CollabAll - Survey Results

# Introduction

This document provides details on the results of surveys conducted during the process of designing and implementing CollabAll. Participants involved in Participatory Design and Focus Group studies were interviewed using a post questionnaire. Results of the survey are available in the Appendix.

## Participatory Design

We employed a participatory design (PD) approach involving a team of D/HH consultants. The primary participants in this PD session were members of NTID's Research Center for Teaching and Learning (RCfTL). The D/HH consultants comprised of students and faculty members with different levels of hearing impairments. Additionally, ASL interpreters and captionists were invited to the PD session.

## Focus Group

We conducted Focus Group (FG) studies with students of Rochester Institute of Technology. Two researchers monitored the study, observed the group, and took notes. Meetings took place in a meeting room that had a whiteboard and projector.

Our study involved having each FG discuss predefined topics and perform tasks associated with these topics. An ASL interpreter was recruited to facilitate communication. We started the study by introducing CollabAll to the participants. We gave them five minutes to familiarize themselves with the system. We then asked them to perform 3 tasks, one after another. The tasks were:

* Scheduling a meeting - Each participant was provided with a unique schedule and they had to agree on a common day and time to meet based on their schedule availability.
* Reading Comprehension 01 - All participants were provided with a same reading passage (Flesch-Kincaid Grade Level 0.8) and had to discuss and provide answers to two open-ended questions
* Reading Comprehension 02 - All participants were provided with a same reading passage (Flesch-Kincaid Grade Level 9.5) and had to discuss and provide answers to two open-ended questions

A breakdown on the average duration taken to complete the tasks is provided in Table 1.

|  |  |
| --- | --- |
| Focus Group Activity | Average Activity Completion Time |
| Scheduling a meeting | 3 minutes |
| Reading Comprehension 01 | 5 minutes |
| Reading Comprehension 02 | 10 minutes |

Table : Focus Group Activities

### Observations

The participants took turns smoothly and used interjections to convey need for talking, agreeing, and disagreeing. All participants were engaged in discussing the article and answering the questions. Reading comprehension activity resulted in participants discussing their personal opinions about the facts mentioned in the article.

Even though CollabAll supports mobile devices, participants preferred to use their laptop; participants also preferred to issue interjections via clicking buttons over tilting their mobile devices. Interestingly, even though participants rated the effectiveness of the "Card" feature as high, they did not utilize this feature as much as they did for the others. A possible explanation for this, is that the participants were interacting with CollabAll for the first time and hence require more time to get familiar with all features of the system. Another interesting point to note, is that some participants used interjections such as ``Don't Understand'' and ``Question'' when reading articles related to the topic being discussed (i.e. they did not limit the use of interjections to the person communicating). The hearing participants, on occasions, forgot to click the “Communicate” interjection button when they started talking. However, this behavior was not observed from the D/HH participants.

A summary of the survey results is provided in Table 2. The detailed survey results are provided in the Appendix.

|  |  |
| --- | --- |
| Survey Question | Average Score |
| Ease of navigation | 3.9 |
| Effectiveness of "Card" feature | 3.9 |
| Effectiveness of "MeetNow" feature | 4.1 |
| Effectiveness of "Interjections" feature | 4.1 |
| Intuitive icons and images | 3.9 |
| Overall befit/effectiveness of the app | 4.1 |
| Willingness to recommend the app | 4.0 |

Table : Average Survey Score

# Appendix A

## Survey Participant Demography

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Person ID | Age | Gender | Hearing Impairment | Role | Study |
| Person 01 | 58 | M | Deaf | Faculty | PD |
| Person 02 | 20 | M | Deaf | Student | PD |
| Person 03 | 20 | F | Hard-of-Hearing | Student | PD |
| Person 04 | 21 | M | Deaf | Student | PD |
| Person 05 | 22 | M | Deaf | Student | PD |
| Person 06 | 20 | F | Hard-of-Hearing | Student | PD |
| Person 07 | 21 | M | Deaf | Student | FG |
| Person 08 | 25 | M | Deaf | Student | FG |
| Person 09 | 26 | M | None | Student | FG |
| Person 10 | 25 | M | None | Student | FG |
| Person 11 | 27 | M | None | Student | FG |
| Person 12 | 26 | M | None | Student | FG |
| Person 13 | 22 | F | None | Student | FG |

PD = Participatory Design

FG = Focus Group

# Appendix B

## Survey Results – Qualitative Feedback

|  |  |  |  |
| --- | --- | --- | --- |
| Person ID | Feedback | Feedback Type | Area |
| Person 02 | "Deaf people like me can easily follow along and see who is speaking without feeling lost/confused" | Satisfaction | General |
| Person 05 | "I love the idea of using the phone!...I'm looking forward to using the app!" | Satisfaction | General |
| Person 04 | "Change the color slowdown to yellow. Add 'proceed' button after stop (communicating)" | Improvement | Interject |
| Person 05 | "I think there should be some kind of features for interpreters. They might need to interrupt the discussion" | Improvement | Interject |
| Person 06 | "Provide the ability to modify the interjections, where students can change the colors and icons" | Improvement | Interject |

# Appendix C

## Survey Results

Results are based on a 5-Point Likert scale (with 5 being extremely positive)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Person ID | I like the colors used in the application | The actions associated with the icons/images used in the application are intuitive | I find the navigation of the application easy and intuitive | The “Card” feature of the application is effective | The “Meet Now” feature of the application is effective | The set of “Interjections” currently available in the application are appropriate and effective | I believe that this application will be beneficial to D/HH and Non-D/HH students in meetings | I will recommend/encourage students to utilize this application |
| Person 01 | 3 | 5 | 4 | 4 | 4 | 5 | 4 | 4 |
| Person 02 | 5 | 5 | 4 | 5 | 4 | 5 | 5 | 4 |
| Person 03 | 4 | 5 | 5 | 4 | 5 | 5 | 5 | 5 |
| Person 04 | 4 | 3 | 4 | 3 | 4 | 4 | 4 | 4 |
| Person 05 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | 5 |
| Person 06 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 3 |
| Person 07 | 4 | 4 | 2 | 3 | 3 | 2 | 1 | 2 |
| Person 08 | 4 | 3 | 4 | 2 | 4 | 4 | 4 | 4 |
| Person 09 | 3 | 3 | 4 | 2 | 4 | 4 | 4 | 4 |
| Person 10 | 3 | 2 | 4 | 4 | 4 | 3 | 4 | 4 |
| Person 11 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 4 |
| Person 12 | 4 | 5 | 5 | 3 | 3 | 3 | 4 | 4 |
| Person 13 | 4 | 4 | 4 | 3 | 5 | 5 | 5 | 5 |