Think-Aloud Protocol Research Document - NYU Engage Redesigned Prototype

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Introduction

NYU Engage is a digital platform aimed at enhancing community building among NYU students by facilitating discovery and engagement with clubs and organizations. The app seeks to address the challenge students face in finding and integrating into communities, thereby improving the overall student experience at NYU. However, there are some issues found during user observation testing, such as inefficient information, UI friction, and confusion on specific features. Therefore, giving the takeaways from previous research, the NYU Engage has now designed a new version (prototype) intended to address the existing problem. Hence, there is a need to evaluate its usability and effectiveness in meeting the needs of its users. This study employs a think-aloud protocol to gain insights into the user experience of NYU Engage, identifying areas for improvement to enhance its usability and effectiveness.

Research Questions

This research is motivated by the need to evaluate the effectiveness of NYU Engage in facilitating community building and engagement among students. The client for this research is the NYU Engage development team, and the target audience includes NYU students and university administrators. The results will be used to inform future design and development decisions for the application. The research questions being addressed are:

1. How do students *navigate and interact* with the NYU Engage platform, and what challenges do they encounter during this process?
2. Which features of NYU Engage do students *find most useful*, and how do these features facilitate their engagement with clubs and organizations?
3. How can the *usability and user experience of NYU Engage be improved* to better meet the needs of its student users?

Method

Design

The study will use a think-aloud protocol, a qualitative research method where participants verbalize their thoughts, feelings, and actions while interacting with the NYU Engage platform. This method allows for real-time insights into the user experience, providing valuable data for usability analysis.

Target Audience: NYU Students looking to start or join online NYU communities, or find clubs, organizations, and events.

Setting: The study takes place online via Zoom and is recorded.

Personas

Here are three different personas featuring NYU student users for NYU Engage:

Name: Alex	**Goals:**
Demographics: Age: 21 Major: Psychology Grade/Class: Junior	Find and join clubs that host a lot of social events and offer networking opportunities. Looks for clubs focused on mental health advocacy to align with his academic interests.
Interests: Social events, networking, mental health advocacy	**Challenges:** Alex feels overwhelmed by the number of options available and struggles to find clubs that match his specific interests. Alex struggles to balance his time between academic commitments and club activities.

Name: Amy	**Goals:**
Demographics: Age: 24 Major: Computer Science Grade/Class: Master 1st-year	Looks for clubs that offer coding workshops and participate in academic competitions to enhance her technical skills and academic profile. Seeks to build a professional network by connecting with club members who share similar career interests.
Interests: Coding, tech workshops, academic competitions	**Challenges:** Amy finds it difficult to identify clubs that offer advanced technical workshops and opportunities for competitive participation in her field of study.

	Amy has difficulty finding clubs that offer mentorship or guidance for academic and career development.

Name: Taylor	**Goals:** Looks for clubs focusing on environmental activism and community service, especially those working on sustainability projects. Looks for clubs and network with people who have similar hobbies or interests in badminton or card games to make more friends.
Demographics: Age: 22 Major: Environmental Studies Grade/Class: Senior	**Challenges:** Taylor is looking for clubs with a strong impact on the community but finds it hard to assess the effectiveness and engagement level of different clubs through the app. She also struggles to stay in the same club because of her limited time to join events and the various group dynamics in different clubs require her to take more time to settle in.
Interests: Environmental activism, community service, sustainability projects, badminton, card games	

Participants

The study will involve one participant who is an NYU Steinhardt student, currently in his/her first year of a master's degree on LTXD major. She previously had some experience in NYU-suite platforms and apps and events-related apps such as Google Calendar and Eventbrite.

Instruments & Measures

Data collection will include audio recordings of the participant’s think-aloud session (via Zoom), and screen recordings of the participant’s interactions with the platform. Otter.ai will be used during the testing session for transcription purposes.

Procedure

Entire Activity Recordings (via Zoom) and Transcripts (via Otter.ai)

Activity Recordings:
https://drive.google.com/drive/folders/1O7tiIHZRjrNoJH6MMFo9-FcQHZPeh62O?usp=sharing
Transcripts:

https://otter.ai/u/YXVEf6CwG5H8wXDTut1qnp7JHpM?utm_source=copy_url
https://otter.ai/u/cfXb9aeg01EaKV2JxXFvlHWT_XY?utm_source=copy_url

Warm-up Activity

The participant will be briefed on the think-aloud process and given a simple practice task of using NYU Moblie to familiarize themselves with verbalizing their thoughts. This warm-up activity is designed to familiarize the participant with the think-aloud process in a low-pressure setting. It helps them get comfortable with speaking their thoughts aloud, which is essential for the main think-aloud session with the NYU Engage platform.

The research will encourage the participant to use the think-aloud method by saying: “Please think out loud at all times because it helps me to understand your spot. I am not the developer nor designer of this app. My purpose is to know what you find clear and what you find unclear. I will ask you to keep talking if you get quiet. ”

Task: Ask the participant to navigate to the NYU Engage Website and find its features.

Instructions:

1. Open https://engage.nyu.edu/.
2. As the participant explores the app, verbally encourage him/her to think out loud and describe the actions and reasons. For example: “If you're clicking on a link, explain why you chose that link.” As the participant is navigating through the app, ask “What do you expect to happen if you click on it?” “How do you feel about the information/ UI/ or anything? ”
3. Provide some examples of how to practice think-aloud. For example: “During this session, you can say “I'm clicking on the 'Events' tab because I want to see what's happening this week.” “I'm not sure what 'Track Involvement' means. Is it for tracking my participation in events?” “I'm feeling a bit lost. I clicked on this link expecting to see event details, but it took me somewhere else.”
4. Let the participant know the goal is to find and briefly describe three different features of this app. Make sure that the participant feels comfortable when speaking, for example: “Please feel free to verbalize any confusion or questions you have while navigating.”

Set-up instructions

1. The researcher will ensure that the recording equipment is set up and functioning correctly. The participant will be seated comfortably in front of the computer and a phone device.
2. The researcher will provide a brief overview of the NYU Engage, highlighting its purpose and key features.
3. The participant will be reminded of the think-aloud process. Also, he/she will be encouraged to speak naturally and not worry about grammar or coherence.
4. The participant will be reassured that their privacy will be respected and that all data collected will be anonymized. They will be asked to provide verbal consent to proceed with the recording.
5. The participant will be given 2 tasks to complete on the NYU Engage platform: (1) Browse the platform and familiarize yourself. Try to find events and organizations that you are interested in, and (2) Find and explore organizations. See how to attend and RSVP for an event that aligns with your schedule.
6. Once the participant is ready and has provided consent, the researcher will start the Zoom recording and Otter.ai automatic transcription and signal the participant to begin the first task. The researcher will observe and take notes, providing occasional prompts or reminders to keep talking if needed.

General probes

At the beginning of the session, the researcher may use general probes such as "What are you thinking now?" or "Can you explain why you chose that option?" to encourage continuous verbalization. Below is a list of general probs that the researcher may use during the testing:

Clarification	Can you tell me more about what you're thinking right now? What's going through your mind as you look at this page?
Reflective	How do you feel about the options you're seeing? What are your impressions of this feature so far?
Decision-making	What made you choose that option? Can you explain why you decided to go in that direction?
Expectation	What were you expecting to happen when you clicked on that? Did this page meet your expectations? Why or why not?
Comparison	How does this compare to your experience on other similar platforms? Is there anything here that stands out to you as better or worse than what you've seen elsewhere?
Usability	Is there anything here that you find particularly easy or difficult to use?

Task-specific probes

The participant will be given 2 tasks to complete on the NYU Engage platform:

(1) Browse the platform and familiarize yourself. Try to find events and organizations that you are interested in.

(2) Find and explore organizations. See how to attend and RSVP for an event that aligns with your schedule.

Below is a list of task-specific probs the research might ask during the test session:

Task 1	1. What keywords are you using to search for events or organizations? 2. Can you walk me through your thought process as you choose which events or organizations to explore further? 3. How do you decide which events or organizations are of interest to you? 4. Are you finding the information you need about these events or organizations? If not, what's missing? 5. What features of the platform are you finding helpful as you browse? Are there any features that are not helpful? 6. How easy or difficult is it for you to navigate to the details of an event or organization?
Task 2	1. Can you describe the process you're using to find an event that fits your schedule? What tools or features are you using on the platform? 2. What information do you need about an event before you decide to attend? How are you determining if an event aligns with your schedule? 3. Are there any obstacles or challenges you're encountering while trying to find events that match your availability? 4. After RSVP for an event, what kind of confirmation or follow-up information do you expect to receive? 5. What would make it easier for you to find and RSVP for events that fit into your schedule? Are there any features you wish were available? 6. How satisfied are you with the process of finding and RSVP for events on the platform? Is there anything that could improve your experience?

Wrap-up

At the end of the session, the researcher will express gratitude to the participant for his/her time and effort. Also, the participant will be asked a few open-ended questions:

1. How was your overall experience using the NYU Engage platform during this session?
2. Was there anything that stood out to you as particularly positive or negative?
3. Do you have any suggestions for how we could improve the platform based on your experience today?
4. Do you have any questions about the study or anything else you'd like to discuss?

The participant is thanked for his/her volunteering before he/she left.

Data Analysis Plan

1. Transcribe audio recordings and annotate screen recordings to capture participants' verbalizations and interactions.
2. Break down the data into different aspects such as features, content/information, usability, and emotions.
3. Identify common themes, challenges, and patterns in user behavior and interaction with the platform.
4. Analyze the data to answer the research questions, focusing on navigation challenges, feature usability, and areas for improvement.
5. Synthesize findings into actionable recommendations for enhancing the usability and user experience of NYU Engage.

Rubrics for Evaluation

Navigation and Structure

- Is the platform's layout intuitive and easy to navigate?
    - Keywords: straightforward, clear/not clear sth., need to build sth., easy to navigate, flow
- Can users easily find and access the main features and information?
    - Keywords: research, sure/not sure, I can find, accessible, discoverable, enough/not enough

Information

- Are instructions, labels, and content clearly written and easy to understand?
    - Keywords: content, clear, confused, not sure how, lack sth., concise, understandable.
- Is the purpose of each feature and how to use it easily comprehensible?
    - Keywords: what is, self-explanatory, clear, user-friendly, sure/not sure, need to have sth.

Interaction

- Do interactive elements (e.g., links, buttons, forms) respond appropriately to user actions?
    - Keywords: why, where, responsive, functional, interactive, confused
- Is feedback provided to the user in a timely and helpful manner (e.g., confirmation messages, error messages)?
    - Keywords: alert, need sth., informative, helpful, constructive

Overall Experience

- Does the user feel satisfied with their experience using the platform?
    - Keywords: satisfied, content, pleased, positive, confused, like/not like
- Are there any recurring issues or frustrations expressed by the user?
    - Keywords: issues, frustrations and confusions, problems, complaints

- Would the user recommend the platform to others based on his/her experience?
    - Keywords: numbers, ratings, recommend, support, suggestions

Conclusions and Recommendations

Although some progress and improvements have been made from the old NYU Engage app, some major conclusions and recommendations can be drawn based on the think-aloud testing session and the research questions on NYU Engage Redesigned:

1. ***Navigation and Clarity***

The participant found some aspects of the platform's navigation and information presentation confusing. For example, the purpose and content of certain features like "Track Involvement" were not immediately clear.

Recommendation: Simplify navigation by clearly labeling sections and providing brief descriptions or tooltips for features like "Track Involvement." Ensure that the back button works consistently across the platform.

2. ***UI Design***

The UI design received mixed feedback. While some aspects like the sidebar and event labels were appreciated for their clarity, other elements like the thumbnails for events and the lack of clear distinction between different sections caused confusion.

Recommendation: Make the UI more intuitive by using more descriptive thumbnails for events and ensuring that all sections have a consistent and clear design. Consider using more visual elements to represent different categories and statuses (e.g., interested, going with different colors and icons).

3. ***Search and Filers***

The search functionality and filters were generally found to be useful. However, there were suggestions for improvements, such as better integration of the search bar with the filter options and clearer differentiation between categories like "Organizations" and "Events."

Recommendation: Integrate the search bar more seamlessly with the filter options, and ensure that the filters are relevant to the user's current context. Clarify the distinction between different categories like "Organizations" and "Events" to reduce confusion.

4. ***Event Information***

The participant expressed a desire for more detailed information about events, including clearer schedules, descriptions, and host details. The process for joining or expressing interest in an event was also identified as an area for improvement.

Recommendation:

> 1) Integrate the search bar more seamlessly with the filter options, and ensure that the filters are relevant to the user's current context. Clarify the distinction between different categories like "Organizations" and "Events" to reduce confusion.
>
> 2) Include more comprehensive information about events, such as detailed schedules, descriptions, and host details. Simplify the process for joining or expressing interest in an event, and provide clear confirmation and follow-up information.

Reflections and Improvements

Based on the think-aloud protocol testing session I facilitated, I have identified several areas for improvement in the protocol design and execution.

Original document:
https://docs.google.com/document/d/1Q4phJiyzkOfS8O2lrXCz8vbTRfWbhv0lib_v45nMtnE/edit?usp=sharing

Clearer Instructions at the Beginning of the Session

From the testing session, I noticed that the participant was sometimes unsure about what types of comments were expected. The participant hesitated on putting some “stronger” words on comments, possibly because she/he was unsure if they were performing correctly or because of language barriers. Therefore, I improved my instructions in the warm-up activity, adding more examples of sentences to encourage the participant to speak and providing him/her with some examples of how to practice think-aloud.

Adding Evaluation Rubric

I also added rubrics of keywords for categorizing the participant’s responses based on the app’s navigation and structure, information, interaction, and overall experience. It is because I found analyzing this one-hour session, even with transcripts, would be overwhelming without a structured approach. This rubric would help me to focus on specific aspects of the platform and evaluate them against predefined criteria, making the analysis more manageable and targeted. I also gradually saw some verbal patterns in the participant’s responses. By categorizing the feedback, I was able to identify areas of strength and opportunities for improvement in the platform, which will inform future design decisions and enhancements.