototype:

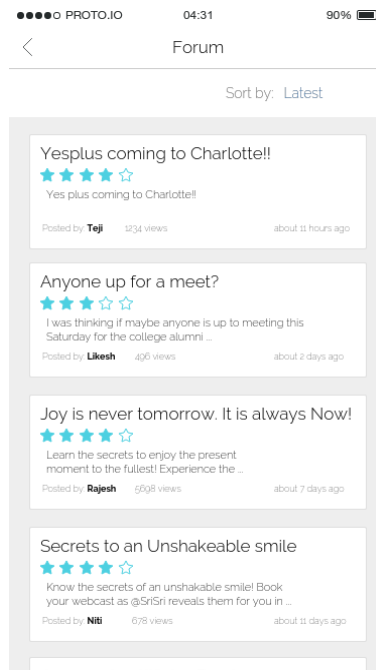
- Virtual reality enabled video streaming. The content of the video can be meditation or any other instruction material. User can either wear virtual 3D glasses or webcast/Chromecast the videos to any external graphical adapters.



- Push Notification service to alert the user about the updates or new discussion board related events inside the application.



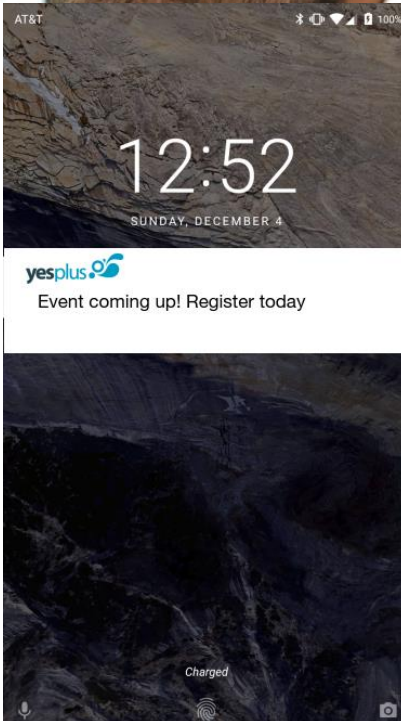
- Videos are sorted as Most popular videos, Unwatched videos, and latest videos. This mechanism is based on Artificial Intelligence where Videos are recommended to user based on his previous history of searches.



- There is also personalized instruction provided by the instructor to each subscriber. To implement this feature, we have proposed a unique functionality that takes feedback from the member after completing each virtual video. Subscriber can also provide video recording feedback and sends a video compilation to the instructor.



- The instructor receives a push notification about the personalized feedback. Thereafter Instructor can choose to individually teach the member by monitoring the student by live recording the student's movements using the pivot head glasses.



- 360-degree camera: This tool is compatible with the application to record and capture motion that happens in all directions. This is the basis for creating virtual videos that



should be streamed across

- **Pivot head camera technology** is one of the tools supported by the app. This device is used as glasses by the person recording the video of the surroundings and the video content can be live streamed across through the mobile app.



2.5.3 Justification of design Goals Via the prototype

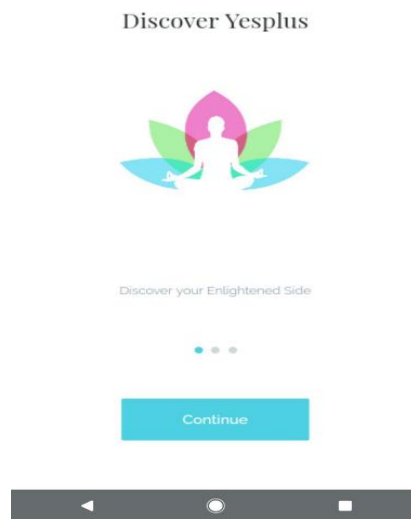
Design goal	Feature implementation	Justification
Convenience	Virtual video enabled live streaming in the videos page	<ul style="list-style-type: none"> • Users find it convenient to access the yoga practice videos from their current locations. • Users can practice yoga while the instructor delivers the lessons by wearing his virtual reality glasses. • Instructor can wear Pivot head wearable glasses and do Yoga. He can stream the video of his teachings and lessons simultaneously. • User can also Chromecast or webcast the videos being streamed towards any external graphical input display devices.

Enhancing sociability	Forums and discussion boards, chatting	<ul style="list-style-type: none"> • Users can interact and have conversations with each other and do social networking by means of discussion forums • Users can share and post events, pictures and digital media content with their fellow community members. This increases their virtual presence socially.
Flexibility	Live Content streaming	<ul style="list-style-type: none"> • User can access all the content at his leisure time wherever he goes on his mobile apathic gives him flexibility
Clarity	Integrated services like messaging, networking, Discussion forums and live video streaming	<ul style="list-style-type: none"> • Integration of all these functionalities onto one single platform enables user to get a clear view of the activities inside the community without having to switch to multiple platforms to access those services. • Since single app can deliver multiple functionalities, it works like an independent app without any external dependencies. • This improves clarity

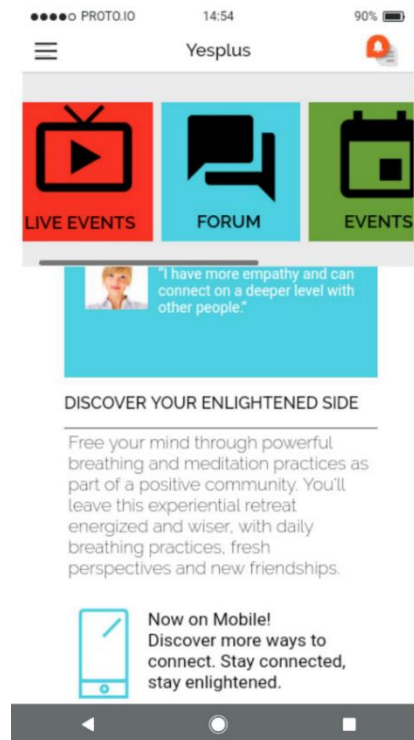
3. Interaction, Affordances and Signifiers

These are the design elements that enhance the understanding of the user in using the application.

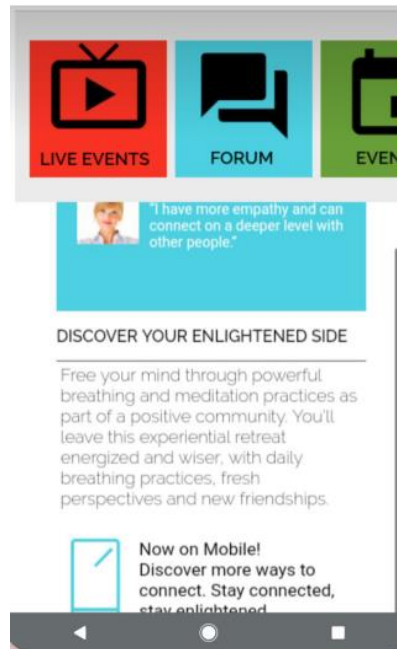
Affordances: These provide clues about how the application can be explored and used. The following affordances are used while designing the prototype.



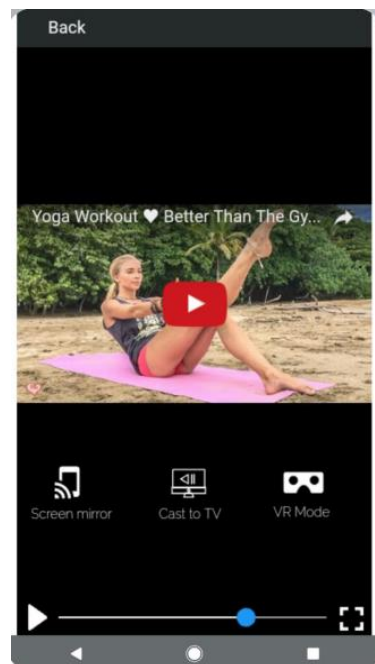
- Horizontal Scroll Indicators are provided on the main screen of the app which represent 3 dots. These are the affordances used that indicate the user there are more screens that he can scroll horizontally. This is a regular convention that is followed while designing mobile app screens.



Signifiers: The icons used for Live events, Forums, Events are self-explanatory and the user can easily navigate to the pages without any textual or learning assistance.

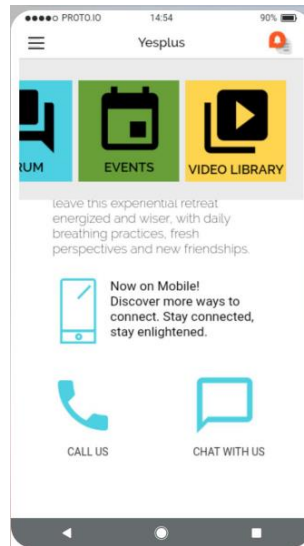


Scrolling indicators are affordances that indicate the user that screen can be scrolled through vertically and horizontally.



- Screen mirror
- Cast to TV
- VR Mode

Are the symbols that indicate that it is possible for the video to be casted and can be viewed in Virtual reality mode.



Call us.

Chat with Us.

The above are the signifiers - Self-explanatory about the actions that can be performed on them.

Page	Signifiers	Affordances	Feedbacks
Home page	'Continue' button acts as signifier so that the user can automatically continue	Horizontal scrolling indicators	
Sign -in page	<ul style="list-style-type: none"> • Icons used in the Email and password text fields. • Sign-in button • Skip 	Clickable text fields	The navigation from sign in screens to the user-home page itself is a feedback to the user that he was able to successfully sign-in
3rd screen	Forum & Events icon Join Now label	Call us & Chat with us items indicate that user can place a call and participate in chat forums	

Sign-up screen	<ul style="list-style-type: none"> Email icon in the Email Text field. Continue button Birth date pattern 	All the text field entries	
Sign-up screen 2	<ul style="list-style-type: none"> 'Continue' button -Text fields with labels are signifiers. - 'Login' link below the 'continue' button 	<ul style="list-style-type: none"> All the text field entries. Icon used for phone is an affordance /signifier which signifies as well as indicates the possibility of an action being performed. Dropdown arrow in the 'state' field 	
Sign up screen 3	<p>Confirm Cancel Visa 1234. (Payment option) Terms of service. Privacy policy.</p>		
Secure Payment Info Screen	<p>Master Card Visa Discover icons</p>	<p>Card holder name Card number Expiry date Security code</p>	<ul style="list-style-type: none"> Click on Submit in the payment info page will take it back to screen 3 of Sign up page. Click on 'Confirm' will navigate to the 'congratulation' screen.

Congratulations Screen	'Continue' button		
Forum Screen		<ul style="list-style-type: none"> • Coloration and discoloration of stars- Rating feature • Sort by filter works as an affordance • Left arrow '<' by the side of the Forum affords that the user can go back to the main page. 	
Upcoming Events page	-View button. -Scrolling bars. Star ratings.		

4. Evaluation

The Yes Plus mobile app will be used by a wide variety of users that include UNCC students, Non-UNCC Yesplus members, Yesplus organizers and Instructors. Hence getting user experience and feedback and incorporating these expectations is crucial in the application's success. End-user's interaction with the initial prototype gave us valuable user experience data that we used to evaluate the design and make further enhancements.

4.1 Goals of usability evaluation:

Following were the goals that we had in our mind while carrying out usability evaluation using the prototype:

1. To find out if the users felt the application to be simple and easy to use. This can be measured from the level of satisfaction of the users after using the prototype. If the Users can perform the tasks with ease without needing any help or guidance, then we can say that the application is simple to use.
2. Identify the pain points and issues with the current prototype. This can be measured by noting down the issues users faced while using the application. This can be any screen in the application or a feature not implemented correctly.
3. Identify the missing features in the application that can be incorporated by user's choice. We can ask the users any additional features that was missing in the application prototype that would have improved their user experience. If feasible we can incorporate these features in the final prototype.

4. To record the time taken to perform certain actions using the application and determine if the application is slow or fast. We can measure the time taken to complete a specific task like registering on the application, using the discussion forum to post a topic, using the live stream feature, etc. This can help us determine if the application is fast enough by helping the users to complete these tasks.
5. Check to ensure that the final interface is consistent or not. We need to make sure if same header and footer are user across all the screens and theme and background color are consistent. Users love to use applications that are aesthetically pleasant.
6. Determine if the transition between the screens of the application happen seamlessly. We can measure this by noting down the total number of screens we have in our prototype and asking the users to see if they can navigate to all the screens seamlessly. If any screens can't be reached, we need to add links to make it accessible or decide to remove it.

4.2 Participants:

We recruited 2 set of participants for the usability testing of our prototype. First set of users consisted of UNCC students from the HCI class. There were 4 participants in this group who are also designing an application for another community. Having taken HCI class and developing a similar application gives them prior knowledge of what exactly to test in an application. This puts them in expert user's category who gave us better feedback on what modifications need to be made in the initial prototype. The second set of users consisted of the Yes Plus Community Members. This consisted of 5 people who attend Yesplus events like mass yoga and meditation sessions and are actively involved in Yesplus activities. These users are non UNCC students who stay away from the campus. Due to current unavailability of a mobile application for the Yes Plus community, these users find it difficult to get regular updates regarding community events and interact with other community members to clarify any doubts. Asking them to test the initial prototype of the application helped us in getting valuable user reactions that we can expect from new users of this application.

4.3 Methodology type:

We used 2 evaluation methodologies in this project to get user experience on the initial prototype.

1. We did Usability testing on first set of users. The participants were given a brief explanation regarding the context of the application and how to use the application. After making an initial walkthrough of the application the participants were asked to perform specific set of tasks with clear instructions on what to perform at each step. During this process participants, could think aloud and gave us their remarks and feedbacks while they were performing the tasks. Time taken to complete each task, issues faced, enhancements and features to be added were noted down.
2. We did field study for the second set of users. We met the participants individually in their suitable time and asked them to use the initial prototype of the yes plus mobile app. This was followed by an interview where the users were asked a set of subjective and objective questions and the data was noted down for analysis and evaluation

4.4 Tasks:

The first set of users that included UNCC students were given a brief overview regarding Yesplus community and the initial prototype we had developed. We then handed over the prototype to each of the users and asked them to perform following set of tasks. The tasks were performed in cognitive walkthrough manner and users were encouraged to share their feelings and thoughts while they were performing the task.

Task 1: Access the Live Stream feature of the application to view live videos.

Step 1: Click on the Yes plus logo in the main screen

Step 2: Enter a random username and password in the login screen and click Login button.

Step 3: Click on the menu bar on top left corner and select 'Live stream Yoga' option.

Step 4: Click on the video to play the live video

Task 2: Make a post in the discussion forum

Step 1: From the login screen continue as a guest

Step 2: Click on the menu bar on top left corner and select 'Discussion Board' option

Step 3: In the new page write some text and click on 'Post' to post the topic

Task 3: Initiate a Chat with YesPlus community member

Step 1: Click on the Yes plus logo in the main screen

Step 2: Enter a random username and password in the login screen and click Login button.

Step 3: Click on the menu bar on top left corner and select 'Chat with YesPlus' option.

Step 4: Click on available user in the screen and enter some text to send it.

Field Study:

We have conducted field study on 5 non UNCC Yesplus community members. Every user was given a small walkthrough of the initial prototype. They were then asked to use the application for some time. We video recorded the users while they performed this task. After this the users were asked following set of questions to answer.

Question 1: What features of the application did you like the most?

Question 2: What features of the application do you think can be improved?

Question 3: What issues did you encounter while using the prototype?

Question 4: How would you recommend the YesPlus Mobile app to one of your friend?

a. Very likely b. Likely c. May be d. Not at all

Question 5: On a scale of 1 to 5 how often do you think, you will use this application in everyday life. (with 5 being very frequently, 4 being Once in a Day, 3 being once in 2-3 days, 2 being once in a week and 1 being Rarely Use)

4.5 Heuristic evaluation

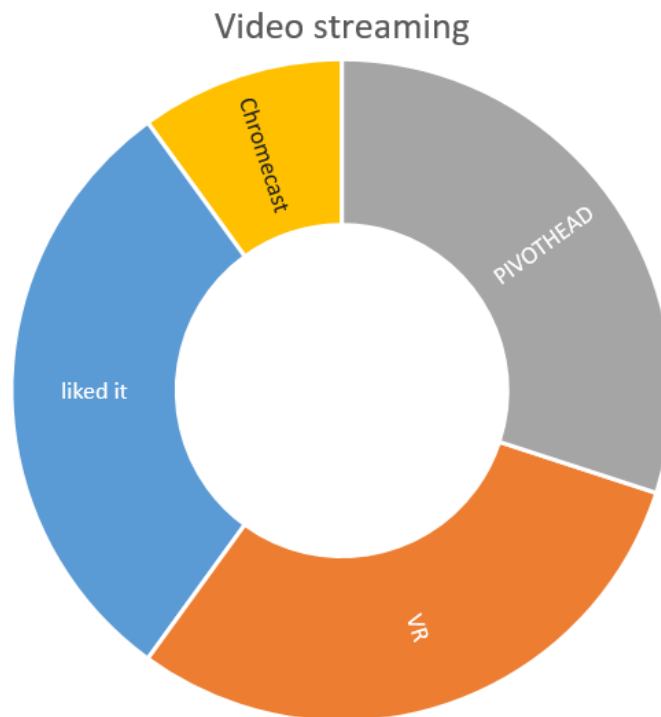
Listed below are the summary of the feedback given by various participants of the usability testing:

1. The application is not aesthetic and can be improved.
2. Inconsistency with design features. Background color and theme is not consistent across the application.
3. Feedback for some of the actions is not shown. For example, after clicking the login button no message like 'Login successful' or 'Login Failed'. Similarly, there is no medium to inform the user that a live event is going on without going to the events page.
4. The prototype only implements basic features of the application. More content can be added in the screens and unique feature need to be implemented.
5. Redundant page for sign in. Main screen can have sign in with links to register and login as guest.
6. Since live event streaming is the main feature of this application a new shortcut need to be added in the home screen for the live streaming events. Similarly, Archived events can be shown.
7. Ranking and sorting feature lacking for posts in discussion forum.
8. Sorting feature not available for events/videos. It can have options like 'Most popular', 'Unwatched' etc. as filtering options.
9. A push notification need to be added to enable user re-push their question in the forum.
10. Help and documentation: Help or contact us page not present to give information about what the user can do with the application.

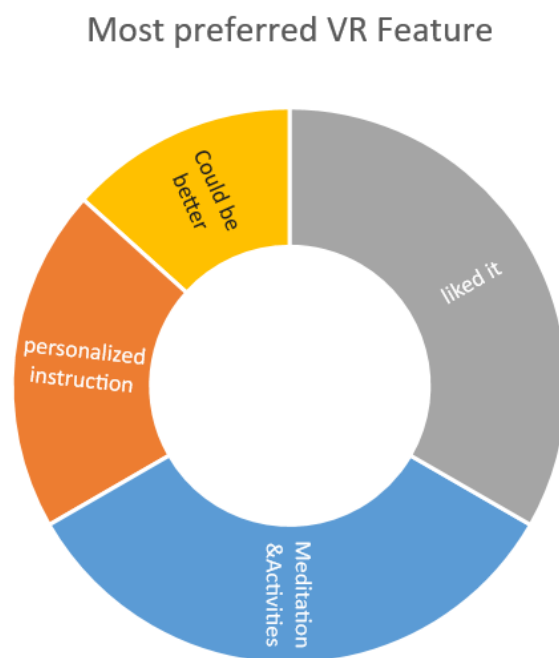
4.6 Analysis of data:

Data collected through Usability testing, field studies and heuristic evaluation gave us important insights regarding user's experience and expectations from the application. This also helped us to understand which features of the application users will love the most and the areas we need to modify and improve. Following are the analysis of the data:

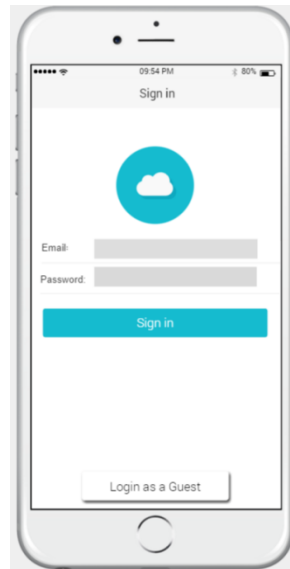
1. Majority of the users preferred VR enabled streaming of the instructions so that they can access the content on the go as per their convenience. Pivthead wearable glass is another preferred option by instructors and organizers to record the lecture on the spot and transmit it to the viewer.



2. About 85% of the test users appreciated the idea of teaching yoga postures and meditation techniques with the help of VR headset feature included in the app.

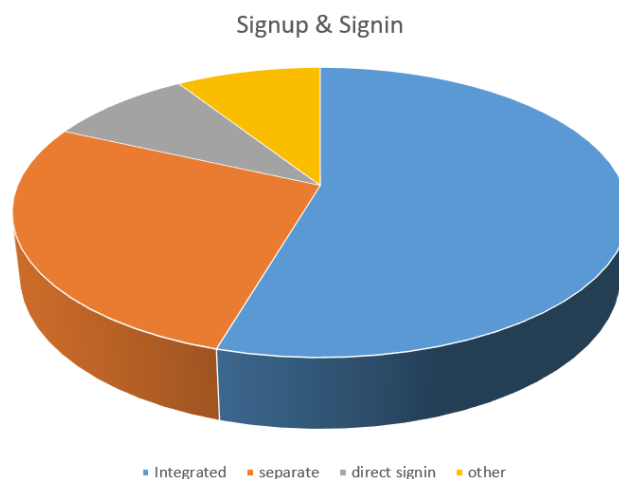


3. 11 out of 17 people recommended having login and registering functionality in the same screen rather than making it separate.



(login screen from initial prototype)

Analysis of the feedback raw data collected.



Analysis from the evaluation data collected

PROTO.IO 04:19 90%

Sign In



Email



Password

Sign In

Don't have an account? [Sign up](#)

[SKIP](#)

(Login screen improved after the feedback)

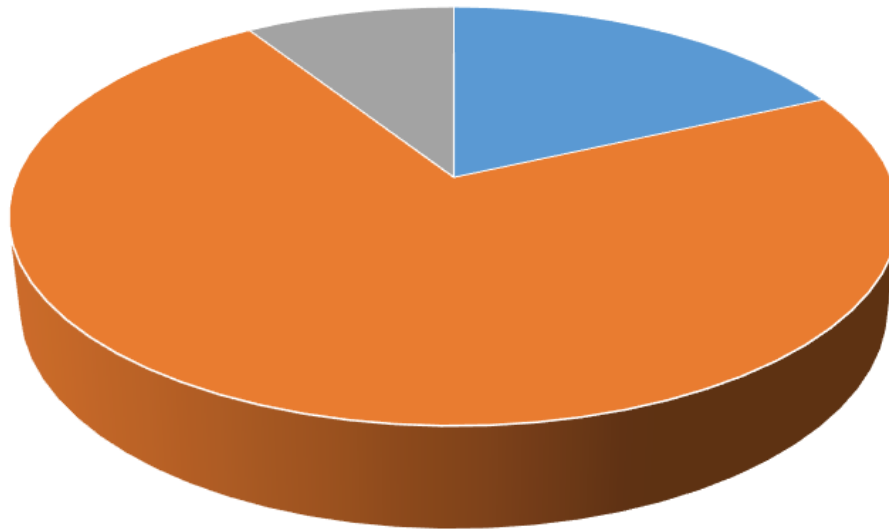
4. Most of the users suggested improving the background theme and coloring which was initially plain black and white.



(Discussion forum page from initial prototype)

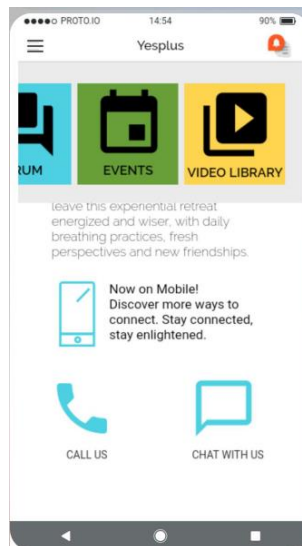
Data collected from the feedback and analysis.

Color theme

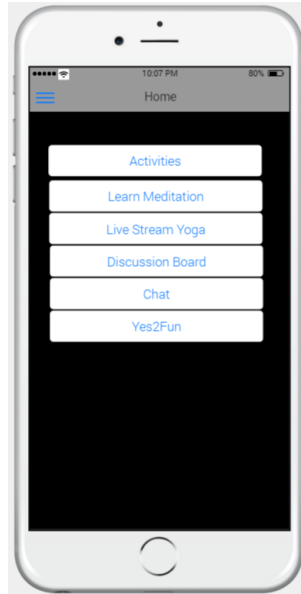


■ black &white ■ light&appealing ■ other

Improved color theme



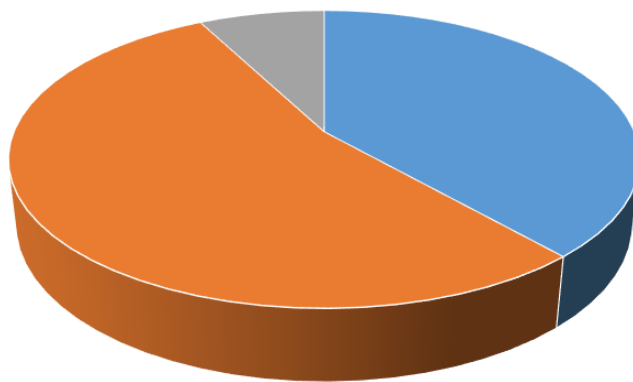
5. About 80% of the users tested said they would love to see the various features of the application in a tile based display rather than selecting it from the drop down menu bar. This suggested that users love to see larger icons and they preferred scrolling or sliding gestures on the screen to view the contents instead of clicking each menu and submenu.



(Home screen from initial prototype)

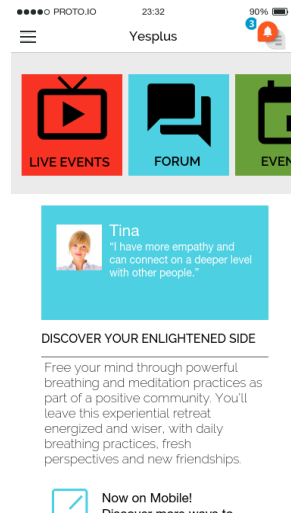
Feedback raw data analysis

Menu of features



■ plain dropdown ■ Hyerlinks ■ window tile icons

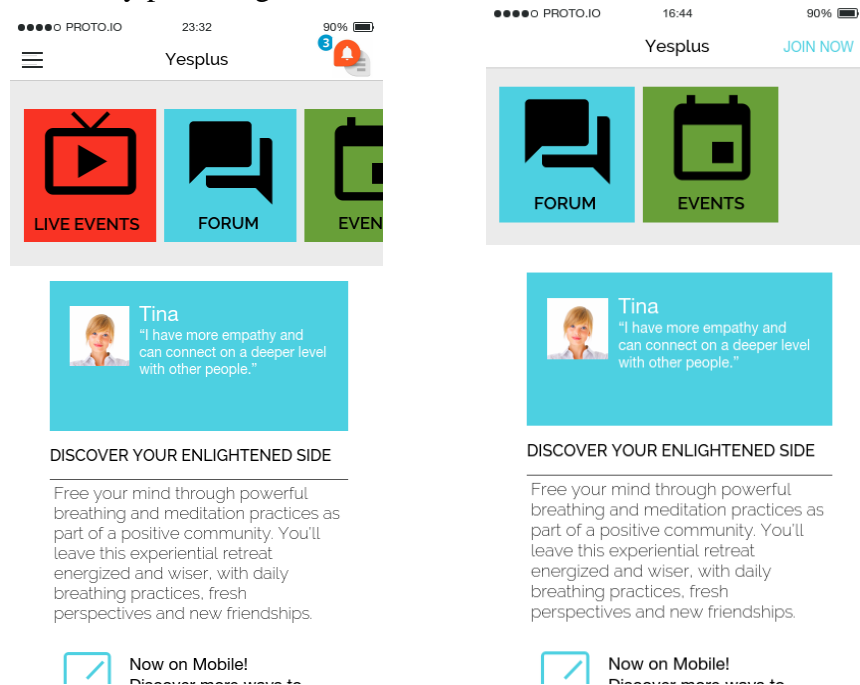
Improved design:



7. Around 70% of users said that they would recommend this application to their friends and family members as it makes them feel more connected to the Yesplus community.

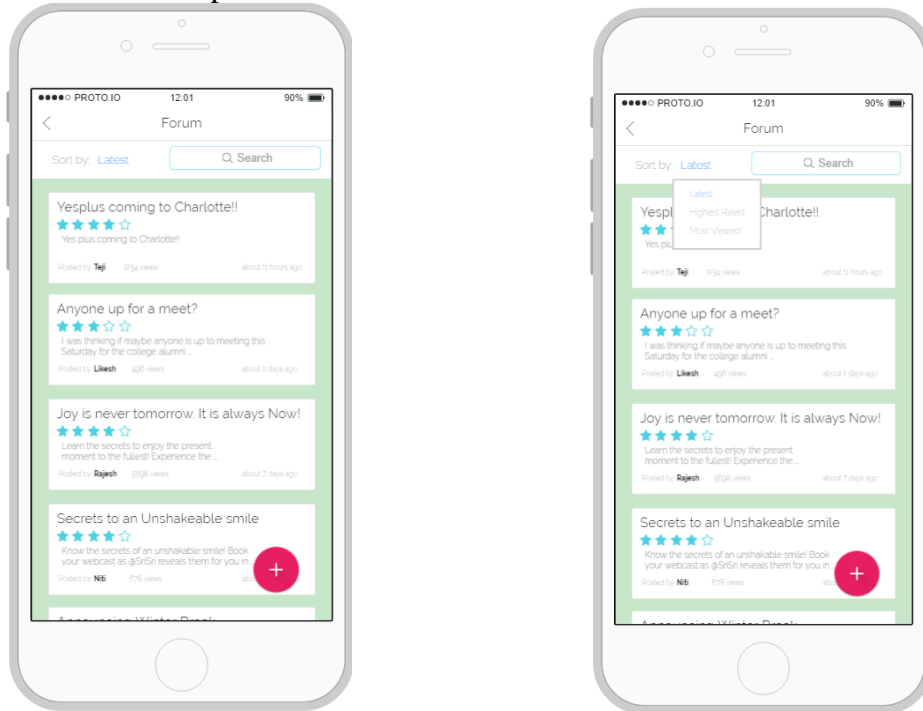
5. Interpretation of results:

The overall look and design of the prototype was modified to give the users a better and cleaner user interface. The functionalities like Live events, Discussion Forum and YesPlus Events has now been added with large icons as window based tiles in the home screen. This will help people with relatively larger hands by providing more touch area on the screen.



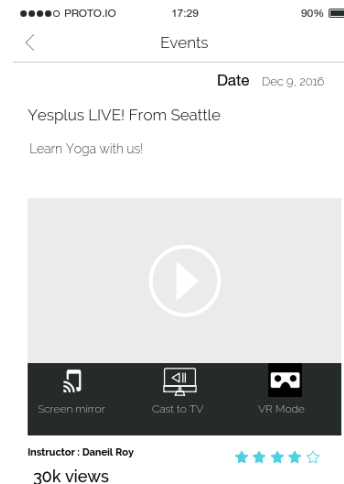
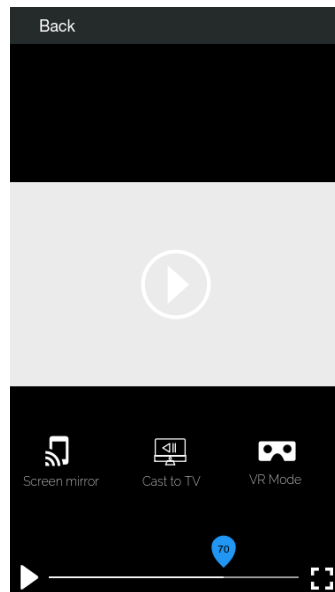
(Home screen with tile window based icons)

Most of the users wanted to chat with other Yesplus community members to share information and participate in the discussion forum to get ideas and views. Inclusion of these features in the prototype will help the user by enhancing sociability and give them an emotionally fulfilling experience. Users can now post a new topic in the forum, filter the forum or search for a specific post using the search option. These features increases the efficiency of the application and makes it convenient for the user to perform various tasks.



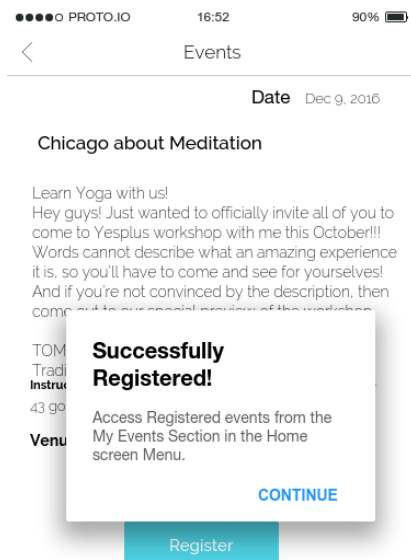
(Discussion forum and features)

The inclusion of VR feature to view Yoga and event videos provides flexibility to the users. The feature has can be accessed by touching the VR mode option displayed for any video and then connecting with your VR headset device.



(VR Mode for videos and events)

Users experience is enhanced when user get to know what exactly the system is doing and get proper feedback for their actions. Hence we have included proper feedback and notification messages for the user actions in various screen.



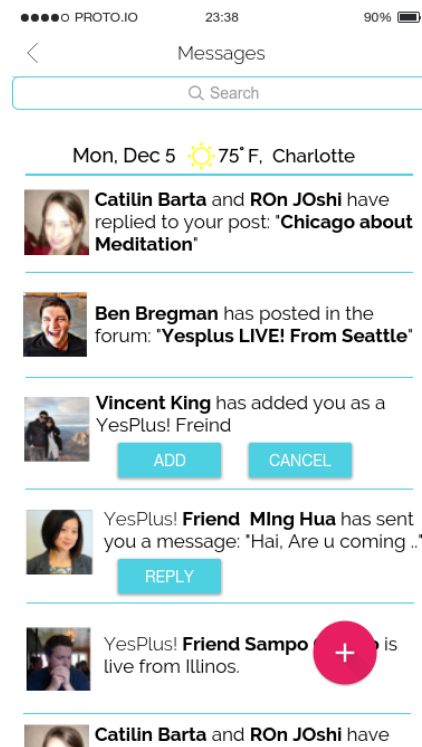
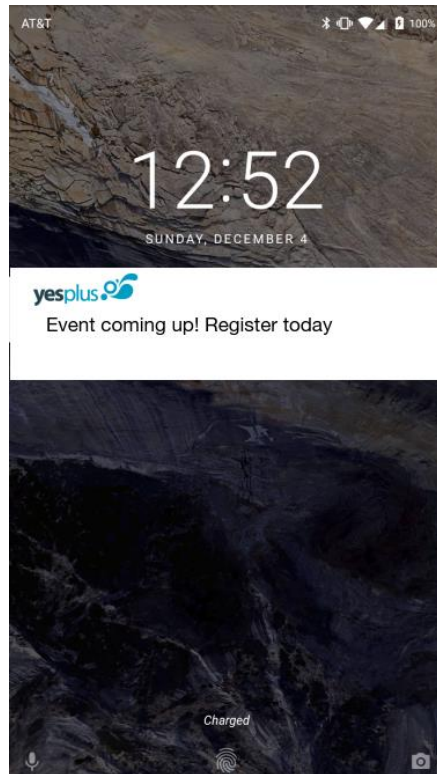
Congratulations! You are now a member of Yesplus. Login to continue.



(Confirmation and feedback messages)

Users should not have to memorize lot of options. Since Yesplus organizes many events and activities round the year it is very difficult for the users to remember all these events and miss to attend some. Even if they register for an event they need to be reminded about the upcoming event

through notifications and reminders. We have included push notification in lock screen that give user alerts and notifications for easy access. The user can also view new notifications once he logs into his profile.



(notifications)

5.1 Lessons learnt

1. Maintaining a consistent state of design across the application improves the user experience significantly. It makes the user feel comfortable while using the various features of the application
2. Use of contrasting colors to differentiate between contents improves learnability. Users should be able to distinguish easily between the contents and various menu item and links. Hence we need to use proper fonts, spacing, contrasting colors and icons while designing an application.
3. Good use of interaction, affordance and signifiers in the design reduces the burden of memorizing more information by the user. Using information scent wherever possible and making the features more realistic as in real world makes the application to be lively and easy to use.
4. We gained deep understanding of need finding techniques to collect information while building any application.
5. Heuristic evaluation gives valuable feedback for designing real application. It is essential to get user feedback by building a prototype as it will help in improving the real application and avoiding wastage of resources in later stages.

5.2 Future enhancements

1. More features can be added in the prototype to replicate the real application. Feature like analysis and reports can be added in the home screen of the Yesplus organizer that will help him to take reports and do analysis of various events organized.
2. Option of replying to a post in the discussion forum can be added to make it more interactive.
3. A new screen with calendar can be added to make it convenient for the user to see upcoming events and the registered events by date.
4. Will incorporate other interaction based technologies like Sixth sense technology to make the user space more convenient to view and practice yoga.

6. Conclusion:

We learnt the nuances of Human Computer Interaction and the technical aspects of the design aspect of an interface. The significance of interactions, signifiers and affordances is understood and incorporated in the design of the GUI

Old prototype has been revised and alterations have been made to include unique interaction features like virtual reality enabled video capture and transmission.

Rating feature has been incorporated in the discussion forum which is a unique feature to the concept of yoga and activities.

User can not only post or receive responses but also view only the relevant posts and valuable results.

The old prototype has been enhanced by optimizing the design by following Novel interface techniques. We optimized desired properties to enhance features such as learnability and efficiency.

Software prototype tools like Just in mind and PROTO.io have been put to best use to come up with industry standard prototype design.

After multiple steps of cognitive walkthrough and heuristic evaluation with yesplus community members, we have incorporated unique features like

- Push notification alert
- Virtual reality enable interaction technique for video streaming.
- Most popular videos, Unwatched videos are categorized . This is an Artificial Intelligence based technique.
- Pivot head based camera shooting technique has been made compatible with the design to support video streaming feature.
- Personalized feedback and instruction to each member using the virtual reality technology.

7. References

1. Link for final prototype: <https://share.proto.io/EWJ94R/>
2. Link for final presentation: https://prezi.com/5ygpc04qphnp/yesplus-yoga-your-finger-tips/?utm_campaign=share&utm_medium=copy